**Washington**

**Science K-12**

**Final by Grade**

**Prepared by Marzano Research Laboratory**

**2010**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Science Measurement Topics** | **K-1** | **2-3** | **4-5** | **6-8** | **9-12** |

**Big Idea: Systems**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parts and Wholes | **+** |  |  |  |  |
| Taking Objects Apart | **+** |  |  |  |  |
| Systems |  | **+** | **+** |  |  |
| Interdependence of Parts |  | **+** |  |  |  |
| Functions of Wholes and Parts |  | **+** |  |  |  |
| Connection of Parts |  | **+** |  |  |  |
| Similar Parts |  | **+** |  |  |  |
| Subsystems |  |  | **+** |  |  |
| Inputs/Outputs |  |  | **+** | **+** |  |
| Damaged Systems |  |  | **+** |  |  |
| Subsystems |  |  |  | **+** |  |
| Boundaries |  |  |  | **+** |  |
| Open and Closed Systems |  |  |  | **+** |  |
| Matter and Energy in Systems |  |  |  | **+** |  |
| Complex Systems |  |  |  | **+** | **+** |
| Feedback in Systems |  |  |  |  | **+** |
| Systems Thinking |  |  |  |  | **+** |
| Equilibrium in Systems |  |  |  |  | **+** |

**Big Idea: Inquiry**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Question and Investigate | **+** |  |  |  |  |
| Question |  | **+** | **+** | **+** | **+** |
| Investigate |  | **+** | **+** | **+** | **+** |
| Infer |  | **+** |  |  |  |
| Model | **+** | **+** | **+** | **+** | **+** |
| Explain and Infer | **+** |  |  |  |  |
| Explain |  | **+** | **+** | **+** | **+** |
| Communicate Intellectual Honesty |  | **+** |  |  |  |
| Communicate | **+** |  | **+** |  | **+** |
| Communicate Clearly |  |  |  | **+** | **+** |
| Intellectual Honesty | **+** |  | **+** | **+** | **+** |
| Consider Ethics |  |  |  | **+** |  |

**Big Idea: Application**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Tools | **+** |  |  |  |  |
| Choose Materials | **+** |  |  |  |  |
| Solutions | **+** |  |  |  |  |
| Problem Solving | **+** | **+** |  | **+** |  |
| Finding Solutions |  | **+** |  |  |  |
| Different Solutions to Similar Problems |  | **+** | **+** |  |  |
| Using Tools |  | **+** |  |  |  |
| Selecting Tools |  | **+** |  |  |  |
| Using Technology |  |  | **+** |  |  |
| Technological Design |  |  | **+** |  | **+** |
| Team Work |  |  | **+** | **+** |  |
| Testing Solutions |  |  | **+** | **+** |  |
| Communicating Solutions |  |  | **+** |  |  |
| Science and Technology |  |  | **+** | **+** |  |
| Careers |  |  | **+** | **+** |  |
| Technology |  |  |  | **+** |  |
| Benefits of Science and Technology |  |  |  | **+** |  |
| Cultural Contribution |  |  |  | **+** |  |
| Science Effects Society |  |  |  |  | **+** |
| Choosing Solutions |  |  |  |  | **+** |
| Mathematical Solutions |  |  |  |  | **+** |
| Societal Trade-Offs |  |  |  |  | **+** |
| Science and Society |  |  |  |  | **+** |

**Big Idea: Earth in Space**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Objects in the Sky | **+** |  |  |  |  |
| Sun in the Sky | **+** |  |  |  |  |
| Moon | **+** |  |  |  |  |
| Shadows |  | **+** |  |  |  |
| Earth’s Shape and Gravity |  |  | **+** |  |  |
| Earth’s Rotation |  |  | **+** |  |  |
| Earth’s Revolution |  |  | **+** |  |  |
| The Sun as a Star |  |  | **+** |  |  |
| Moon Phases and Eclipses |  |  |  | **+** |  |
| Objects in the Solar System |  |  |  | **+** |  |
| Gravity in the Solar System |  |  |  | **+** |  |
| Solar System in the Universe |  |  |  | **+** |  |
| Formation of Elements in Stars |  |  |  |  | **+** |
| The Big Bang Theory |  |  |  |  | **+** |

**Big Idea: Earth Systems, Structures and Processes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Natural and Human-made | **+** |  |  |  |  |
| Properties of Earth Materials | **+** |  |  |  |  |
| Composition of Earth Materials | **+** |  |  |  |  |
| Water on the Land |  | **+** |  |  |  |
| Three Forms of Water |  | **+** |  |  |  |
| Weather Changes |  | **+** |  |  |  |
| Properties and Uses of Earth Materials |  |  | **+** |  |  |
| Weathering of Rock |  |  | **+** |  |  |
| Erosion |  |  | **+** |  |  |
| Formation of Soils |  |  | **+** |  |  |
| Properties of Soils |  |  | **+** |  |  |
| Soil Erosion |  |  | **+** |  |  |
| Earth’s Atmosphere |  |  |  | **+** |  |
| The Sun’s Influence on Wind, Waves and Water |  |  |  | **+** |  |
| Water Cycle |  |  |  | **+** |  |
| Water as a Solvent |  |  |  | **+** |  |
| Layers of the Earth |  |  |  | **+** |  |
| Plate Tectonics |  |  |  | **+** |  |
| Origins of Landforms |  |  |  | **+** |  |
| Rock Cycle |  |  |  | **+** |  |
| Global Climate |  |  |  |  | **+** |
| Factors that Influence Climate |  |  |  |  | **+** |
| Biogeochemical Cycles |  |  |  |  | **+** |
| Renewable and Non-renewable Resources |  |  |  |  | **+** |

**Big Idea: Earth History**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Formation of Fossils |  |  | **+** |  |  |
| Fossil Evidence |  |  | **+** |  |  |
| Uniformitarianism |  |  |  | **+** |  |
| Age of Landforms |  |  |  | **+** |  |
| Superposition |  |  |  | **+** |  |
| Catastrophic Events |  |  |  | **+** |  |
| Life Shapes the Earth |  |  |  | **+** |  |
| Evolution of the Earth System |  |  |  |  | **+** |
| Geological Time |  |  |  |  | **+** |
| Evolution of the Atmosphere |  |  |  |  | **+** |
| Historical Climate |  |  |  |  | **+** |

**Big Idea: Structures and Functions of Living Organisms**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Human Body External Parts | **+** |  |  |  |  |
| Plant and Animal External Parts | **+** |  |  |  |  |
| Observing Organisms with Magnifiers | **+** |  |  |  |  |
| Different Purposes for Body Parts | **+** |  |  |  |  |
| Obtaining Food and Water | **+** |  |  |  |  |
| Functions of Roots and Leaves | **+** |  |  |  |  |
| Plant Life Cycles |  | **+** |  |  |  |
| Animal Life Cycles |  | **+** |  |  |  |
| Sorting Plants and Animals |  |  | **+** |  |  |
| Animal Structures and Functions |  |  | **+** |  |  |
| Responding to Environmental Change |  |  | **+** |  |  |
| Responding to Internal Needs |  |  | **+** |  |  |
| Nutrition and Health |  |  | **+** |  |  |
| Cell Functions |  |  |  | **+** |  |
| Cell Parts |  |  |  | **+** |  |
| Multi-cellular Organisms |  |  |  | **+** |  |
| Plant and Animals Cell Parts |  |  |  | **+** |  |
| Classifying Organisms |  |  |  | **+** |  |
| Lifestyle Choices and Environments |  |  |  | **+** |  |
| Photosynthesis |  |  |  |  | **+** |
| Cellular Respiration |  |  |  |  | **+** |
| Cell Essential Functions |  |  |  |  | **+** |
| Cell Membrane |  |  |  |  | **+** |
| Genetic Information and DNA |  |  |  |  | **+** |
| Chemical Reactions in Cells |  |  |  |  | **+** |
| Encoding Enzymes |  |  |  |  | **+** |
| Mitosis |  |  |  |  | **+** |
| Meiosis |  |  |  |  | **+** |

**Big Idea: Ecosystems**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Different Habitats | **+** |  |  |  |  |
| Habitats Support Plants/Animals | **+** |  |  |  |  |
| Humans Can Change Habitats | **+** |  |  |  |  |
| Ecosystems Support Life |  | **+** |  |  |  |
| Ecosystems Change |  | **+** |  |  |  |
| Slow and Rapid Changes |  | **+** |  |  |  |
| Humans Impact Ecosystems |  | **+** |  |  |  |
| Ecosystem Characteristics |  |  | **+** |  |  |
| Food is Energy |  |  | **+** |  |  |
| Food Webs |  |  | **+** |  |  |
| Changes over Time |  |  | **+** |  |  |
| Organisms Affect Ecosystems |  |  | **+** |  |  |
| People Affect Ecosystems |  |  | **+** |  |  |
| Populations and Ecosystems |  |  |  | **+** |  |
| Energy Flow in Ecosystems |  |  |  | **+** |  |
| Sun Energy and Ecosystems |  |  |  | **+** |  |
| Changing Ecosystems |  |  |  | **+** |  |
| Investigating Environmental Issues |  |  |  | **+** |  |
| Energy and Matter Cycles in Ecosystems |  |  |  |  | **+** |
| Population Density |  |  |  |  | **+** |
| Population Growth |  |  |  |  | **+** |
| Representing Ecosystems with Models |  |  |  |  | **+** |
| Biodiversity |  |  |  |  | **+** |
| Sustainability |  |  |  |  | **+** |

**Big Idea: Biological Evolution**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Living/Non-Living | **+** |  |  |  |  |
| Plant vs. Animals | **+** |  |  |  |  |
| Classifying with External Features | **+** |  |  |  |  |
| Variations Among Plants and Animals |  | **+** |  |  |  |
| Resemblances to Parents |  | **+** |  |  |  |
| Characteristics and Survivability |  | **+** |  |  |  |
| Fossils Represent Today’s Life |  | **+** |  |  |  |
| Fossils Different from Today’s Life |  | **+** |  |  |  |
| Population Changes |  |  | **+** |  |  |
| Inherited Characteristics |  |  | **+** |  |  |
| Characteristics and Environment |  |  | **+** |  |  |
| Fossil Evidence |  |  | **+** |  |  |
| Diversity of Life |  |  |  | **+** |  |
| Genetic Information |  |  |  | **+** |  |
| Reproduction and Diversity |  |  |  | **+** |  |
| Sexual and Asexual Reproduction |  |  |  | **+** |  |
| Adaptations |  |  |  | **+** |  |
| Extinction |  |  |  | **+** |  |
| Evidence for Evolution |  |  |  | **+** |  |
| Biological Evolution |  |  |  |  | **+** |
| Mutations |  |  |  |  | **+** |
| Diversity of Organisms |  |  |  |  | **+** |
| Fossil Record |  |  |  |  | **+** |
| Biological Classifications |  |  |  |  | **+** |

**Big Idea: Force and Motion**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Position | **+** |  |  |  |  |
| Motion | **+** | **+** |  |  |  |
| Force | **+** |  |  |  |  |
| Touching/Not Touching | **+** |  |  |  |  |
| Force Changes Motion |  | **+** |  |  |  |
| Greater Force/Lesser Force |  | **+** |  |  |  |
| Distance and Force |  | **+** |  |  |  |
| Weight |  |  | **+** |  |  |
| Speed |  |  | **+** |  |  |
| Average Speed |  |  |  | **+** |  |
| Friction |  |  |  | **+** |  |
| Unbalanced Forces |  |  |  | **+** |  |
| Force, Mass and Motion |  |  |  | **+** |  |
| Velocity |  |  |  |  | **+** |
| Acceleration |  |  |  |  | **+** |
| Newton’s First |  |  |  |  | **+** |
| Newton’s Second |  |  |  |  | **+** |
| Newton’s Third |  |  |  |  | **+** |
| Gravity |  |  |  |  | **+** |
| Electrical Force |  |  |  |  | **+** |
| Electrical Magnetism |  |  |  |  | **+** |

**Big Idea: Matter: Properties and Change**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Liquids | **+** |  |  |  |  |
| Solids | **+** |  |  |  |  |
| Identify and Sorting by Properties |  | **+** |  |  |  |
| Comparing Properties |  | **+** |  |  |  |
| States of Matter |  | **+** | **+** |  |  |
| Evaporation |  | **+** |  |  |  |
| Air |  |  | **+** |  |  |
| Conserving Matter |  |  | **+** |  |  |
| Characteristic Properties |  |  |  | **+** |  |
| Mixtures and Compounds |  |  |  | **+** |  |
| Atomic Nature of Matter |  |  |  | **+** |  |
| Molecules |  |  |  | **+** |  |
| Particle Motion and Phases of Matter |  |  |  | **+** |  |
| Conservation of Mass |  |  |  | **+** |  |
| Atomic Structure |  |  |  |  | **+** |
| Elements |  |  |  |  | **+** |
| Periodic Table |  |  |  |  | **+** |
| Ions |  |  |  |  | **+** |
| Molecular Compounds |  |  |  |  | **+** |
| Organic Compounds |  |  |  |  | **+** |
| Chemical Reactions |  |  |  |  | **+** |
| Solutions |  |  |  |  | **+** |
| Rates of Reaction |  |  |  |  | **+** |
| Isotopes |  |  |  |  | **+** |
| Fusion/Fission |  |  |  |  | **+** |

**Big Idea: Energy: Transfer, Transformation and Conservation**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Forms of Energy |  | **+** | **+** |  |  |
| Energy Transfer |  |  | **+** |  |  |
| Heat Energy |  |  | **+** |  |  |
| Sound Energy |  |  | **+** |  |  |
| Electrical Energy and Circuits |  |  | **+** |  |  |
| Energy Transfer and Transformation |  |  |  | **+** |  |
| Heat Transfer |  |  |  | **+** |  |
| Thermal Insulators |  |  |  | **+** |  |
| Visible Light |  |  |  | **+** |  |
| Electrical Energy |  |  |  | **+** |  |
| Waves |  |  |  | **+** |  |
| Conservation of Energy |  |  |  |  | **+** |
| Kinetic Energy |  |  |  |  | **+** |
| Gravitational Potential Energy |  |  |  |  | **+** |
| Wave Properties |  |  |  |  | **+** |
| Electromagnetic Wave |  |  |  |  | **+** |

**Grades K-1**

|  |  |  |  |
| --- | --- | --- | --- |
| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Part-Whole Relationships** | | | |
| **Topic: Parts and Wholes** | | | |
| **Grade: K-1 (SYSA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * name the different parts of a whole object, plant, or animal * compare a part of an object with the whole object, using the words “whole” and “part”   **The student exhibits no major errors or omissions.** | | * Name 5 parts of a plant, animal or object. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes the parts of the object when given the term * recognizes examples of parts and whole objects * recognizes or recalls basic terminology such as: part, whole   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a list of possible plant parts student will match the term with a picture or object. * Given examples of wholes or parts, identify which are “part” and which are “whole.” |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| --- | --- | --- | --- |
| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Part-Whole Relationships** | | | |
| **Topic: Taking Objects Apart** | | | |
| **Grade: K-1 (SYSB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * name common objects that may be taken apart and put back together without damaging them *(e.g., a jigsaw puzzle)* and objects that cannot be taken apart without damaging them *(e.g., books, pencils, plants, and animals)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes examples of common objects that may be taken apart and put back together without damaging them *(e.g., a jigsaw puzzle)* and objects that cannot be taken apart without damaging them *(e.g., books, pencils, plants, and animals)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

|  |  |  |  |
| --- | --- | --- | --- |
| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Making Observations** | | | |
| **Topic: Question and Investigate** | | | |
| **Grade: K-1 (INQA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * ask questions about objects, organisms, and events in their environment * follow up a question by looking for an answer through students’ own activities *(e.g., making observations or trying things out)* * record observations and patterns in the natural world in a table or picture graph   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of objects, organisms and events in their environment * performs a teacher led observation * recognizes data that is recorded in a table or picture graph   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| --- | --- | --- | --- |
| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Making Observations** | | | |
| **Topic: Models** | | | |
| **Grade: K-1 (INQB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how a child’s toy, that is a model of an object found in the real world, is like and unlike the object it represents   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how a child’s toy is like or unlike a similar object from the real world   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| --- | --- | --- | --- |
| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Making Observations** | | | |
| **Topic: Explain and Infer** | | | |
| **Grade: K-1 (INQC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe patterns of data recorded, using tallies, tables, picture graphs, or bar-type graphs * explain how patterns of recorded data helps to explain the observation   **The student exhibits no major errors or omissions.** | | * Participate in a discussion of how the recorded data (evidence) might help to explain the observations. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes connections between data recorded and the investigation or event * recognizes or recalls basic terminology such as :patterns   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

|  |  |  |  |
| --- | --- | --- | --- |
| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Making Observations** | | | |
| **Topic: Communicate** | | | |
| **Grade: K-1 (INQD) (INQE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * listen to and use observations (evidence) made by other students and compare to their own results * use repeated observations to ensure reliability of results   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * reports observations of simple investigations, using drawings and simple sentences * states verbally or in writing a need to repeat observations (evidence) to be certain the results are more reliable   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Making Observations** | | | |
| **Topic: Intellectual Honesty** | | | |
| **Grade: K-1 (INQF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * record observations (evidence) accurately, independently   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * records observations (evidence) accurately, with a group or class prompt   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Tools and Materials** | | | |
| **Topic: Common Tools** | | | |
| **Grade: K-1 (APPA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use simple tools and materials to solve a simple problem *(e.g., make a paper or cardboard box to hold seeds so they won’t get lost)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * uses simple tools and materials to solve a simple problem, given procedural steps   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Student will follow teacher instructions to make a box given the paper/cardboard. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Tools and Materials** | | | |
| **Topic: Choose Materials** | | | |
| **Grade: K-1 (APPB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * choose a material to meet a specific need and explain why that material was chosen *(e.g., cardboard is better than paper for making a box that will stand up by itself)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * chooses a material to meet a specific need   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Chooses cardboard over paper for making a box that will stand up by itself but does not explain the reason for that choice. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Tools and Materials** | | | |
| **Topic: Solutions** | | | |
| **Grade: K-1 (APPC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * develop two possible solutions to solve a simple problem   **The student exhibits no major errors or omissions.** | | * Design two possible napping places for a favorite stuffed animal; * Decide on two choices for the best food to eat for lunch. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * chooses the best solution to a problem from a teacher provided list   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a list of choices, choose a napping place for a favorite stuffed animal; * Given a list of choices, choose the best food to eat for lunch. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Tools and Materials** | | | |
| **Topic: Problem Solving** | | | |
| **Grade: K-1 (APPD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use counting, measuring, and classifying to solve a problem *(e.g., Is that enclosure big enough for a pet to stand up in? What types of food can it eat? How much food should I put into the enclosure for my pet?)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * counts, measures or uses classifying to gather information about a problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Problem: Is that enclosure big enough for a pet to stand up in? What types of food can it eat? How much food should I put into the enclosure for my pet?   + Student can measure an enclosure for a pet   + Student can count the pieces of food   + Student can classify food as appropriate for the pet or not |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth and Space (ES1)** | | | |
| **Core Content: Observing the Sun and Moon** | | | |
| **Topic: Objects in the Sky** | | | |
| **Grade: K-1 (ES1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * observe and communicate the many things that can be seen in the sky that change minute by minute *(e.g., birds, airplanes, and clouds)* and those that change their shape or position in observable patterns day after day *(e.g., apparent shape of the Moon)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls objects that can be seen in the sky including those that change shape or position in observable patterns such as the Moon, Sun and stars   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given pictures of various objects student will identify those objects that can be found in the sky. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth and Space (ES1)** | | | |
| **Core Content: Observing the Sun and Moon** | | | |
| **Topic: Sun in the Sky** | | | |
| **Grade: K-1 (ES1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare the position of the Sun in the sky in the morning with its position in the sky at midday and in the afternoon   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the changes of position of the Sun in the sky during the day   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Student identifies (draws or points out) the position of the Sun at three different times of the day. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth and Space (ES1)** | | | |
| **Core Content: Observing the Sun and Moon** | | | |
| **Topic: Moon** | | | |
| **Grade: K-1 (ES1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the change in the appearance of the Moon during different times of the day and month   **The student exhibits no major errors or omissions.** | | * Observe the Moon during different times of the day and month, and draw its apparent shape. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the Moon’s appearance during different times of the day and month   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Properties and Change** | | | |
| **Topic: Composition of Earth Materials** | | | |
| **Grade: K-1 (ES2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * observe and describe objects made of more than one Earth material *(e.g., certain rocks and soil)*   **The student exhibits no major errors or omissions.** | | * Student will independently describe several physical properties of objects made of more than one Earth material. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes objects that are made of more than one Earth material   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Properties and Change** | | | |
| **Topic: Natural and Human Made Objects** | | | |
| **Grade: K-1 (ES2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * sort objects into two groups: natural and human-made   **The student exhibits no major errors or omissions.** | | * Given a variety of natural and human made objects students sort them into two piles. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of objects that are human made * recognizes or recalls basic terminology such as: natural and man made   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Student identifies (points to) human made objects from among a group of objects. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Properties and Change** | | | |
| **Topic: Properties of Earth Materials** | | | |
| **Grade: K-1 (ES2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * sort Earth objects by one observable property *(e.g., rocks by size or color)* * compare Earth objects by at least two properties *(e.g., first compare rocks by size, then by color)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes and recalls basic terminology such as: Hard/soft, Dry/wet, Heavy/light * compares Earth objects by one property * describes Earth objects using appropriate terms, such as hard, soft, dry, wet, heavy, and light   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Plant and Animal Parts** | | | |
| **Topic: Human Body External Parts (LS1A)** | | | |
| **Grade: K-1** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * recall the external parts of a human body *(e.g., head, hands, feet, knees, and elbows)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes the external parts of a human body *(e.g., head, hands, feet, knees, and elbows)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Plant and Animal Parts** | | | |
| **Topic: Plant and Animal External Parts** | | | |
| **Grade: K-1 (LS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * recall the external parts of different plants and animals *(e.g., legs on an insect, flowers, stems, and roots on many plants, feathers on birds, scales on fish, eyes and ears on many animals)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes the external parts of different plants and animals   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Plant and Animal Parts** | | | |
| **Topic: Observing Organisms with Magnifiers** | | | |
| **Grade: K-1 (LS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * observe and describe how parts of a plant or animal look under a magnifier *(e.g., a single hair, the leg of an insect, a fingerprint)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls parts of animal or plant   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Plant and Animal Parts** | | | |
| **Topic: Different Purposes for Body Parts** | | | |
| **Grade: K-1 (LS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare how different animals use the same body parts for different purposes *(e.g., humans use their tongues to taste, while snakes use their tongues to smell)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of how different animals use the same body parts for different purposes   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Plant and Animal Parts** | | | |
| **Topic: Obtaining Food and Water (LS1E)** | | | |
| **Grade: K-1** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare how different animals obtain food and water *(e.g., a squirrel hunts for nuts, a pet dog eats prepared food and drinks water from a bowl or puddle, many birds and insects find nectar in flowers, which contain food and water, people may grow food in gardens and many shop for food in stores and get water from the tap)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of how different animals obtain food and water   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Plant and Animal Parts** | | | |
| **Topic: Functions of Roots and Leaves** | | | |
| **Grade: K-1 (LS1F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that most plants get water from soil through their roots and that they gather light through their leaves   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls that most plants get water from soil through their roots and that they gather light through their leaves   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Habitats** | | | |
| **Topic: Different Habitats** | | | |
| **Grade: K-1 (LS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * investigate an area near their home or school where many different plants and animals live together *(e.g., a lawn, a vacant lot, a wooded park, a flower bed)* and describe the different plants and animals found in an area   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of the different plants and animals found in an area   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Habitats** | | | |
| **Topic: Habitats Support Plants and Animals** | | | |
| **Grade: K-1 (PS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the characteristics of a habitat that enables the habitat to support the growth of many different plants and animals *(e.g., have trees to provide nesting places for birds and squirrels, pond water for tadpoles and frogs, blackberry bushes for rabbits to hide in)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the characteristics of a habitat that enables the habitat to support the growth of many different plants and animals * recognizes or recalls basic terminology such as: habitat   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Habitats** | | | |
| **Topic: Humans can Change Habitats** | | | |
| **Grade: K-1 (LS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe ways that humans might harm plants and animals in a given habitat *(e.g., throwing litter in a pond might cause difficulty for water birds and fish to find food or might poison the plants and animals that live there)* * describe ways that humans can protect habitats and/or improve conditions for the growth of the plants and animals that live there *(e.g., reuse or recycle products to avoid littering which keeps natural areas natural)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls ways that humans might harm plants and animals in a given habitat *(e.g., throwing litter in a pond)* * recognizes or recalls ways that humans protect habitats and/or improve conditions for the growth of the plants and animals that live there *(e.g., reuse or recycle products to avoid littering)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |
| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Classifying Plants and Animals** | | | |
| **Topic: Living/Non-living** | | | |
| **Grade: K-1 (LS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use logical rules to independently sort objects into two groups, those that are alive and those that are not and give reasons for your choices   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * uses logical rules with a group to sort objects into two groups, those that are alive and those that are not and give reasons for your choices   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Classifying Plants and Animals** | | | |
| **Topic: Plant versus Animal** | | | |
| **Grade: K-1 (LS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * given a list, illustrations, or actual plants or animals, classify them as plants or animals   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the criteria for classification of plants and animals   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Identify or produce the criteria for classification of plants and animals. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Classifying Plants and Animals** | | | |
| **Topic: Classifying with External Features** | | | |
| **Grade: K-1 (LS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe external features and behaviors of animals that can be used to classify them *(e.g., size, color, shape of body parts)* * describe external features of plants that can be used to classify them *(e.g., size, color, kinds of seeds, shapes, or texture of plant parts)* * give examples to illustrate how pairs of plants and/or animals how plants and animals are similar to and different from each other *(e.g., cats and dogs both have four legs, but many dogs have longer snouts than cats)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of external features and behaviors of animals that can be used to classify them *(e.g., size, color, shape of body parts)* * recognizes or recalls examples of external features of plants that can be used to classify them *(e.g., size, color, kinds of seeds, shapes, or texture of plant parts)* * recognizes or recalls examples that illustrate how pairs of plants and/or animals are similar to and different from each other *(e.g., cats and dogs both have four legs, but many dogs have longer snouts than cats)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Push-Pull and Position** | | | |
| **Topic: Position** | | | |
| **Grade: K-1 (PS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use common terms so that all observers can agree on the position of an object in relation to another object *(e.g., describe whether the teacher’s desk is in front of the room, at the side, or in the back; say whether the top of the school’s flagpole is higher or lower than the roof)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes common descriptions of an object’s position in relation to other objects *(e.g., in front of , behind, next to, lower than, higher than)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Push-Pull and Position** | | | |
| **Topic: Motion** | | | |
| **Grade: K-1 (PS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * demonstrate motion by moving an object or a part of a student’s body and explain that motion means a change in position   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes and recalls accurate statements about motion and change in position   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Push-Pull and Position** | | | |
| **Topic: Force** | | | |
| **Grade: K-1 (PS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * respond to a request to move an object *(e.g., toy wagon, doll, or book)* by pushing or pulling it * when asked to move the object farther, respond by pushing or pulling it more strongly * explain that a push or a pull is a force   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as push, pull, and force   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Push-Pull and Position** | | | |
| **Topic: Touching/Not Touching** | | | |
| **Grade: K-1 (PS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * distinguish a force that acts by touching it with an object *(e.g., by pushing or pulling)* from a force that can act without touching *(e.g., the attraction between a magnet and a steel paper clip)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * explains that forces can be transferred from one object to another by touching   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Liquids and Solids** | | | |
| **Topic: Liquid** | | | |
| **Grade: K-1 (PS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict the shape that water will take in a variety of different containers   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls that liquids take the shape of their containers and that water is a liquid   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | **Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content** |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | **With help, a partial understanding of the 2.0 content but not the 3.0 content** |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Liquids and Solids** | | | |
| **Topic: Solid** | | | |
| **Grade: K-1 (PS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict that frozen water *(e.g., ice)* will retain its shape when moved among containers of different shapes *(e.g., ice cubes in a cup or on a plate)* * given several substances, sort them into those that are liquid and those that are solid   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls that solids retain their shape and that ice is solid water * recalls examples of substances that are solids and liquids   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

**Grades** **2-3**

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Role of Each Part in a System** | | | |
| **Topic: Systems** | | | |
| **Grade: 2-3 (SYSA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give examples of simple living and physical systems *(e.g., a whole animal or plant, a car, a doll, a table and chair set)* and explain how different parts make up the whole   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes examples of parts of simple living and physical systems *(e.g., a whole animal or plant, a car, a doll, a table and chair set)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given parts that may or may not create a whole, correctly identify whether they go together to form a whole. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Role of Each Part in a System** | | | |
| **Topic: Interdependence of Parts** | | | |
| **Grade: 2-3 (SYSB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| Score 3.0 | The student will:   * predict what may happen to an object, plant, or animal if one or more of its parts are removed *(e.g., a tricycle cannot be ridden if its wheels are removed)* and defend * explain how the parts of a system depend on one another for the system to function   The student exhibits no major errors or omissions. | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls what may happen to an object, plant, or animal if one or more of its parts are removed *(e.g., a tricycle cannot be ridden if its wheels are removed)* * recognizes or recalls which parts of a system depend on one another for the system to function   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a scenario where a part is removed from a whole choose correctly one of several options for possible outcomes. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Role of Each Part in a System** | | | |
| **Topic: Functions of Wholes and Parts** | | | |
| **Grade: 2-3 (SYSC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * contrast the function of a whole object, plant, or animal with the function of one of its parts *(e.g., an airplane can fly, but wings and propeller alone cannot; plants can grow, but stems and flowers alone cannot)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls if a function is that of a whole object, plant, or animal or the function of one of its parts * recognizes or recalls basic terminology such as: function   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given an example of a function (ex: flying) identify if it is a function that can be carried out by a part of a system (the propeller) or by the whole (the plane). |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Role of Each Part in a System** | | | |
| **Topic: Connection of Parts** | | | |
| **Grade: 2-3 (SYSD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain why the parts in a system need to be connected in a specific way for the system to function as a whole *(e.g., batteries must be inserted correctly in a flashlight if it is to produce light)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes if the parts in a system are connected properly so that the system will function as a whole   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Identify that a flashlight will not produce light if the batteries are inserted incorrectly. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Role of Each Part in a System** | | | |
| **Topic: Similar Parts** | | | |
| **Grade: 2-3 (SYSE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe ways that similar parts can play different roles in different systems *(e.g., birds may use their beaks to crack seeds while other birds use their beaks to catch fish)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls ways that similar parts can play different roles in different systems *(e.g., birds may use their beaks to crack seeds while other birds use their beaks to catch fish)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a similar part in more than one system, choose the correct function for that system. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Investigations** | | | |
| **Topic: Questions** | | | |
| **Grade: 2-3 (INQA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how observations can lead to new knowledge and new questions about the natural world   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how observations can lead to more questions about the natural world   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Investigations** | | | |
| **Topic: Investigate** | | | |
| **Grade: 2-3 (INQB)(INQD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * make and follow a plan to carry out a scientific investigation * determine and use appropriate simple instruments *(e.g., metric scales or balances, thermometers, and rulers)* to observe and make measurements * record and display data in a table, bar graph, line plot, or pictograph   **The student exhibits no major errors or omissions.** | | * Students plan and conduct a plant growth investigation, using such tools as rulers and a time keeping device. Observations will be recorded and displayed in tables. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * follows a teacher-directed plan to carry out a scientific investigation that includes the simple instruments, tables and graphs to be used * uses appropriate instruments provided by the teacher * completes a teacher provided data table   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Investigations** | | | |
| **Topic: Infer** | | | |
| **Grade: 2-3 (INQC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the differences between direct observations and simple inferences   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of direct observations and simple inferences   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Investigations** | | | |
| **Topic: Model** | | | |
| **Grade: 2-3 (INQE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use a simple model to study a system and explain how the model can be used to understand the system *(e.g., aquarium or terrarium)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how a simple model represents a system   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Investigations** | | | |
| **Topic: Explain** | | | |
| **Grade: 2-3 (INQF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * accurately describe the results of an investigation using a graph or other data as evidence * draw a conclusion about the question that motivated a study using the results of the investigation as evidence   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the results of an investigation * recognizes or recalls accurate statements about the conclusion of an investigation   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Investigations** | | | |
| **Topic: Communicate/Intellectual Honesty** | | | |
| **Grade: 2-3 (INQG)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * communicate accurate information about their investigations, describing how observations were made and summarizing results   **The student exhibits no major errors or omissions.** | | * Use science notebook entries to share your observations and results with another student   ([www.sciencenotebooks](http://www.sciencenotebooks).org). |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * using a teacher provided format or worksheet, communicates accurate information about their investigations, describing how observations were made and summarizing results   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Solving Problems** | | | |
| **Topic: Finding Solutions** | | | |
| **Grade: 2-3 (APPA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * design a solution to a simple problem *(e.g., design a tool for removing an object from a jar when your hand doesn’t fit)* using a technological design process that includes:   + defining the problem,   + gathering information,   + exploring ideas,   + making a plan,   + testing possible solutions to see which is best   + communicating the results   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes a solution to a simple problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Identify the most appropriate tool for removing an object from a jar when your hand doesn’t fit. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Solving Problems** | | | |
| **Topic: Problem Solving** | | | |
| **Grade: 2-3 (APPB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how the application of scientific knowledge helps solve a problem *(e.g., use electric lights to see at night)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of the application of scientific knowledge used to solve problems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a specific condition (the dark) student identifies a solution (flashlight) from a list, to help see in the dark. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Solving Problems** | | | |
| **Topic: Different Solutions to Similar Problems** | | | |
| **Grade: 2-3 (APPC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe a problem that people in different cultures around the world have had to solve and the various ways they have gone about solving that problem   **The student exhibits no major errors or omissions.** | | * Describe the need to get water and ways that that has been accomplished in different cultures. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about various methods for solving a similar problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a problem (e.g., finding water), the student will match a solution to the problem. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Solving Problems** | | | |
| **Topic: Using Tools** | | | |
| **Grade: 2-3 (APPD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain the reason for the selection of tools and materials to meet a goal or solve a specific problem   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * selects appropriate tools and materials to meet a goal or solve a specific problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Ask students to build the tallest tower they can using a variety of provided materials (students have a variety of materials to choose from) * Chooses appropriate materials to build the longest bridge span. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Solving Problems** | | | |
| **Topic: Selecting Tools** | | | |
| **Grade: 2-3 (APPE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * evaluate how well a selected tool solved a problem and discuss what might be done differently to solve a similar problem   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * determines whether a selected tool solved a problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given Popsicle sticks and plastic straws students determine whether material solved the given problem. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth and Space (ES1)** | | | |
| **Core Content: The Sun’s Daily Motion** | | | |
| **Topic: Shadows** | | | |
| **Grade: 2-3 (ES1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * observe and describe the changes in the length of a shadow over time and infer how position of the Sun affects the length of the shadow * explain how shadows could be used to tell the time of day   **The student exhibits no major errors or omissions.** | | * Mark the position of shadows cast by a stick over the course of a few hours, and infer how the Sun has moved during that time. * Observe that the length of shadows is shortest at about noon, and infer that this is because the Sun is highest in the sky (but not directly overhead) at about that time. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes that the length of a shadow changes over time * recognizes that shadows are shortest at noon   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Water and Weather** | | | |
| **Topic: Water on the Land** | | | |
| **Grade: 2-3(ES2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how water has shaped a local landform *(e.g., river valley, canyon, Puget Sound)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * names a local body of water * recognizes or recalls basic terminology such as: river, valley, canyon, Puget Sound , natural body of water, human-created body of water   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Name the closest body of water to your home (e.g., i.e. lake, stream, river). * Match a picture of a natural body of water with its name. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Water and Weather** | | | |
| **Topic: Three Forms of Water** | | | |
| **Grade: 2-3 (ES2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the various forms and places that water can be found on Earth as liquids and solids *(e.g., as liquid in morning dew; in lakes, streams, and oceans; as solid ice at the North and South Poles, and on the tops of mountains; and in the air as clouds, fog, rain, hail, and snow)* * explain why the weight of a sample of water will be nearly the same before and after it is frozen or melted   **The student exhibits no major errors or omissions.** | | * Given an ice cube students will explain why the weight of the melted ice cube will be nearly the same as the frozen ice cube. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * given examples of places on Earth where water is found, recognizes whether the water is liquid or solid * recognizes or recalls accurate statements about the weight of water as a solid and a liquid   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given pictures of various places on Earth such as the North and South poles, lakes streams, oceans students will identify the water as solid or liquid. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Water and Weather** | | | |
| **Topic: Weather Changes** | | | |
| **Grade: 2-3 (ES2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * measure and record changes in weather *(e.g., inches of rain using a rain gauge, depth of snow using a ruler, and temperature using a thermometer)* * interpret graphs of weather conditions to describe, with measurements, how weather changes from season to season   **The student exhibits no major errors or omissions.** | | * Measure and record inches of rain using a rain gauge, depth of snow using a ruler, and temperature using a thermometer. * Interpret graphs in terms of specific measurements. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes weather changes from given photo sequences   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a series of pictures with different weather conditions describe the changes in weather. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Life Cycles** | | | |
| **Topic: Plant Life Cycles** | | | |
| **Grade: 2-3 (LS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the life cycle of a common type of plant *(e.g., the growth of a fast-growing plant from seed to sprout, to adult, to fruits, flowers, and seeds)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the correct order of the life cycle of a common type of plant *(e.g., the growth of a fast-growing plant from seed to sprout, to adult, to fruits, flowers, and seeds)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given index cards with the stages of a plant life cycle, order them correctly. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Life Cycles** | | | |
| **Topic: Animal Life Cycles** | | | |
| **Grade: 2-3 (LS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the life cycle of a common type of animal *(e.g., the development of a butterfly or moth from egg to larva to pupa to adult, or the development of a frog from egg to tadpole to adult frog)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the correct order of a life cycle of a common type of animal *(e.g., the development of a butterfly or moth from egg to larva to pupa to adult, or the development of a frog from egg to tadpole to adult frog)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Changes in Ecosystems** | | | |
| **Topic: Ecosystems Support Life** | | | |
| **Grade: 2-3 (LS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe at least four ways that ecosystems support life *(e.g., by providing fresh water, generating oxygen, removing toxic pollutants, and providing sources of useful materials)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of ways that ecosystems support life * recognizes or recalls basic terminology such as: ecosystem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Changes in Ecosystems** | | | |
| **Topic: Ecosystems Change** | | | |
| **Grade: 2-3 (LS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe three or more of the changes that occur in an ecosystem or a model of a natural ecosystem *(e.g., aquarium, terrarium)* over time, as well as how these changes may affect the plants and animals living there   **The student exhibits no major errors or omissions.** | | * \*\*make sure when writing tasks that this is can be done as a single assessment\*\* |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of the changes that occur in an ecosystem or a model of a natural ecosystem *(e.g., aquarium, terrarium)* over time, as well as how these changes may affect the plants and animals living there   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Changes in Ecosystems** | | | |
| **Topic: Slow and Rapid Changes** | | | |
| **Grade: 2-3 (LS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain the consequences of a rapid ecosystem change *(e.g., flooding, wind storms, snowfall, and volcanic eruptions)* * explain the consequences of a gradual ecosystem change *(e.g., gradual increase or decrease in daily temperatures, reduction or increase in yearly rainfall)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the consequences of a rapid ecosystem change *(e.g., flooding, wind storms, snowfall, and volcanic eruptions)* * recognizes or recalls the consequences of a gradual ecosystem change *(e.g., gradual increase or decrease in daily temperatures, reduction or increase in yearly rainfall)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Changes in Ecosystems** | | | |
| **Topic: Humans Impact Ecosystems** | | | |
| **Grade: 2-3 (LS2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe a change that humans are making in a particular ecosystem and predict how that change could harm or improve conditions for a given type of plant or animal * propose a plan independently to protect or improve an ecosystem   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls how a given change, that humans are making in a particular ecosystem, could harm or improve conditions for a given type of plant or animal * proposes a plan with a group or class to protect or improve an ecosystem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Variation of Inherited Characteristics** | | | |
| **Topic: Variations Among Plants and Animals** | | | |
| **Grade: 2-3 (LS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe variations that occur among individuals of the same species and give examples *(e.g., tall and short pine trees, black cats and white cats, people with blue eyes or brown eyes, with freckles or without)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of variations among individuals of the same kinds of plants and animals within a population *(e.g., tall and short pine trees, black cats and white cats, people with blue eyes or brown eyes, with freckles or without)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Variation of Inherited Characteristics** | | | |
| **Topic: Resemblances to Parents** | | | |
| **Grade: 2-3 (LS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare the offspring of a plant or animal with its parents, listing features that are similar and that are different independently   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * compares the offspring of a plant or animal with its parents, listing features that are similar and that are different with a class or group   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Variation of Inherited Characteristics** | | | |
| **Topic: Characteristics and Survivability** | | | |
| **Grade: 2-3 (LS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict how differences in characteristics might help one individual survive better than another *(e.g., animals that are stronger or faster, plants or animals that blend into the background, plants that grow taller or that need less water to survive)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of individuals with characteristics that might help them survive better than another individual in a given habitat   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Variation of Inherited Characteristics** | | | |
| **Topic: Fossils Represent Today’s Life** | | | |
| **Grade: 2-3 (LS3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare fossils to similar plants or animals that live today *(e.g., compare a fossil fern with a similar fern that grows today, a dinosaur leg bone with the leg bone of a reptile that lives today, a mastodon and an elephant)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of how fossil plants compare to plants of today   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Variation of Inherited Characteristics** | | | |
| **Topic: Fossils Different from Today’s Life** | | | |
| **Grade: 2-3 (LS3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how fossils give us evidence of animals that are no longer alive *(e.g., T-Rex, trilobites)* * given pictures, describe how animals that are extinct are different from animals that live today *(e.g., dinosaurs, mammoths)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of species on Earth that are no longer alive * recognizes or recalls examples of how extinct animals are different from animals of today * recognizes of recalls basic terminology such as: fossil, extinct, evidence   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Force Makes thing Move** | | | |
| **Topic: Motion** | | | |
| **Grade: 2-3 (PS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give an example to illustrate motion as a change in position over a period of time *(e.g., if a student stands near the door and then moves to his/her seat, the student is “in motion” during that time)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes motion as a change in position * recalls accurate statements about time   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Force Makes thing Move** | | | |
| **Topic: Force changes Motion** | | | |
| **Grade: 2-3 (PS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * identify the force that starts something moving or changes its speed or direction of motion *(e.g., when a ball is thrown or when a rock is dropped)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes that force is required to change the motion *(e.g., direction, speed)* of an object   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Force Makes thing Move** | | | |
| **Topic: Greater Force/Lesser Force** | | | |
| **Grade: 2-3 (PS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give examples to illustrate that a greater force can make an object move faster than a lesser force *(e.g., throwing a ball harder or hitting it harder with a bat will make the ball go faster)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recalls that a greater force is required to make a larger change in the motion *(e.g., direction, speed)* of an object   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Force Makes thing Move** | | | |
| **Topic: Distance and Force** | | | |
| **Grade: 2-3 (PS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * measure and compare the distances moved by an object *(e.g., a toy car)* when given a small push and when given a big push   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recalls that the distance an object moves is related to a big push or a little push   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Properties of Materials** | | | |
| **Topic: Identify and Sort by Properties** | | | |
| **Grade: 2-3 (PS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * list several properties of an object * select one of several objects that best matches a list of properties * sort objects by their functions, shapes, and the materials they are composed of   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about properties of objects   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Properties of Materials** | | | |
| **Topic: Comparing Properties** | | | |
| **Grade: 2-3 (PS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare similar objects made of different materials *(e.g., a plastic spoon and a metal spoon)* and explain how their properties are similar and different * compare two objects made of the same material but a different shape *(e.g., a plastic fork and a plastic spoon)* and identify which of their properties are similar and different   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * gives examples of objects that are similar but made of different materials or examples of objects that are made of the same material but different in shape   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Properties of Materials** | | | |
| **Topic: States of Properties** | | | |
| **Grade: 2-3 (PS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict what will happen to a sample of liquid water if it is put into a freezer (it will turn to ice) and if it is put into a pan and heated on the stove (it will turn to steam or water vapor)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recalls examples of three states of matter *(i.e., solid, liquid, gas)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Properties of Materials** | | | |
| **Topic: Evaporation** | | | |
| **Grade: 2-3 (PS2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict what will happen to a small quantity of water left in an open container overnight * predict what will happen to the same quantity of water left in a closed container overnight * explain where the liquid water goes when the amount decreases over time   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recalls two examples of phase changes of matter *(i.e., freezing, evaporating)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Forms of Energy** | | | |
| **Topic: Forms of Energy** | | | |
| **Grade: 2-3 (PS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use the word “energy” to explain everyday activities *(e.g., food gives people energy to play games)* * explain how light, sound, and motion are all energy   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * names and gives examples of different forms of energy as observed in everyday life: light, sound, and motion   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | **Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content** |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | **With help, a partial understanding of the 2.0 content but not the 3.0 content** |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

**Grades 4-5**

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Complex Systems** | | | |
| **Topic: Subsystems** | | | |
| **Grade: 4-5 (SYSA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe at least one of the subsystems of an object, plant, or animal *(e.g., an airplane contains subsystems for propulsion, landing, and control)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls at least one of the subsystems of an object, plant, or animal *(e.g., an airplane contains subsystems for propulsion, landing, and control)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Complex Systems** | | | |
| **Topic: Systems** | | | |
| **Grade: 4-5 (SYSB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how a system can do things that none of its subsystems can do by themselves *(e.g., a forest ecosystem can sustain itself, while the trees, soil, plant, and animal populations cannot)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of things a system can do that none of its subsystems can do by themselves   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | | |
| **Big Idea: Systems (SYS)** | | | | |
| **Core Content: Complex Systems** | | | | |
| **Topic: Inputs and Outputs** | | | | |
| **Grade: 4-5 (SYSC)** | | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | | **Sample Tasks** |
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|  | **3.5** | | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe what goes into a system (input) and what comes out of a system (output) *(e.g., when making cookies, inputs include sugar, flour, and chocolate chips; outputs are finished cookies)* * describe the effect on a system if its input is changed *(e.g., if sugar is left out, the cookies will not taste very good)*   **The student exhibits no major errors or omissions.** | | |  |
|  | **2.5** | | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls what goes into a system (inputs) given outputs or what comes out of a system (output) given inputs * recognizes or recalls accurate statements about the effect on a system if its input is changed *(e.g., if sugar is left out, the cookies will not taste very good)* * recognizes or recalls basic terminology such as: input, output   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | | * Given the input, identify the outputs of a system. * Given a system with an input that is changed, choose the correct effect. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content | |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | | |
|  | **0.5** | | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Complex Systems** | | | |
| **Topic: Damaged Systems** | | | |
| **Grade: 4-5 (SYSD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict what might happen to a system if a part in one or more of its subsystems is missing, broken, worn out, mismatched, or misconnected *(e.g., a broken toe will affect the skeletal system, which can greatly reduce a person’s ability to walk)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about what might happen to a system if a part in one or more of its subsystems is missing, broken, worn out, mismatched, or misconnected *(e.g., a broken toe will affect the skeletal system, which can greatly reduce a person’s ability to walk)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Planning Investigations** | | | |
| **Topic: Question** | | | |
| **Grade: 4-5 (INQA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * identify the questions being asked in an investigation * gather scientific evidence that helps to answer a question   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * gathers scientific evidence that helps to answer a teacher-directed question   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Planning Investigations** | | | |
| **Topic: Investigate** | | | |
| **Grade: 4-5 (INQB) (INQC)(INQD)(INQE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * given a research question, plan an appropriate investigation, which may include systematic observations, field studies, models, open-ended explorations, or controlled experiments * work collaboratively with other students to carry out a controlled experiment, selecting appropriate tools and demonstrating safe and careful use of equipment * gather, record, and organize data using appropriate units, tables, graphs, or maps * explain why additional trials are needed *(e.g., to ensure that the results are repeatable)* * critique an experiment, noting when the experiment might not be fair because things that might change the outcome are not kept the same   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * performs a teacher designed investigation * reads data from tables, graphs or maps * recognizes or recalls accurate statements about additional trials   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Planning Investigations** | | | |
| **Topic: Models** | | | |
| **Grade: 4-5 (INQF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * create a simple model to represent an event, system, or process * use a model to learn something about the event, system, or process and explains what was learned * explain how a model is similar to and different from the thing being modeled   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * chooses a model, from a given group, to represent an event, system or process * recognizes or recalls accurate statements about how a model represents an event, system or process   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Planning Investigations** | | | |
| **Topic: Explain** | | | |
| **Grade: 4-5 (INQG)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * generate a conclusion from a scientific investigation and show how the conclusion is supported by evidence and other scientific principles   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * chooses an appropriate conclusion to a scientific investigation from a list   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Planning Investigations** | | | |
| **Topic: Communicate** | | | |
| **Grade: 4-5 (INQH)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * display the findings of an investigation using tables, graphs, or other visual means to represent the data accurately and meaningfully * communicates orally to peers the purpose, procedure, results, and conclusions of an investigation * discuss differences in findings and conclusions reported by other students and compare to their own findings and conclusions   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * competes a teacher provided table, graph or other visual means of representing data * recognizes or recalls accurate statements about the purpose, procedure, results and conclusions of a given investigation   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Planning Investigations** | | | |
| **Topic: Intellectual Honesty** | | | |
| **Grade: 4-5 (INQI)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain why records of observations must never be changed, even when the observations do not match expectations   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about observations and why they should not be changed   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Using Technology** | | | |
| **Grade: 4-5 (APPA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe ways that people use technology to meet their needs and wants *(e.g., text messages to communicate with friends, use bicycles or cars for transportation)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls ways that people use technology to meet their needs and wants   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given the condition (need to transport something), student will identify the technology (vehicle with wheels) needed. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Different Solutions to Similar Problems** | | | |
| **Grade: 4-5 (APPB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how people around the world use different materials or technologies to solve the same problem *(e.g., people in different countries use different materials to build their houses)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of how people around the world use different materials or technologies to solve the same problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Identify the materials used, by people of different cultures, to build houses. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Technological Design** | | | |
| **Grade: 4-5 (APPC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * define a problem and list criteria for a successful solution * research a problem to better understand the need and to see how others have solved similar problems   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * given a problem, chooses an appropriate solution * describes how others have solved similar problems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Team Work** | | | |
| **Grade: 4-5 (APPD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * work with other students to generate possible solutions to a problem and agree on the most promising solution based on how well each different idea meets the criteria for a successful solution   **The student exhibits no major errors or omissions.** | | * Work with other students to build a rubber band powered car that goes farther than a specified distance. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * works with other students to generate a list of possible solutions to a problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Work with other students to create a list of things needed to build a rubber band powered car. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Testing Solutions** | | | |
| **Grade: 4-5 (APPE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * select and use suitable tools, techniques, and materials to make a drawing or build a model or prototype of a proposed design, test the model/prototype and modify the design, if necessary   **The student exhibits no major errors or omissions.** | | * Build a self-propelled vehicle using materials of student choice, test the car and make modifications to meet design requirements. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * builds a model or prototype of a proposed design when given a prompt, tools, techniques and materials, and recognize flaws to the design   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Communicating Results** | | | |
| **Grade: 4-5 (APPF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * communicate the solution, results of any tests, and modifications persuasively, using oral, written, and/or pictorial representations of the process and product   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * communicates the solution to a problem using oral, written, and/or pictorial representations of the process and product using a teacher provided outline to communicate the results of the testing   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Student explains how they solved problems related to the building a self propelled vehicle to a group of peers using a teacher provided outline. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Science and Technology** | | | |
| **Grade: 4-5 (APPG)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe specific ways that science and technology have improved the quality of the students’ lives   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the ways that science and technology have improved the quality of the students’ lives   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Different Technologies** | | | |
| **Topic: Careers** | | | |
| **Grade: 4-5 (APPH)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe activities or careers that require people to apply their knowledge and abilities in science, technology, engineering, and mathematics   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about activities or careers that require people to apply their knowledge and abilities in science, technology, engineering, and mathematics   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: Earth in Space** | | | |
| **Topic: Earth’s Shape and Gravity** | | | |
| **Grade: 4-5 (ES1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give evidence to support the idea that Earth is spherical in shape *(e.g., research Earth images from space, shape of Earth’s shadow on the Moon during an eclipse of the Moon)* * demonstrate that all things fall “down” toward Earth’s center   **The student exhibits no major errors or omissions.** | | * Student cites two pieces of evidence that the Earth is spherical in shape: research Earth images from space, shape of Earth’s shadow on the Moon during an eclipse of the Moon. * Given a diagram of the Earth students draw the direction objects fall from above the pole, and at the equator. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the shape of the Earth and the evidence that it is spherical * recalls that falling objects drop toward the Earth’s surface   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Identify spherical as the shape of the Earth. * Student draws the surface of the Earth where they are and the direction an object would fall when dropped. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: Earth in Space** | | | |
| **Topic: Earth’s Rotation** | | | |
| **Grade: 4-5 (ES1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that Earth’s spin relative to the Sun causes night and day   **The student exhibits no major errors or omissions.** | | * Use a physical model or diagram to show that Earth’s spin causes night and day. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the Earth’s spin and the causes of night and day   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Answer questions about a provided diagram of the Earth’s spin. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: Earth in Space** | | | |
| **Topic: Earth’s Revolution** | | | |
| **Grade: 4-5 (ES1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that the Earth’s orbit around the Sun causes us to see different constellations at different times of the year   **The student exhibits no major errors or omissions.** | | * Use a physical model or diagram to show how the different constellations are visible in different seasons, as a consequence of Earth orbiting the Sun. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the Earth’s rotation around the Sun   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: Earth in Space** | | | |
| **Topic: The Sun as a Star** | | | |
| **Grade: 4-5 (ES1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * identify that our Solar System contains only one star, the Sun * explain that the Sun appears brighter and larger than any other star because it is very close to us   **The student exhibits no major errors or omissions.** | | * Label a diagram of the solar system identifying the Sun as a star. * Describe why the Sun appears brighter and larger than any other star. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes the Sun as a star and that stars give off light   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given the choice between planet, star, comet, student identifies the Sun as a star. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Formation of Earth Materials** | | | |
| **Topic: Properties and Uses of Earth Materials** | | | |
| **Grade: 4-5 (ES2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe Earth materials and list their physical and chemical properties * explain how the properties of an Earth material make it useful for certain purposes, but not useful for other purposes *(e.g., rocks are heavy and strong so they are good for building walls, but they are not as useful as lighter materials for roofs)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of Earth materials that provide many of the resources that humans use * gives examples of human-made materials, including those that are changed only a little *(e.g., wood and stones used for building)* and those that look very different from the raw materials *(e.g., metal, ceramics, and plastics)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Formation of Earth’s Materials** | | | |
| **Topic: Weathering of Rock** | | | |
| **Grade: 4-5 (ES2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the physical and chemical processes of weathering of rock   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes and recalls basic terminology such as: physical and chemical weathering * gives examples of the physical and chemical processes of weathering of rock   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Formation of Earth’s Materials** | | | |
| **Topic: Erosion** | | | |
| **Grade: 4-5 (ES2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the forces of water and wind as major causes of erosion * identify local examples where erosion has occurred and describe the processes that most likely caused the erosion   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes the forces of water and wind as the major causes of erosion OR recognizes or recalls accurate statements about erosion   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Formation of Earth’s Materials** | | | |
| **Topic: Formation of Soils** | | | |
| **Grade: 4-5 (ES2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how the formation of soils is related to the following processes: weathering of rock; decay of plant matter; settling of volcanic ash; transport by rain, streams, and rivers; deposition of sediments in rivers and lakes   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of processes that form soils   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Formation of Earth’s Materials** | | | |
| **Topic: Properties of Soils** | | | |
| **Grade: 4-5 (ES2E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare different layers in soil with respect to physical properties *(e.g., color, texture, particle size, amount of dead plant and animal material, capacity for holding water)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes color, texture and particle size as properties of soil   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Formations of Earth Materials** | | | |
| **Topic: Soil Erosion** | | | |
| **Grade: 4- 5 (ES2F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain the role that erosion plays in forming soils and how erosion can also deplete soils * describe methods people use to reduce soil   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how erosion contributes to the formation and depletion of soils   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Focus on Fossils** | | | |
| **Topic: Formation of Fossils** | | | |
| **Grade: 4-5 (ES3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe an event that could cause the formation of a given fossil *(e.g., the plant or animal may have been buried in sediment that hardened into rock and left an imprint, or dissolved minerals may have seeped into a piece of wood and hardened into rock)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the formation of fossils   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Focus on Fossils** | | | |
| **Topic: Fossil Evidence** | | | |
| **Grade: 4-5 (ES3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * infer from a picture of several fossils in a layer of rock the environmental conditions that existed when the fossils were formed *(e.g., fish fossils would indicate that a body of water existed at the time the fossils formed)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the fossils found in a given picture   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Structures and Behaviors** | | | |
| **Topic: Sorting Plants and Animals** | | | |
| **Grade: 4-5 (LS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * sort plants and animals according to their structures *(e.g., presence of hair,* feathers*, or scales on their skin)* and behaviors *(e.g., grazing, hunting, or diving for food)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls differences in structures or behaviors between two or more plants or two or more animals   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Structures and Behaviors** | | | |
| **Topic: Animal Structures and Functions** | | | |
| **Grade: 4-5 (LS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how parts of an animal’s body helps the animal meet its basic needs *(e.g., the bones support the body so it can move; the blood carries food and oxygen throughout the body)* * describe the function of a given animal behavior *(e.g., salmon swim upstream to spawn, owls hunt at night when prey are vulnerable)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of parts of an animal’s body that help the animal meet its basic needs *(e.g., the bones support the body so it can move; the blood carries food and oxygen throughout the body)* * recognizes or recalls the function of a given animal behavior   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Structures and Behaviors** | | | |
| **Topic: Responding to Environmental Change** | | | |
| **Grade: 4-5 (LS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how plants and animals respond to their environment *(e.g., many plants grow toward the light, animals hide when they see a predator)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of how plants and animals respond to their environment *(e.g., many plants grow toward the light, animals hide when they see a predator)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Structures and Behaviors** | | | |
| **Topic: Responding to Internal Needs** | | | |
| **Grade: 4-5 (LS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe and give examples of how plants and animals respond to internal needs *(e.g., plants wilt when they don’t have water; animals seek food when they are hungry)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of how plants and animals respond to internal needs   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Structures and Behaviors** | | | |
| **Topic: Nutrition and Health** | | | |
| **Grade: 4-5 (LS1E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how various types of foods contribute to the maintenance of healthy body structures   **The student exhibits no major errors or omissions.** | | * Develop a balanced plan for eating that will allow you to build and maintain your body. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls various types of foods that contribute to the maintenance of healthy body structures   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Food Webs** | | | |
| **Topic: Ecosystem Characteristics** | | | |
| **Grade: 4-5 (LS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give examples to show how the plants and animals depend on one another for survival *(e.g., worms decompose waste and return nutrients to the soil, which helps plants grow)* * describe how the plants and animals in an ecosystem depend on nonliving resources   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the living and nonliving parts of an ecosystem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Food Webs** | | | |
| **Topic: Food is Energy** | | | |
| **Grade: 4-5 (LS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that plants make their own food, and animals, including humans, get food by eating plants and/or eating other animals   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls that plants make their own food, and animals, including humans, get food by eating plants and/or eating other animals   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Food Webs** | | | |
| **Topic: Food Webs** | | | |
| **Grade: 4-5 (LS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * draw a simple food web given a list of three common organisms (draw arrows to properly to identify the producers and consumers) * compare the roles of producers, consumers, and decomposers in an ecosystem   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes examples of food webs * describes producers, consumers and decomposers   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Food Webs** | | | |
| **Topic: Changes Over Time** | | | |
| **Grade: 4-5 (LS2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict whether and how a slow or rapid change in the ecosystem might affect the population of that plant or animal   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * gives examples of plant and/or animal populations that have changed due to changes in their ecosystems and describes the changes that occurred   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Food Webs** | | | |
| **Topic: Organisms Affect Ecosystems** | | | |
| **Grade: 4-5 (LS2E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how one population may affect other plants and/or animals in the ecosystem *(e.g., increase in Scotch Broom replaces native plants normally eaten by butterfly caterpillars, reducing the butterfly population)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about populations that affect each other   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Food Webs** | | | |
| **Topic: People Affect Ecosystems** | | | |
| **Grade: 4-5 (LS2F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe ways that humans can improve the health of ecosystems *(e.g., recycling wastes, establishing rain gardens, planting native species to prevent flooding and erosion)* * describe ways that humans can harm the health of ecosystems *(e.g., overuse of fertilizers, littering, not recycling)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about humans and our impact on the health of ecosystems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Heredity and Adaptation** | | | |
| **Topic: Population Changes** | | | |
| **Grade: 4-5 (LS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the reasons why some populations may not survive as well as others * evaluate similar populations in an ecosystem with regard to their ability to thrive and grow *(e.g., bird populations with differently colored feathers)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * given a list of animals/plants, recognizes the features they posses to help them survive   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Heredity and Adaptation** | | | |
| **Topic: Inherited Characteristics** | | | |
| **Grade: 4-5 (LS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give examples to illustrate an inherited characteristic that would enable an organism to better survive and reproduce in a given ecosystem   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls characteristics that plants and animals inherit from the parents of the plant or animal *(e.g., color of flower, number of limbs etc.)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Heredity and Adaptation** | | | |
| **Topic: Characteristics and Environment** | | | |
| **Grade: 4-5 (LS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how characteristics or behaviors can result from an individual plant’s or animal’s interactions with the environment and are not passed from one generation to the next by heredity *(e.g., trees can lose a limb, animals can have accidents that cause scars, people can exercise and build muscles)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes attributes that resulted from interactions with the environment when given a variety of pictures of plants and animals   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Heredity and Adaptation** | | | |
| **Topic: Fossil Evidence** | | | |
| **Grade: 4-5 (LS3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare and contrast fossils with one another and with living plants and animals to illustrate that fossils provide evidence that plant and animal species have changed over time   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about fossils and how they provide evidence of how species have changed over time   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Measurements of Force and Motion** | | | |
| **Topic: Weight** | | | |
| **Grade: 4-5 (PS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use a spring scale to measure the weights of several objects accurately, record the measurements in a table, and explain that the weight of an object is a measure of the force of gravity on the object   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recalls accurate statements about the relationship between weight and gravity   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Measurements of Force and Motion** | | | |
| **Topic: Speed** | | | |
| **Grade: 4-5 (PS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * measure the distance that an object travels in a given interval of time and compare it with the distance that another object moved in the same interval of time to determine which is fastest * measure the time it takes two objects to travel the same distance and determine which is fastest   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes faster as a function of distance and time   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: States of Matter** | | | |
| **Topic: States of Matter** | | | |
| **Grade: 4-5 (PS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how water is still the same substance when it is frozen as ice or evaporated and becomes a gas   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the water cycle   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: States of Matter** | | | |
| **Topic: Air** | | | |
| **Grade: 4-5 (PS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that a balloon expands when you blow air into it because blowing air into the balloon creates greater air pressure inside the balloon than outside the balloon * describe how the wind can move things *(e.g., wind can move the branches of trees when it blows and moves sailboats through the water)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about air pressure   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: States of Matter** | | | |
| **Topic: Conserving Matter** | | | |
| **Grade: 4-5 (PS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that dissolved substances have not disappeared, and cite evidence to determine that the substance is still there *(e.g., sprinkle sugar on cereal, add milk, and you can taste it even though you can no longer see the sugar)* * predict that the weight of a sample of water will be nearly the same before and after it is frozen or melted and explain why the weight will be almost the same * if an object is weighed, then broken into small pieces, predict that the small pieces will weigh the same as the large piece and explain why the weight will be the same   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how matter is conserved   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Heat, Light, Sound and Electricity** | | | |
| **Topic: Forms of Energy** | | | |
| **Grade: 4-5 (PS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe different forms of energy *(e.g., heat, light, sound, motion, electricity)* in a system   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about or examples of forms of energy in a system   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Heat, Light, Sound and Electricity** | | | |
| **Topic: Energy Transfer** | | | |
| **Grade: 4-5 (PS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * draw and label diagrams showing several ways that energy can be transferred from one place to another *(e.g., sound energy passing through air, electrical energy through a wire, heat energy conducted through a frying pan, light energy through space)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how energy can be transferred   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Heat, Light, Sound and Electricity** | | | |
| **Topic: Heat Energy** | | | |
| **Grade: 4-5 (PS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give examples of two different ways that heat energy can move from one place to another, and explain which direction the heat moves *(e.g., when placing a pot on the stove, heat moves from the hot burner to the cooler pot)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of ways to generate heat energy *(e.g.,* lighting *a match, rubbing hands together, or mixing different kinds of chemicals together)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Heat, Light, Sound and Electricity** | | | |
| **Topic: Sound Energy** | | | |
| **Grade: 4-5 (PS3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * demonstrate how sound can be generated by vibrations * explain how sound energy is transferred through the air from a source to an observer   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the generation of a sound * recognizes or recalls accurate statements about the movement of sound through the air   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Heat, Light, Sound and Electricity** | | | |
| **Topic: Electrical Energy and Circuits** | | | |
| **Grade: 4-5 (PS3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * connect wires to produce a complete circuit involving a battery and at least one other electrical component (without direction from the teacher) to produce an observable change *(e.g., light a bulb, sound a buzzer, and make a bell ring)* independently * repair an electric circuit by completing a closed loop * describe how electrical energy is transferred from one place to another, and how it is transformed from electrical energy to different kinds of energy in the circuit above   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * connects wires to produce a complete circuit involving a battery and at least one other electrical component to produce an observable change *(e.g., light a bulb, sound a buzzer, and make a bell ring)* as a group * recognizes or recalls accurate statements about how electrical energy is transferred and transformed   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

**Grades 6-8**

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Inputs, Outputs, Boundaries and Flows** | | | |
| **Topic: Subsystems** | | | |
| **Grade 6-8 (SYSA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe subsystems and the larger encompassing system, given a system *(e.g., the heart is a system made up of tissues and cells, and is part of the larger circulatory system)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the subsystems and the larger encompassing system, when given a system   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Given a system, correctly choose from a list of subsystems in that system and the larger encompassing systems of which that system is part. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Inputs, Outputs, Boundaries and Flows** | | | |
| **Topic: Boundaries** | | | |
| **Grade 6-8 (SYSB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how the boundaries of a system can be drawn to fit the purpose of the study *(e.g., to study how insect populations change, a system might be a forest, a meadow in the forest, or a single tree)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the boundaries of a system drawn to fit the purpose of a study   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Inputs, Outputs, Boundaries and Flows** | | | |
| **Topic: Input/Output** | | | |
| **Grade 6-8 (SYSC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how output of matter or energy from a system can become input for another system *(e.g., household waste goes to a landfill)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of outputs of matter or energy from a system and how they become input for another system   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Inputs, Outputs, Boundaries and Flows** | | | |
| **Topic: Open and Closed Systems** | | | |
| **Grade 6-8 (SYSD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * analyze and defend whether a described system is open or closed   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes if the system is open or closed when given a description of a system   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Inputs, Outputs, Boundaries and Flows** | | | |
| **Topic: Matter and Energy in Systems** | | | |
| **Grade 6-8 (SYSE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * measure the flow of matter into and out of an open system and predict how the system is likely to change *(e.g., a bottle of water with a hole in the* bottom*, an ecosystem, an electric circuit)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how a system is likely to change, given the flow of matter into and out of an open system   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Inputs, Outputs, Boundaries and Flows** | | | |
| **Topic: Complex Systems** | | | |
| **Grade 6-8 (SYSF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe a complex societal issue with strong science and technology components from a systems point of view, highlighting how changes in one part of the system are likely to influence other parts of the system   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about a complex societal issue with strong science and technology components *(e.g., overfishing, global warming)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Question** | | | |
| **Grade: 6-8 (INQA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * generate a question that can be answered through scientific investigation *(e.g., creating a new question or refining or refocusing a broad and ill-defined question)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of questions that can be answered through scientific investigation   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Investigate** | | | |
| **Grade: 6-8 (INQB)(INQC) (IBQD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * plan and conduct a scientific investigation *(e.g., field study, systematic observation, controlled experiment, model, or simulation)* that is appropriate for the question being asked * plan and conduct a controlled experiment to test a hypothesis about a relationship between two variables. Determine which variables should be kept the same (controlled), which (independent) variable should be systematically manipulated, and which responding (dependent) variable is to be measured and recorded. Report any variables not controlled and explain how they might affect results   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * given a question, recognizes the appropriate scientific investigation type *(e.g., field study, systematic observation, controlled experiment, model, or simulation)* that is appropriate for the question being asked * given a plan, conducts a controlled experiment to test a hypothesis about a relationship between two variables. Identify which variables are kept the same (controlled), which (independent) variable are systematically manipulated, and which responding (dependent) variable is measured and recorded.   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Analyze and Communicate** | | | |
| **Grade: 6-8 (INQB)(INQC) (IBQD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * communicate results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative * recognize and interpret patterns – as well as variations from previously learned or observed patterns – in data, diagrams, symbols, and words * use statistical procedures *(e.g., median, mean, or mode)* to analyze data and make inferences about relationships   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * completes a picture, table, chart, diagram, graphic display, or text to communicate results clearly, accurately, and informatively * recognizes the patterns in data, diagrams, symbols, and words * uses statistical procedures *(e.g., median, mean, or mode)* to analyze data   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Model** | | | |
| **Grade: 6-8 (INQE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * create a model or simulation to represent the behavior of objects, events, systems, or processes. Use the model to explore the relationship between two variables and point out how the model or simulation is similar to or different from the actual phenomenon.   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the behavior of objects, events, systems or processes that are represented in a given model or simulation   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Explain** | | | |
| **Grade: 6-8 (INQF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * generate a scientific conclusion from an investigation using inferential logic, and clearly distinguish between results *(e.g., evidence)* and conclusions *(e.g., explanation)* * describe the differences between an objective summary of the findings and an inference made from the findings   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * chooses an appropriate conclusion based on evidence from a list of possible scientific conclusions * recognizes or recalls basic terminology such as : objective summary and inference   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Communicate Clearly** | | | |
| **Grade: 6-8 (INQG)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * prepare a written report of an investigation by clearly describing the question being investigated, what was done, and an objective summary of results. The report should provide evidence to accept or reject the hypothesis, explain the relationship between two or more variables, and identify limitations of the investigation.   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * uses a teacher provided template to prepare a written report of an investigation   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Intellectual Honesty** | | | |
| **Grade: 6-8 (INQH)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe flaws in scientific claims *(e.g., uncontrolled variables, overgeneralizations from limited data, and experimenter bias)* * listen actively and respectfully to research reports by other students and critique their presentations respectfully, using logical argument and evidence * engage in reflection and self-evaluation   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of flaws in scientific claims * recognizes or recalls basic terminology such as: reflection, self-evaluation, uncontrolled variables, overgeneralizations, experimenter bias   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Questioning and Investigating** | | | |
| **Topic: Consider Ethics** | | | |
| **Grade: 6-8 (INQI)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe ethical concerns and precautions in response to scenarios of scientific investigations involving animal experiments, research in natural ecosystems, and studies that involve human subjects   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of ethical concerns involving animal experiments, research in natural ecosystems and studies that involve human subjects   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Technology** | | | |
| **Grade: 6-8 (APPA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how a technology has changed over time in response to societal challenges   **The student exhibits no major errors or omissions.** | | * Given the example of a light bulb a student can describe how light bulbs of today are more energy efficient and what societal issues made that happen. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how a technology has changed over time in response to societal challenges   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Careers** | | | |
| **Grade: 6-8 (APPB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * investigate professions in which an understanding of science and technology is required and explain why that understanding is necessary for success in each profession   **The student exhibits no major errors or omissions.** | | * Research careers in a profession such as medicine and explain how science and technology is used in that profession. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about or examples of professions in which an understanding of science and technology is required and how they are used   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Consider the medical profession and recall the science and technology required in that profession. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Science and Technology** | | | |
| **Grade: 6-8 (APPC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how scientists have helped solve technological problems *(e.g., how the science of biology has helped sustain fisheries)* and how engineers have aided science *(e.g., designing telescopes to discover distant planets)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples where scientists or engineers have worked together to help solve technological problems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * From a list, ask students to identify examples where scientists and engineers have worked together to solve technological problems. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Problem Solving** | | | |
| **Grade: 6-8 (APPD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * define a problem that can be solved by technological design and determine the criteria for success * research how others solved similar problems * brainstorm different solutions   **The student exhibits no major errors or omissions.** | | * Students take a problem such as recycling, define the problem and criteria for success, research how others solve the problem and brainstorm solutions that result in conserving natural resources. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: technological design, criteria, solutions * recognizes or recalls examples of problems that can be solved by technological design   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Identify the definition of 1) technological design, 2) criteria, 3) solutions * Identify a problem such as recycling that can be solved by technological design. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Team Work** | | | |
| **Grade: 6-8 (APPE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * collaborate with other students to generate creative solutions to a problem *(e.g., Communication following a disaster)* * apply methods to choose the best solution (see APPF for methods)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of appropriate, creative solutions to a problem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Testing Solutions** | | | |
| **Grade: 6-8 (APPF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * test a chosen solution by building a model or other representation and using it with the intended audience, and redesign and retest as necessary * present the recommended design using models or drawings and an engaging presentation   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * tests a solution by building a model or other representation and uses it with an audience * presents the design using models or drawings   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Benefits of Science and Technology** | | | |
| **Grade: 6-8 (APPG)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare and contrast the benefits of science and technology enjoyed by people in industrialized and developing nations   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes a benefit of science and technology enjoyed by people in industrialized nations   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Problem Solving** | | | |
| **Topic: Cultural Contribution** | | | |
| **Grade: 6-8 (APPH)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe scientific or technological contributions to society by people in various cultures   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of scientific or technological contribution to society by people in various cultures   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: The Solar System** | | | |
| **Topic: Moon Phases and Eclipses** | | | |
| **Grade: 6-8 (ES1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use a physical model or diagram to explain how the Moon’s changing position in its orbit results in the changing phases of the Moon as observed from Earth * explain how the cause of an eclipse of the Moon is different from the cause of the Moon’s phases   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the Moon’s changing position in its orbit and its phases * recognizes or recalls accurate statements about an eclipse of the Moon   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: The Solar System** | | | |
| **Topic: Objects in the Solar System** | | | |
| **Grade: 6-8 (ES1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare the relative sizes, distances and compositions of the Sun, Moon, Earth, other major planets, moons, asteroids , and comets   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the relative sizes, distances and compositions of the Sun, Moon, Earth, other major planets, moons, asteroids, and comets   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.\*9+6** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: The Solar System** | | | |
| **Topic: Motion in the Solar System** | | | |
| **Grade: 6-8 (ES1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use a simple physical model or labeled drawing of the Earth-Sun-Moon system to explain day and night, phases of the Moon, and eclipses of the Moon and Sun   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the causes of day and night, phases of the Moon and eclipses of the Moon and Sun   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: The Solar System** | | | |
| **Topic: Gravity in the Solar System** | | | |
| **Grade: 6-8 (ES1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict and explain what would happen to an orbiting object if gravity were increased, decreased, or taken away   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: gravity * recognizes or recalls accurate statements about the effect of gravity on orbiting objects   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: The Solar System** | | | |
| **Topic: Solar System in the Universe** | | | |
| **Grade: 6-8 (ES1E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the position of objects in space relative to other objects *(e.g., Earth’s position in the solar system, the solar system’s position in the Milky Way, and the Milky Way among other galaxies)*   **The student exhibits no major errors or omissions.** | | * Construct a physical model or create a diagram of the Earth’s position in the solar system. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the position of objects in space   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Labels a teacher provided diagram of the solar system. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: Earth’s Atmosphere** | | | |
| **Grade: 6-8 (ES2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the composition and properties of the troposphere and stratosphere   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: troposphere and stratosphere * recognizes or recalls accurate statements about the composition and properties of troposphere and stratosphere   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: The Sun’s Influence on Wind, Waves and Water** | | | |
| **Grade: 6-8 (ES2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how the uneven heating of Earth’s surface by the Sun connects to global wind and ocean currents * describe the role of the Sun in the water cycle   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the uneven heating of the Earth’s surface * recognizes or recalls accurate statements about the role of the Sun in the water cycle   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: Water Cycle** | | | |
| **Grade: 6-8 (ES2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the water cycle and give local examples of where parts of the water cycle can be seen   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls how water changes as it progresses through the water cycle   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * Labels a diagram of the water cycle. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: Water as a Solvent** | | | |
| **Grade: 6-8 (ES2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the process of water dissolving minerals from rocks and soil as it progresses through the water cycle * explain how salt water becomes salty   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology about water as a solvent *(e.g., dissolves, solubility)* * recognizes or recalls accurate statements about how salt water becomes salty   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: Layers of the Earth** | | | |
| **Grade: 6-8(ES2E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * sketch and label the major layers of Earth, showing the approximate relative thicknesses and consistency of the crust, core, and mantle   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * lists the major layers of the Earth   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: Plate Tectonics** | | | |
| **Grade: 6-8 (ES2F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * show how convection in the upper mantle drives movement of crustal plates * describe what may happen when plate boundaries meet (*e.g., Earthquakes, tsunami, faults, mountain building)*, with examples from the Pacific Northwest   **The student exhibits no major errors or omissions.** | | * Draw a labeled diagram of the Earth’s crust at a subduction zone. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about plate tectonics * recognizes or recalls terminology about plate tectonic movement *(e.g., Earthquake, crust, convection, mantle)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **(Strand): Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: Origin of Landforms** | | | |
| **Grade: 6-8 (ES2G)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how a given landform *(e.g., mountain)* has been shaped by processes that build up structures *(e.g., uplift)* and by processes that break down and carry away material *(e.g., weathering and erosion)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes processes that build up (movement of plates) and breakdown structures (erosion)   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Cycles in Earth Systems** | | | |
| **Topic: Rock Cycle** | | | |
| **Grade: 6-8 (ES2H)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * identify samples of igneous, sedimentary, and metamorphic rock from their properties and describe how their properties provide evidence of how they were formed * explain how one kind of rock could eventually become a different kind of rock   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: igneous, sedimentary and metamorphic rocks   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evidence of Change** | | | |
| **Topic: Uniformitarianism** | | | |
| **Grade: 6-8 (ES3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe Earth processes that we can observe and measure today *(e.g., rate of sedimentation, movement of crustal plates, and changes in composition of the atmosphere)* that provide clues to Earth’s past   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * gives examples of observable Earth processes   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evidence of Change** | | | |
| **Topic: Age of Landforms** | | | |
| **Grade: 6-8 (ES3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how the age of landforms can be estimated by studying the number and thickness of rock layers, as well as fossils found within rock layers   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how the age of landforms is estimated   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evidence of Change** | | | |
| **Topic: Superposition** | | | |
| **Grade: 6-8 (ES3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain why younger layers of sedimentary rocks are usually on top of older layers * hypothesize what geologic events could have caused huge blocks of horizontal sedimentary layers to be tipped or older rock layers to be on top of younger rock layers   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: superposition   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evidence of Change** | | | |
| **Topic: Catastrophic Events** | | | |
| **Grade: 6-8 (ES3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe current landforms of the Pacific Northwest that provide evidence of past geologic events *(e.g., Mount St. Helens and Crater Lake provide evidence of volcanism, the Channeled Scablands provides evidence of floods that resulted from melting of glaciers)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about current landforms of the Pacific Northwest and their relationship with past geological events   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evidence of Change** | | | |
| **Topic: Life Shapes the Earth** | | | |
| **Grade: 6-8 (ES3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * list several ways that living organisms have shaped landforms *(e.g., coral islands, limestone deposits, oil and coal deposits)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes examples of living organisms that shape landforms   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structure and Function of Organisms (LS1)** | | | |
| **Core Content: From Cells to Organisms** | | | |
| **Topic: Cell Functions** | | | |
| **Grade: 6-8 (LS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * draw and describe observations made with a microscope showing that plants and animals are made of cells, and explain that cells are the fundamental unit of life * describe the functions performed by cells to sustain a living organism *(e.g., division to produce more cells, taking in nutrients, releasing waste, using energy to do work, and producing materials the organism needs)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the functions and importance of cells   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structure and Function of Organisms (LS1)** | | | |
| **Core Content: From Cells to Organisms** | | | |
| **Topic: Cell Parts** | | | |
| **Grade: 6-8 (LS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * draw and describe observations made with a microscope showing that a single-celled organism *(e.g., paramecium)* contains parts used for all life functions   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about single-celled organisms   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structure and Function of Organisms (LS1)** | | | |
| **Core Content: From Cells to Organisms** | | | |
| **Topic: Multi-Cellular Organisms** | | | |
| **Grade: 6-8 (LS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * relate the structure of a specialized cell *(e.g., nerve and muscle cells)* to the function that the cell performs * explain the relationship between tissues that make up individual organs and the functions the organ performs *(e.g., valves in the heart control blood flow, air sacs in the lungs maximize surface area for transfer of gases)* * describe the components and functions of the digestive, circulatory, and respiratory systems in humans and how these systems interact   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the components and functions of the digestive, circulatory and respiratory systems and the interactions between systems * recognizes or recalls accurate statements about the relationship between tissues and the function the organ performs   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structure and Function of Organisms (LS1)** | | | |
| **Core Content: From Cells to Organisms** | | | |
| **Topic: Plant and Animal Cell Parts** | | | |
| **Grade: 6-8 (LS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * illustrate similarities and differences between plant and animal cell structures and describe their functions *(e.g., both have nuclei, cytoplasm, cell membranes, and mitochondria, while only plants have chloroplasts and cell walls)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * lists plant and animal structures   **However, the student exhibits major errors** **or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structure and Function of Organisms (LS1)** | | | |
| **Core Content: From Cells to Organisms** | | | |
| **Topic: Classifying Organisms** | | | |
| **Grade: 6-8 (LS1E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use a classification key to identify organisms, noting use of both internal and external structures as well as behaviors   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls classification characteristics   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structure and Function of Organisms (LS1)** | | | |
| **Core Content: From Cells to Organisms** | | | |
| **Topic: Lifestyle Choices and Environments** | | | |
| **Grade: 6-8 (LS1F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * evaluate how lifestyle choices and environments *(e.g., tobacco, drug, and alcohol use, amount of exercise, quality of air, and kinds of food)* affect parts of the human body and the organism as a whole   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes good and poor lifestyle choices   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Flow of Energy Through Ecosystems** | | | |
| **Topic: Populations and Ecosystems** | | | |
| **Grade: 6-8 (LS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe an ecosystem and the components that make up the ecosystem *(e.g., a defined area that contains populations of organisms and nonliving factors)* * give examples of ecosystems *(e.g., Olympic National Forest, Puget Sound, one square foot of lawn)* and describe their boundaries and contents   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: ecosystem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Flow of Energy Through Ecosystems** | | | |
| **Topic: Energy Flow in Ecosystems** | | | |
| **Grade: 6-8 (LS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * analyze the flow of energy in a local ecosystem, and draw a labeled food web showing the relationships among all of the ecosystem’s plant and animal populations   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the flow of energy in a given ecosystem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Flow of Energy Through Ecosystems** | | | |
| **Topic: Sun Energy and Ecosystems** | | | |
| **Grade: 6-8 (LS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how energy from the Sun is transformed through photosynthesis to produce chemical energy in food * explain that plants are the only organisms that make their own food, and that animals cannot survive without plants because animals get food by eating plants or other animals that eat plants   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: photosynthesis * recognizes or recalls accurate statements about how plants and animals get their food   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Flow of Energy Through Ecosystems** | | | |
| **Topic: Changing Ecosystems** | | | |
| **Grade: 6-8 (LS2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict what may happen to an ecosystem if nonliving factors change *(e.g., the amount of light, range of temperatures, or availability of water or habitat),* or if one or more populations are removed from or added to the ecosystem   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls changes in a given ecosystem   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Flow of Energy Through Ecosystems** | | | |
| **Topic: Investigating Environmental Issues** | | | |
| **Grade: 6-8 (LS3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * investigate a local environmental issue by defining the problem, researching possible causative factors, understanding the underlying science, and evaluating the benefits and risks of alternative solutions * describe resource uses that reduce the capacity of ecosystems to support various populations *(e.g., use of pesticides, construction)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about a local environmental issue * recognizes or recalls accurate statements about resource uses that reduce the capacity of ecosystems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Inheritance, Variation and Adaptation** | | | |
| **Topic: Diversity of Life** | | | |
| **Grade: 6-8 (LS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain and provide evidence of how biological evolution accounts for the diversity of species on Earth today   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: biological evolution * recognizes or recalls accurate statements about biological evolution   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Inheritance, Variation and Adaptation** | | | |
| **Topic: Genetic Information** | | | |
| **Grade: 6-8 (LS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that information on how cells are to grow and function is contained in genes in the chromosomes of each cell nucleus and that during the process of reproduction the genes are passed from the parent cells to offspring   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how genetic information is passed on   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Inheritance, Variation and Adaptation** | | | |
| **Topic: Reproduction and Diversity** | | | |
| **Grade: 6-8 (LS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain why offspring that result from sexual reproduction are likely to have more diverse characteristics than offspring that result from asexual reproduction   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of sexually and asexually reproducing plants and animals   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Inheritance, Variation and Adaptation** | | | |
| **Topic: Sexual and Asexual Reproduction** | | | |
| **Grade: 6-8 (LS3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe that in sexual reproduction, the offspring receive genetic information from both parents, and therefore differ from the parents * predict the outcome of specific genetic crosses involving one characteristic (using principles of Mendelian genetics) * explain the survival value of genetic variation   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate predictions of the outcomes of genetic crosses * recognizes or recalls accurate statements about the survival value of genetic variation * recognizes or recalls accurate statements about sexual reproduction and the transfer of genetic information   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Inheritance, Variation and Adaptation** | | | |
| **Topic: Adaptations** | | | |
| **Grade: 6-8 (LS3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe a plant or animal adaptation that would confer a survival and reproductive advantage during a given environmental change   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about plant and animal adaptations   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Inheritance, Variation and Adaptation** | | | |
| **Topic: Extinction** | | | |
| **Grade: 6-8 (LS3F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict which organisms are most likely to disappear from a given ecosystem when the environment changes in specific ways   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes extinction   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Inheritance, Variation and Adaptation** | | | |
| **Topic: Evidence for Evolution** | | | |
| **Grade: 6-8 (LS3G)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * infer the degree of relatedness of two species, given diagrams of anatomical features of the two species *(e.g., chicken wing, whale flipper, human hand, bee leg)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes how two species are alike or unlike based on diagrams of anatomical features   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Balanced and Unbalanced Forces** | | | |
| **Topic: Average Speed** | | | |
| **Grade: 6-8 (PS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * measure the distance an object travels in a given interval of time and calculate the object’s average speed, using S = d/t*(e.g., a battery-powered toy car travels 20 meters in 5 seconds, so its average speed is 4 meters per second)* * illustrate the motion of an object using a graph, or infer the motion of an object from a graph of the object’s position vs. time or speed vs. time   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the formula for average speed * completes a teacher provided graph showing the motion over time of an object   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Balanced and Unbalanced Forces** | | | |
| **Topic: Friction** | | | |
| **Grade: 6-8 (PS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * demonstrate and explain the frictional force acting on an object with the use of a physical model   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about frictional force acting on an object   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Balanced and Unbalanced Forces** | | | |
| **Topic: Unbalanced Forces** | | | |
| **Grade: 6-8 (PS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * determine whether forces on an object are balanced or unbalanced and justify with observational evidence * given a description of forces on an object, predict the object’s motion   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes balanced and unbalanced forces   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Balanced and Unbalanced Forces** | | | |
| **Topic: Force, Mass and Motion** | | | |
| **Grade: 6-8 (PS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * given two different masses that receive the same unbalanced force, predict and explain which will move more quickly   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the relationship between mass, force and acceleration   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Atoms and Molecules** | | | |
| **Topic: Characteristic Properties** | | | |
| **Grade: 6-8 (PS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use characteristic intrinsic properties such as density, boiling point, and melting point to identify an unknown substance   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls characteristic intrinsic properties of various substances   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Atoms and Molecules** | | | |
| **Topic: Mixtures and Compounds** | | | |
| **Grade: 6-8 (PS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * separate a mixture using differences in properties *(e.g., solubility, size, magnetic attraction)* of the substances used to make the mixture * demonstrate that the properties of a compound are different from the properties of the reactants from which it was formed   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls that mixtures are formed by combining substance and can be separated by physical means * recognizes or recalls that compounds are formed by chemical reaction and cannot be separated by physical means   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Atoms and Molecules** | | | |
| **Topic: Atomic Nature of Matter** | | | |
| **Grade: 6-8 (PS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain that all matter is made of (atoms), and give examples of common elements—substances composed of just one kind of atom   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about composition of matter and elements   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Atoms and Molecules** | | | |
| **Topic: Molecules** | | | |
| **Grade: 6-8 (PS2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * demonstrate with a labeled diagram and explain the relationship among atoms, molecules, elements, and compounds   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the relationship among atoms, molecules, elements and compounds   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Atoms and Molecules** | | | |
| **Topic: Particle Motion and Phase of Matter** | | | |
| **Grade: 6-8 (PS2E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how solids, liquids, and gases behave when put into a container *(e.g., a gas fills the entire volume of the container)* and relate these properties to the relative movement of the particles in the three states of matter   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the movement of particles in solids, liquids and gases   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Atoms and Molecules** | | | |
| **Topic: Conservation of Mass** | | | |
| **Grade: 6-8 (PS2F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * apply the concept of conservation of mass to correctly predict changes in mass before and after chemical reactions, including reactions that occur in closed containers, and reactions that occur in open containers where a gas is given off   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * explains that mass is conserved in a chemical reaction   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Interactions of Energy and Matter** | | | |
| **Topic: Energy, Transfer and Transformations** | | | |
| **Grade: 6-8 (PS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe ways in which energy is transformed from one form to another and is transferred from one place to another *(e.g., chemical to electrical energy in a battery, electrical to light energy in a bulb)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * lists different forms of energy *(e.g., thermal, light, chemical, electrical, kinetic, and sound energy)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Interactions of Energy and Matter** | | | |
| **Topic: Heat Transfer** | | | |
| **Grade: 6-8 (PS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use everyday examples of conduction, radiation, and convection, or mechanical mixing, to illustrate the transfer of heat energy from warmer objects to cooler ones until the objects reach the same temperature   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the processes of conduction, radiation, convection and mechanical mixing   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Interactions of Energy and Matter** | | | |
| **Topic: Thermal Insulators** | | | |
| **Grade: 6-8 (PS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how various types of insulation slows transfer of heat energy based on the atomic-molecular model of heat (thermal energy)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * gives examples of different types of insulation * describes how insulation works   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Interactions of Energy and Matter** | | | |
| **Topic: Visible Light** | | | |
| **Grade: 6-8 (PS3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how to demonstrate that visible light from the Sun is made up of different colors * draw and label a diagram showing that for an object to be seen, light must come directly from the object or from an external source reflected from the object, and enter the eye   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about visible light and the process required for an object to seen   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Interactions of Energy and Matter** | | | |
| **Topic: Electrical Energy** | | | |
| **Grade: 6-8 (PS3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * illustrate the transformations of energy in an electric circuit when heat, light, and sound are produced * describe the transformation of energy in a battery within an electric circuit   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the transformation of energy in an electrical circuit   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Interactions of Energy and Matter** | | | |
| **Topic: Waves** | | | |
| **Grade: 6-8 (PS3F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * contrast a light wave with a sound wave by identifying that both have characteristic wavelengths, but light waves can travel through a vacuum while sound waves cannot * explain that sound is caused by a vibrating object   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about light waves and sound waves   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

Grades 9-12

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| **EALR 1: Systems** | | | | |
| **Big Idea: Systems (SYS)** | | | | |
| **Core Content: Predictability and Feedback** | | | | |
| **Topic: Feedback in Systems** | | | | |
| **Grade 9-12 (SYSA)** | | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | | **Sample Tasks** |
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|  | **3.5** | | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give an example of a positive feedback system and explain its regulatory mechanism *(e.g., global warming causes Earth’s ice caps to melt, reflecting less energy to space, increasing temperatures)* * give an example of a negative feedback system and explain its regulatory mechanism *(e.g., when a human body overheats, it produces sweat that cools the body by evaporation)*   **The student exhibits no major errors or omissions.** | | | * Describe how global warming causes Earth’s ice caps to melt, reflecting less energy to space, increasing temperatures. |
|  | **2.5** | | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of a positive feedback system and its regulatory mechanism * recognizes or recalls examples of a negative feedback system and its regulatory mechanism * recognizes or recalls basic terminology such as: feedback, regulatory mechanism   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | | * Given a list of examples of feedback systems identify those that are positive feedback and those that are negative feedback. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content | |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content | |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Predictability and Feedback** | | | |
| **Topic: Systems Thinking** | | | |
| **Grade 9-12 (SYSB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * determine if a systems approach will be helpful in answering a question or solving a problem * represent a system with a diagram specifying components, boundaries, flows, and feedbacks * describe relevant subsystems and the larger system that contains the system being analyzed * determine how a system functions with respect to other systems   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the criteria used to determine if a systems approach is useful * completes a teacher provided diagram of a system * recognizes or recalls accurate statements about subsystems and the larger system that contains the system being studied * recognizes or recalls accurate statements about how a system functions in respect to other systems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Predictability and Feedback** | | | |
| **Topic: Complex Systems** | | | |
| **Grade 9-12 (SYSC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * create a simplified model of a complex system, trace the possible consequences of a change in one part of the system and explain how the simplified model may not be adequate to reliably predict consequences   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the possible consequences of a change in one part of the system and recognizes or recalls how the simplified model may not be adequate to reliably predict consequences given a simplified model of a complex system   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 1: Systems** | | | |
| **Big Idea: Systems (SYS)** | | | |
| **Core Content: Predictability and Feedback** | | | |
| **Topic: Equilibrium in Systems** | | | |
| **Grade 9-12 (SYSD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * analyze whether or not a system *(e.g., population)* is changing or in equilibrium * determine whether a state of equilibrium is static or dynamic *(e.g., inflows equal outflows)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of systems that are changing or in equilibrium * recognizes or recalls examples of static and dynamic equilibrium   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Analyses and Thinking Logically** | | | |
| **Topic: Question** | | | |
| **Grade: 9-12 (INQA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * generate and evaluate a question that can be answered through a scientific investigation * critique questions generated by others and explain whether or not the questions are scientific   **The student exhibits no major errors or omissions.** | | * From a list of Earthquake epicenters, generate a question that can be answered through a scientific investigation. * Exchange papers and critique one another’s questions. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the criteria for a scientific question   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * From a list of questions select one and give reasons why it is investigable or not. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Analyses and Thinking Logically** | | | |
| **Topic: Investigate** | | | |
| **Grade: 9-12 (INQB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * plan and conduct a scientific investigation, choosing a method appropriate to the question being asked * collect, analyze, and display data using calculators, computers, or other technical devices when available   **The student exhibits no major errors or omissions.** | | * Note to teacher – the use of technology is also in 9-12 APPD |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * conducts a teacher directed scientific investigation * analyzes given data   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Analyses and Thinking Logically** | | | |
| **Topic: Explain** | | | |
| **Grade: 9-12 (INQC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * draw conclusions supported by evidence from an investigation and consistent with established scientific knowledge * analyze alternative explanations and decide which best fits the data and evidence   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * chooses an appropriate conclusion from a list, that is supported by evidence and is consistent with established scientific knowledge * gives a logical explanation based on data and evidence   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Analyses and Thinking Logically** | | | |
| **Topic: Communicate Clearly** | | | |
| **Grade: 9-12(INQD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * write a detailed laboratory report that includes: the question that motivated the study, a justification for the kind of investigation chosen, hypotheses (if any), a description of what was done, a summary of data in tables and graphs, and a conclusion, based on the evidence, that responds to the question   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * completes a teacher provided lab report form   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Analyses and Thinking Logically** | | | |
| **Topic: Model** | | | |
| **Grade: 9-12(INQE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * formulate a hypotheses based on a model or theory of a causal relationship (demonstrate creativity and critical thinking to formulate and evaluate the hypotheses)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * matches given hypotheses to models or theories   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Analyses and Thinking Logically** | | | |
| **Topic: Communicate** | | | |
| **Grade: 9-12 (INQF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * evaluate an investigation to determine if it was a valid means of answering the question, and whether or not the results were reliable * describe the development of a scientific theory that illustrates logical reasoning, creativity, testing, revision, and replacement of prior ideas in light of new evidence   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the criteria used to evaluate an investigation based on validity and reliability * recognizes or recalls accurate statements about the development of a scientific theory * recognizes or recalls basic terminology such as: validity/reliability   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |
| **EALR 2: Inquiry** | | | |
| **Big Idea: Inquiry (INQ)** | | | |
| **Core Content: Conducting Analyses and Thinking Logically** | | | |
| **Topic: Intellectual Honesty** | | | |
| **Grade: 9-12 (INQG)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain inconsistent findings in a scientific discussion about one’s own investigations and those performed by others * respond to questions and criticisms, and if appropriate, revise explanations based on these discussions * provide appropriate citations for all ideas, findings, and information used in any and all written reports * explain the consequences for failure to provide appropriate citations   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the failure to provide appropriate citations * completes teacher provided citation worksheets   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Society** | | | |
| **Topic: Science Effects Society** | | | |
| **Grade: 9-12 (APPA)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe ways that scientific ideas have influenced society or the development of differing cultures * describe questions that scientists investigate that are stimulated by the needs of society *(e.g., medical research, global climate change)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the ways that scientific ideas have influenced society or the development of cultures * recognizes or recalls questions that scientists investigate that are stimulated by the needs of society *(e.g., medical research, global climate change)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Society** | | | |
| **Topic: Technological Design** | | | |
| **Grade: 9-12 (APPB)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * work collaboratively with other students to generate ideas for solving a problem (identify criteria and constraints, research the problem, and generate several possible solutions)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the steps of the problem solving process and the procedures for working collaboratively to solve problems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Society** | | | |
| **Topic: Choosing Solutions** | | | |
| **Grade: 9-12 (APPC)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * choose the best solution for a problem, create a model or drawing of the final design, and devise a way to test it. Redesign the solution, if necessary, then present it to peers.   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * matches problems to appropriate solutions   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Society** | | | |
| **Topic: Mathematical Solutions** | | | |
| **Grade: 9-12 (APPD)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use proportional reasoning, functions, graphing, and estimation to solve problems * use technology *(e.g., computers, probes, and software)* to collect, display, and analyze data   **The student exhibits no major errors or omissions.** | | * Note to teacher – the use of technology is also in 9-12 INQB |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * solves basic problems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Society** | | | |
| **Topic: Societal Trade offs** | | | |
| **Grade: 9-12 (APPE)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * analyze a societal issue that may be addressed through science and/or technology * compare and contrast alternative solutions by considering trade-offs and unintended consequences *(e.g., removing dams to increase salmon spawning)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about societal issues addressed through science * recognizes or recalls accurate statements about alternate solutions   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 3: Application** | | | |
| **Big Idea: Application (APP)** | | | |
| **Core Content: Science, Technology and Society** | | | |
| **Topic: Science and Society** | | | |
| **Grade: 9-12 (APPF)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * analyze scientific information in current events to make personal choices or to understand public-policy decisions   **The student exhibits no major errors or omissions.** | | * Students give examples of personal choices one would make based on scientific information (i.e., becoming a vegetarian, buying organic produce etc.). |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes current events that contain scientific information   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: Evolution of The Universe** | | | |
| **Topic: Formation of Elements in Stars** | | | |
| **Grade: 9-12 (ES1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * connect the life cycles of stars to the production of elements through the process of nuclear fusion   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the life cycle of a star   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth in Space (ES1)** | | | |
| **Core Content: Evolution of The Universe** | | | |
| **Topic: The Big Bang Theory** | | | |
| **Grade: 9-12 (ES1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * cite evidence that supports the “Big Bang theory” *(e.g., red shift of galaxies or 3K background radiation)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the big bang theory   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Energy in Earth Systems** | | | |
| **Topic: Global Climate** | | | |
| **Grade: 9-12 (ES2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain why Earth is warmer near the equator and cooler near the poles (due to the uneven heating of Earth by the Sun) * explain why it’s warmer in summer and colder in winter for people in Washington State (because the intensity of sunlight is greater and the days are longer in summer than in winter) and connect these seasonal changes in sunlight to the tilt of Earth’s axis with respect to the plane of its orbit around the Sun   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the uneven heating of the Earth by the Sun and the relationship to the tilt of Earth’s axis   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Energy in Earth Systems** | | | |
| **Topic: Factors that Influence Climate** | | | |
| **Grade: 9-12 (ES2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how the climate in the Pacific Northwest region is affected by seasonal weather patterns, as well as other factors such as the addition of greenhouse gases to the atmosphere and proximity to mountain ranges and to the ocean   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the climate in the Pacific Northwest   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Energy in Earth Systems** | | | |
| **Topic: Biogeochemical Cycles** | | | |
| **Grade: 9-12 (ES2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the different forms taken by carbon and nitrogen, and the reservoirs where they are found   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * gives examples of carbon found on Earth *(e.g., carbonate rocks such as limestone, in coal and oil, in the atmosphere as carbon dioxide gas, and in the tissues of all living organisms)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth Systems, Structures and Processes (ES2)** | | | |
| **Core Content: Energy in Earth Systems** | | | |
| **Topic: Renewable and Non-renewable Resources** | | | |
| **Grade: 9-12 (ES2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how human use of natural resources stress natural processes and link that use to a possible long term consequence   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls renewable and nonrenewable resources in the Pacific Northwest region   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evolution of The Earth** | | | |
| **Topic: Evolution of the Earth System** | | | |
| **Grade: 9-12 (ES3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe which Earth processes may have caused a given rock formation in the Pacific Northwest *(e.g., erosion, deposition, and scraping of terrain by glaciers, floods, volcanic eruptions, and tsunami)* * construct a possible timeline showing the development of rock formations in the Pacific Northwest   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls which Earth processes may have caused rock formations in the Pacific Northwest *(e.g., erosion, deposition, and scraping of terrain by glaciers, floods, volcanic eruptions, and tsunami)* * recognizes or recalls the age of major rock formations in the Pacific Northwest   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evolution of The Earth** | | | |
| **Topic: Geological Time** | | | |
| **Grade: 9-12 (ES3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how decay rates of radioactive materials in rock layers are used to establish the timing of geologic events * given a geologic event, explain multiple methods that could be used to establish the timing of that event   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * lists methods that can establish the timing of a geologic event   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evolution of The Earth** | | | |
| **Topic: Evolution of the Atmosphere** | | | |
| **Grade: 9-12 (ES3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare the chemical composition of the Earth’s atmosphere before bacteria and plants evolved and after they became widespread   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the current chemical composition of the Earth’s atmosphere   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Earth and Space Science** | | | |
| **Big Idea: Earth History (ES3)** | | | |
| **Core Content: Evolution of The Earth** | | | |
| **Topic: Historical Climate** | | | |
| **Grade: 9-12 (ES3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe factors that change climates over long periods of time and describe methods that scientists have found to gather information on ancient climates   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * lists factors that change climates and methods that scientists use to gather information on ancient climates   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Photosynthesis** | | | |
| **Grade: 9-12 (LS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how plant cells use photosynthesis to produce their own food, use the following equation to illustrate how plants rearrange atoms during photosynthesis: 6CO2+6H2O+light energy —> C6H12O6+6O2 * explain the importance of photosynthesis for both plants and animals, including humans   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: photosynthesis * recognizes or recalls accurate statements about the importance of photosynthesis * labels a diagram of the photosynthetic cycle   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Cellular Respiration** | | | |
| **Grade: 9-12 (LS1B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how the process of cellular respiration is similar to the burning of fossil fuels (*e.g., both processes involve combustion of carbon-containing compounds to transform chemical energy to a different form of energy)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes cellular respiration   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Cell Essential Functions** | | | |
| **Grade: 9-12 (LS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * draw, label, and describe the functions of components of essential structures within cells *(e.g., cellular membrane, nucleus, chromosome, chloroplast, mitochondrion, ribosome)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the components of essential structures within cells   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Cell Membrane** | | | |
| **Grade: 9-12 (LS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the structure of the cell and how the membrane regulates the flow of materials into and out of the cell   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the structure of the cell and the importance of the membrane   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Genetic Information and DNA** | | | |
| **Grade: 9-12 (LS1 E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * illustrate the process by which gene sequences are copied to produce proteins   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes howDNA molecules are long chains linking four subunits (smaller molecules) whose sequence encodes genetic information   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Chemical Reactions in Cells** | | | |
| **Grade: 9-12 (LS1F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how cells break down food molecules and use the constituents to synthesize proteins, sugars, fats, DNA and many other molecules that cells require * describe the role that enzymes play in the breakdown of food molecules and synthesis of the many different molecules needed for cell structure and function * explain how cells extract and store energy from food molecules   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how cells break down food molecules * recognizes or recalls accurate statements about the role that enzymes play in the breakdown of food * recognizes or recalls accurate statements about how cells extract and store energy   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Encoding Enzymes** | | | |
| **Grade: 9-12 (LS1G)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how regulation of cell functions can occur (by changing the activity of proteins within cells and/or by changing whether and how often particular genes are expressed)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about regulation of cell functions   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Mitosis** | | | |
| **Grade: 9-12 (LS1H)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe and model the process of mitosis, in which one cell divides, producing two cells, each with copies of both chromosomes from each pair in the original cell   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about mitosis   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Structures and Functions of Living Organisms (LS1)** | | | |
| **Core Content: Processes Within Cells** | | | |
| **Topic: Meiosis** | | | |
| **Grade: 9-12 (LS1I)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe and model the process of meiosis in which egg and sperm cells are formed with only one set of chromosomes from each parent * model and explain the process of genetic recombination that may occur during meiosis and how this then results in differing characteristics in offspring * describe the process of fertilization that restores the original chromosome number while reshuffling the genetic information, allowing for variation among offspring * predict and explain the outcome of specific genetic crosses involving two characteristics   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about meiosis * recognizes or recalls accurate statements about genetic recombination * recognizes or recalls accurate statements about fertilization   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Maintenance and Stability of Populations** | | | |
| **Topic: Energy and Matter Cycles in Ecosystems** | | | |
| **Grade: 9-12 (LS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how plants and animals cycle carbon and nitrogen within an ecosystem * explain how matter cycles and energy flows in ecosystems, resulting in the formation of differing chemical compounds and heat   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about how matter cycles and energy flows in ecosystems * recognizes or recalls accurate statements about how plants and animals cycle carbon and nitrogen in ecosystems   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Maintenance and Stability of Populations** | | | |
| **Topic: Population Density** | | | |
| **Grade: 9-12 (LS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * evaluate the conditions necessary for rapid population growth *(e.g., given adequate living and nonliving resources and no disease or predators, populations of an organism increase at rapid rates)* * calculate the population density of an organism given ecosystem data   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about conditions needed for rapid population growth   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Maintenance and Stability of Populations** | | | |
| **Topic: Population Growth** | | | |
| **Grade: 9-12 (LS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain factors, including matter and energy, in the environment that limit the growth of plant and animal populations in natural ecosystems   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of environmental factors that limit plant and animal population growth   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Maintenance and Stability of Populations** | | | |
| **Topic: Representing Ecosystems with Models** | | | |
| **Grade: 9-12 (LS2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * draw a systems diagram to illustrate and explain why introduced (nonnative) species often do poorly and have a tendency to die out, as well as why they sometimes do very well and force out native species   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the reasons that introduced species do poorly or survive   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Maintenance and Stability of Populations** | | | |
| **Topic: Biodiversity** | | | |
| **Grade: 9-12 (LS2E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare the biodiversity of organisms in different types of ecosystems *(e.g., rain forest, grassland, desert)* noting the interdependencies and interrelationships among the organisms in these different ecosystems   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * given an ecosystem, describes the biodiversity of organisms found there   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Ecosystems (LS2)** | | | |
| **Core Content: Maintenance and Stability of Populations** | | | |
| **Topic: Sustainability** | | | |
| **Grade: 9-12 (LS2F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how scientific concepts and findings relate to a resource issue currently under discussion in the state of Washington *(e.g., removal of dams to facilitate salmon spawning in rivers; construction of wind farms)* * explain how the concept of sustainable development may be applied to a current resource issue in the state of Washington   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls examples of current natural resource issues in the state of Washington   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Mechanisms of Evolution** | | | |
| **Topic: Biological Evolution** | | | |
| **Grade: 9-12 (LS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain biological evolution as the consequence of the interactions of four factors: population growth, inherited variability of offspring, a finite supply of resources, and natural selection by the environment of offspring better able to survive and reproduce * predict the effect on a species if one of these factors should change   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the factors that affect biological evolution * describes the effect on a species if one factor changes   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Mechanisms of Evolution** | | | |
| **Topic: Mutations** | | | |
| **Grade: 9-12 (LS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the molecular process by which organisms pass on physical and behavioral traits to offspring, as well as the environmental and genetic factors that cause minor differences (variations) in offspring or occasional “mistakes” in the copying of genetic material that can be inherited by future generations (mutations) * explain how a genetic mutation may or may not allow a species to survive and reproduce in a given environment   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about genetic mutations   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Mechanisms of Evolution** | | | |
| **Topic: Diversity of Organisms** | | | |
| **Grade: 9-12 (LS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how the millions of different species alive today are related by descent from a common ancestor * explain how genes in organisms that are very different *(e.g., yeast, flies, and mammals)* can be very similar because these organisms all share a common ancestor   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the relationship of modern species to a common ancestor * recognizes or recalls accurate statements about common shared genes among species   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Mechanisms of Evolution** | | | |
| **Topic: Fossil Record** | | | |
| **Grade: 9-12 (LS3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * using the fossil record and anatomical and/or molecular (DNA) similarities as evidence, formulate a logical argument for biological evolution as an explanation for the development of a representative species *(e.g., birds, horses, elephants, whales)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes an animal alive today that could be related to a given fossil representation (picture, model of a fossil etc.)   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Life Science** | | | |
| **Big Idea: Biological Evolution (LS3)** | | | |
| **Core Content: Mechanisms of Evolution** | | | |
| **Topic: Biological Classifications** | | | |
| **Grade: 9-12 (LS3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * classify organisms, using similarities and differences in physical and functional characteristics * explain similarities and differences among closely related organisms in terms of biological evolution *(e.g., “Darwin’s finches” had different beaks due to food sources on the islands where they evolved)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes the physical and functional characteristics of organisms * describes the similarities and differences in organisms due to biological evolution   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Velocity** | | | |
| **Grade: 9-12 (PS1A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * calculate the average velocity of a moving object, given the object’s change in position and time (v = x2-x1/ t2-t1) * explain how two objects moving at the same speed can have different velocities   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about speed and velocity   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Acceleration (PS1B)** | | | |
| **Grade: 9-12** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * calculate the average acceleration of an object, given the object’s change in velocity with respect to time (a = v2-v1/ t2-t1) * explain how an object moving at constant speed can be accelerating   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about calculating acceleration   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Newton’s First** | | | |
| **Grade: 9-12 (PS1C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * compare the motion of an object acted on by balanced forces with the motion of an object acted on by unbalanced forces given specific scenarios   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: balanced force, unbalanced force * describes how balanced and unbalanced forces will affect an object in motion   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Newton’s Second** | | | |
| **Grade: 9-12 (PS1D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict and explain how objects of different masses will accelerate when subjected to the same force * calculate the acceleration of an object, given the object’s mass and the net force on the object, using Newton’s Second law of Motion (F=ma)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the formula used to calculate acceleration *(i.e., F=ma)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Newton’s Third** | | | |
| **Grade: 9-12 (PS1E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * illustrate with everyday examples Newton’s third law of motion *(i.e., for every action there is an equal and opposite reaction) (e.g., a person exerts the same force on the Earth as the Earth exerts on the person)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about Newton’s third law of motion   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Gravity** | | | |
| **Grade: 9-12 (PS1F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict and explain how the gravitational force between two bodies would differ for bodies of different masses or different distances apart * explain how the weight of an object can change while its mass remains constant   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: gravitational force, weight, mass * recognizes or recalls accurate statements about the effect of mass and distance on gravitational force   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Electrical Force** | | | |
| **Grade: 9-12 (PS1G)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict whether two charged objects will attract or repel each other, and explain why   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the conditions under which charged objects will attract or repel each other   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Force and Motion (PS1)** | | | |
| **Core Content: Newton’s Laws** | | | |
| **Topic: Electro-Magnetism** | | | |
| **Grade: 9-12 (PS1H)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * demonstrate and explain how an electric current flowing in a wire will create a magnetic field around the wire (electromagnetic effect) * demonstrate and explain how moving a magnet near a wire will cause an electric current to flow in the wire (the generator effect)   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: magnetic field, electric current * recognizes or recalls accurate statements about the electromagnetic effect * recognizes or recalls accurate statements about the generator effect   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Atomic Structure** | | | |
| **Grade: 9-12 (PS2A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe the relative charges, masses, and locations of the protons, neutrons, and electrons in an atom of an element   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about protons, neutrons and electrons   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Elements** | | | |
| **Grade: 9-12 (PS2B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict the chemical properties of an element , given the number and arrangement of electrons in the outermost shell of an atom   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the relationship between the chemical property and arrangement of electrons in the outer shell   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Periodic Table** | | | |
| **Grade: 9-12 (PS2C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * use the Periodic Table to identify the element given the number of protons * explain the arrangement of the elements on the Periodic Table, including the significant relationships among elements in a given column or row   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the significant relationships among elements in a given column or row   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Ions** | | | |
| **Grade: 9-12 (PS2D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how ions and ionic bonds are formed *(e.g., sodium atoms lose an electron and chlorine atoms gain an electron, then the charged ions are attracted to each other and form bonds)* * explain the meaning of a chemical formula for an ionic array *(e.g., NaCl)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: ionic bond, ion, ionic array * recognizes or recalls accurate examples of formulas for an ionic array * recognizes or recalls accurate statements about ions and ionic bonds   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Molecular Compounds** | | | |
| **Grade: 9-12 (PS2E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * illustrate that molecules are groups of two or more atoms bonded together *(e.g., a molecule of water is formed when one oxygen atom shares electrons with two hydrogen atoms)* * explain the meaning of a chemical formula for a molecule *(e.g., CH4 or H2O)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: molecule * recognizes or recalls accurate examples of chemical formulas   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Organic Compounds** | | | |
| **Grade: 9-12 (PS2F)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * demonstrate how carbon atoms form four covalent bonds to make large molecules   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * labels a diagram showing how carbon atoms form covalent bonds * recognizes the functions of large carbon molecules *(e.g., plant and animal tissue, polymers, sources of food and nutrition, fossil fuels)*   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Chemical Reactions** | | | |
| **Grade: 9-12 (PS2G)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe at least three chemical reactions that are of particular importance to humans *(e.g., burning of fossil fuels, photosynthesis, rusting of metals)* * write a chemical equation for each of the three important chemical reactions *(e.g., burning of fossil fuels, photosynthesis, rusting of metals)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * uses a chemical equation to illustrate how the atoms in molecules are arranged before and after a reaction * recognizes or recalls accurate examples of chemical reactions that acquire energy from their surroundings * recognizes or recalls accurate examples of chemical reactions that release energy   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | * From a list of reactions identify the reactions that release energy to the surroundings and those that acquire energy from the surroundings. |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Solutions** | | | |
| **Grade: 9-12 (PS2H)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * give examples of common solutions * explain the differences among the processes of dissolving, melting, and reacting * predict the result of adding increased amounts of a substance to an aqueous solution, in concentration and pH   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: solution, dissolving, melting, reacting, concentration, pH * describes the effect on concentration and pH of adding increased amounts of a substance to an aqueous solution   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Rates of Reactions** | | | |
| **Grade: 9-12 (PS2I)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * predict and explain the effect of a change in temperature, surface area, or pressure on the rate of a given physical or chemical change   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * describes how temperature, surface area or pressure can affect the rate of a physical or chemical change   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Isotopes** | | | |
| **Grade: 9-12 (PS2J)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe an isotope’s atomic structure (number of protons, neutrons, and electrons), given the atomic number and atomic mass number of an isotope * use a decay curve for a radioactive isotope to find the age of the sample, given data from the sample and explain how the decay curve is derived   **The student exhibits no major errors or omissions.** | | * Draw and label a model of the isotope’s atomic structure. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: atomic number, atomic mass number, and isotope * describes the decay curve of a radioactive isotope   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Properties and Change (PS2)** | | | |
| **Core Content: Chemical Reactions** | | | |
| **Topic: Fission/Fusion** | | | |
| **Grade: 9-12 (PS2K)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * distinguish between nuclear fusion and nuclear fission by describing how each process transforms elements present before the reaction into elements present after the reaction   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about nuclear fusion and fission * recognizes or recalls basic terminology such as: nuclear fusion and nuclear fission   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Transformation and Conservation of Energy** | | | |
| **Topic: Conservation of Energy** | | | |
| **Grade: 9-12 (PS3A)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain how energy is conserved in a situation in which energy is transferred from one place to another * explain how energy is conserved in a situation in which energy is transformed from one form to another   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: conservation of energy * recognizes or recalls accurate statements about the conservation of energy in various situations   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Transformation and Conservation of Energy** | | | |
| **Topic: Kinetic Energy** | | | |
| **Grade: 9-12 (PS3B)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
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|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * calculate the kinetic energy of an object, given the object’s mass and velocity   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls the formula for calculating the kinetic energy of an object   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Transformation and Conservation of Energy** | | | |
| **Topic: Gravitational Potential Energy** | | | |
| **Grade: 9-12 (PS3C)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * explain a situation in which gravitational, potential energy and kinetic energy are changed from one to the other *(e.g., a child on a swing illustrates the alternating transformation of kinetic and gravitational potential energy)*   **The student exhibits no major errors or omissions.** | |  |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * gives an example of gravitational, potential and kinetic energy being changed into one another   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Transformation and Conservation of Energy** | | | |
| **Topic: Wave Properties** | | | |
| **Grade: 9-12 (PS3D)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * characterize physical waves by frequency, wavelength, amplitude, and speed * apply these properties to the pitch and volume of sound waves and to the wavelength and magnitude of water waves   **The student exhibits no major errors or omissions.** | | * Use a spring or string to demonstrate frequency, wavelength, amplitude, and speed. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls basic terminology such as: frequency, amplitude, speed, wavelength, pitch, volume, magnitude as applied to waves   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | |

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| **EALR 4: Physical Science** | | | |
| **Big Idea: Matter: Energy: Transfer, Transformation and Conservation (PS3)** | | | |
| **Core Content: Transformation and Conservation of Energy** | | | |
| **Topic: Electromagnetic Waves** | | | |
| **Grade: 9-12 (PS3E)** | | | |
| **Score 4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond what was taught.** | | **Sample Tasks** |
|  |
|  | **3.5** | In addition to score 3.0 performance, in-depth inferences and applications with partial success. |  |
| **Score 3.0** | **The student will:**   * describe how regions of the electromagnetic spectrum differ regarding wavelength, frequency, and energy, and how they are used *(e.g., infrared in heat lamps, microwaves for heating foods, X-rays for medical imaging)*   **The student exhibits no major errors or omissions.** | | * Illustrate the electromagnetic spectrum with a labeled diagram. |
|  | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content |  |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes as the student:**   * recognizes or recalls accurate statements about the electromagnetic spectrum   **However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | |  |
|  | **1.5** | Partial knowledge of the 2.0 content but major errors or omissions regarding the 3.0 content |  |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | |
|  | **0.5** | With help, a partial understanding of the 2.0 content but not the 3.0 content |
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