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| Time & ***Duration*** | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **8:00-**  **8:30** | **Sign-In** | **Participants will need to identify/bring the following:**   * 1. **A unit of study that will occur before the next Session.**   2. **An investigation from the unit that generates data (or an activity that has data) that lends itself to constructing a Conclusion.** * Remind participants to sign in * Notebooks * TPEP Reflection Handout   **(2 minute warning for the opening)** | * Parking Lot Poster * Table boxes * Journals * Box of handouts * Sign in sheet * Name tags * Music |
| **8:30-**  **8:45**  10 | **Opening:**  **Framing the Day** | **Welcome Participants**  **Logistics & Session Design**   * Rest Room location * Locate the Parking Lot Poster (or describe electronic alternative) * Goals & Agenda (See TPEP Reflection sheet w/doc camera)   + TPEP Reflection Sheet can be used to capture ideas to improve instruction throughout the day   **Frame**:  This 3-session series will focus on strategies for improving student performance on *Conclusion Writing* in science as measured on the MSP and EOC. In addition, the series will lay the foundation for moving from conclusion writing to the NGSS Science & Engineering Practice of *Arguing from Evidence*. Participants will develop and administer Washington State science assessment-like items and analyze their students’ performance.  **Display Goals**  Designed to support teachers K-12, this 3-session series will focus on strategies for improving student performance on *Conclusion Writing* in science as measured on the MSP and EOC.  In addition, this series will lay the foundation for moving from conclusion writing to the NGSS Science & Engineering Practice of *Arguing from Evidence*.  As a result of this series, participants will develop and administer Washington State science assessment-like items and analyze their students’ performance. | Parking Lot Poster  (or electronic alternative)  TPEP Reflection Sheet |

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| Time & ***Duration*** | | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **8:45-**  **9:00**  **15** | **The Three Dimensions of the NGSS** | | **Preparation**:  Navigate to a Performance Expectation on the NGSS web site. Use one of these PE’s: 2-LS-4-1, 3-LS3-2, 4-LS1-1, MS-LS4-4, HS-LS4-4. These PEs align with upcoming activity. Activate the view: “Practices and Crosscutting Concepts” to illustrate how the Dimensions are integrated into a PE.  Be prepared to toggle to this web page from the PPT presentation.  Provide background and context to for participants to understand SEP #7 by describing the dimensions and an NGSS standard.  **Process**:   1. Handout the document: “3 Dimensions/Inside the NGSS Box”. 2. Provide time for participants to make sense of the “3 Dimensions” side. 3. Emphasize diagram showing three-strands of the rope that are braided together as an analogy for the how the three dimensions are braided together in a Performance Expectation. 4. Ask participants to examine the “Inside the NGSS Box” side of the handout. 5. Toggle to the NGSS webpage to show a PE as previously described. 6. Check for understanding, answer questions.   Transition:  Now that you have a sense of the “big picture”, of the NGSS, let’s take a look Performance Expectations that align with the topic we will investigate today.. | HO:3 Dimensions/Inside the NGSS Box |
| **9:00-**  **9:20**  **20** | **Related Performance Expectations** | | Display slides 6-9 to illustrate PE’s connected to the Guppy Scenario. |  |

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| Time & ***Duration*** | | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **9:20**  **9:35**  **15** | **Looking Deeper at One Science Practice** | | **Process**:   1. Ask participants to think about a response to the prompt on the slide and share their ideas with a partner. 2. Popcorn some ideas from the room. 3. Hand out the document: Dimension 1 Science and Engineering Practices and provide time for participants to make sense of it. 4. Ask participants to read SEP #7 (both columns) 5. Ask participants to compare the Science and Engineering columns. 6. What are the similarities? 7. Ask participants to revisit the prompt on the slide. What new information needs to be added?   **Transition**: Argumentation from Evidence is a practice found in CCSS math, ELA and NGSS. Studies show that students have not had enough opportunity in science to engage in discourse with peers to develop, advocate for and defend a claim.  Teachers feel pressure to quickly debrief after an activity or investigation and move on.  We are going to immerse you in a simulation that goes through the steps that can be used to help both teachers and students through the argumentation process. |  |
|  | **Guppies** | | Guppies are native to tropical freshwater ecosystems like those found in Venezuela.  What might be the cause of this difference in appearance?  We will investigate some data and develop an argument to answer the question. |  |

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| Time & ***Duration*** | | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
|  |  | | To bring context to our students for an activity in Engaging in Argument from Evidence build a bit of background first.  Perhaps they could think about where we are located and perhaps other places they have been to? (This is a GLAD Strategy)  Talk with a partner and talk about what you observe or any questions you have from these photos or from the map on the previous slide. (GLAD Strategy)  After the break we will immerse in an instructional model to facilitate argument from evidence. |  |
|  |  | | **Break** |  |

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| Time & ***Duration*** | | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **9:50-**  **10:00**  **10** | **Construction of a Viable Argument** | | Introduce the Five Stage Scientific Argumentation Process depicted in Sampson’s book.  This process engages all learners and has several strategies that explicitly meet the needs of our migrant students.  You will use this process to construct and refine an argument to explain the difference in guppy appearance. Your argument will contain a claim, evidence and justification, or reasoning. |  |
| **10:00-**  **10:05**  **5** | **Construction of a Viable Argument: Stage 1** | | **Process**:   1. Show slide for **Stage 1** – Identify the Tasks and Question. 2. Form groups of two or three. 3. Each group reads p19-20 – Color Variation in Venezuelan Guppies from Scientific Argumentation in Biology. 4. Check for understanding of the task. | HO: Color Variation in Venezuelan Guppies |
| **10:05-**  **10:15**  **10** | **Reading for Understanding** | | **Pre Reading: Text Features for Color Variation in Venezuelan Guppies**   1. With a partner skim through pages 19-23 2. Jot down a few text features you see in the text 3. Predict what you think will be in the text | HO: Color Variation in Venezuelan Guppies |

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| Time & ***Duration*** | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **10:15-**  **10:30**  **15** | **Pre-Reading:**  **Looking at Data – Page 21** | **Process**:   1. Read the text of the packet. 2. Return to Table 2.1. 3. Use the strategy “Highlights, Comments, and Captions” to analyze Table 2.1. (See 3 PPT slides and prompts) | HO: Color Variation in Venezuelan Guppies |
| **10:30-**  **10:35**  **5** | **Pre-Reading:**  **Looking at Data – Page 22** | Direct participants to Page 21. Encourage them to connect the data of page 21 to the map on page 22. | HO: Color Variation in Venezuelan Guppies |

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| Time & ***Duration*** | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **10:35-**  **11:00**  **25** | **Stage 2 – Generation of a Tentative Argument: Analyze data**    **Stage 2 - Generation of a Tentative Argument: Gallery Walk #1** | **Transition**:  Now you should analyze all of the data from the scenario for trends and patterns  **Process**:   1. Groups should look for patterns, trends, differences or relationships in the data provided on p21-22 2. Ask groups to create a chart of their summarized, supportive data. 3. Prepare for Gallery Walk #1.   It’s time to gather more data from other groups. You will use this collective data to make a claim about improving a factory subsystem.  **Process**   1. Collaborate with your group to create a poster that summarizes observations and other data from the scenario. 2. Groups will display their data posters. 3. Have participants look at the results of other groups.    1. Provide about 10 minutes to look for patterns, trends, differences or relationships.    2. Add data harvested from other posters to your group’s data.    3. Incorporate a quick break into this “gallery walk”. |  |
| **11:00-**  **11:15**  **15** | **Stage 2 - Generation of a Tentative Argument** | **Process:**   1. Ask groups to create the graphic (see slide) on chart paper 2. Groups should identify their question, claim, and any evidence from their group or other groups that had a similar question. 3. Groups should bring their question, claim, and evidence together to make a justification about the answer to their question   NOTE: We have altered the template here slightly from the Sampson article so that the writing frame more closely resembles the MSP/EOC writing frame. |  |

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| Time & ***Duration*** | | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **11:15-**  **12:00**  **45** | **Construction of a Viable Argument:– Stages 3-4** | | **Process:**   1. **Stage 3** – Gallery Walk #2 - 20 Minutes    1. Distribute Gallery Walk Interview Questions and have participants read.    2. Groups should keep an expert with their tentative argument while others rotate to other groups. (In the classroom teachers might want to structure this more tightly)    3. Ask participants to go to three different groups to gather the ideas from that group regarding their arguments.    4. Use the Interview Questions to guide conversations at each poster.    5. Participants should listen to the docent’s answers to questions from others. Avoid repeating questions.    6. Provide positive feedback related to observations and data to the docents.    7. You may want to use your EL Achieve Discussion Cards here, or use sticky note protocol for asking questions and providing feedback. 2. **Stage 4** - Original groups reconvene and discuss what they learned by interacting with individuals from other groups.    1. Modify original ideas based on feedback and ideas of others input    2. Facilitate a whole room discussion encouraging participants to share what they learned about the design challenge.    3. Surface common challenges faced by groups. | HO: Argumentation Gallery Walk Interview Questions |

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| Time & ***Duration*** | | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
| **12:00-**  **12:15**  **15** | **Construction of a Viable Argument:– Stage 5** | | **Stage 5** – Talk through the construction of the final argument with the whole room. |  |
|  | **Reflection** | | 1. Ask participants to revisit the strategies and ideas of the day. 2. Have them turn and talk to a partner about what ideas they might take back to their classroom or colleagues.   *This is an opportunity to add a comment to their TPEP Reflection Sheet.* | TPEP Reflection Sheet |
|  |  | | **Lunch** |  |
| Time & ***Duration*** | | Agenda/Topic | Description/Notes/Process | ***Materials/Logistics*** |
|  | **Afternoon Opening** | | **Review the goals**  **Transition**: We worked through an immersion experience in Argument From Evidence this morning.  Now, we’ll apply that process to a typical MSP/EOC conclusion-type item and see where there are similarities. |  |
|  | **Taking a Look at WA Item Specs** | | **Process**:   1. H/O 5th, 8th, 10th Item Specs and Rubrics after the think-pair-share. 2. Provide some time for them to make sense of the documents. Reflect on the original thoughts and compare to what they see in the rubrics/specs. | HO: 5th, 8th, 10th Item Specs and Rubrics |
|  | **Applying the Rubric** | | **Process:**   1. Be sure to specify that we will be using the 2 point rubric, as it is the current MSP scoring model, across all sessions. 2. (Time allowing) Provide the H/O on the released item student work and allow teachers to shift from their adult learning to the student sample of work. 3. How does our work from the morning compare to what kids are asked to do NOW on the MSP/EOC conclusion items? 4. Provide time to share ah-ha’s or ‘first I thought, but now I know… | HO: Released Item w/student responses |

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| Time & ***Duration*** | | Agenda/Topic | | Description/Notes/Process | ***Materials/Logistics*** |
|  | **Constructing Items** | | **Facilitation Note:**  Depending on who’s in attendance, this work can be by grade-level, independent…  H/O template and allow some processing time for participants to draw parallels between the template and the C-E-R framework from the morning session.  \*\*\*Decide on an active sharing strategy for item prompts.  \*\*\*Remind teachers before Session 1 to bring in an example. Have examples from your own kits on hand in case teachers do not bring a sample.  **Process:**   1. Participants will need to identify/bring the following:    1. A unit of study that will occur before the next Session.    2. An investigation from the unit that generates data (or an activity that has data) that lends itself to constructing a Conclusion. 2. Craft the prompt for the Conclusion Writing Item 3. Provide a Conclusion Writing Item template to participants 4. Share Conclusion Writing Item prompts with others in the room, provide/receive feedback. 5. Incorporate feedback to refine Conclusion Writing Item prompts | | HO: Conclusion Writing Item template |

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| Time & ***Duration*** | | Agenda/Topic | | Description/Notes/Process | ***Materials/Logistics*** |
|  | **Next Steps** | | **Facilitation Note:**  Discuss the idea that we do not want the teacher to provide instruction on the process of arguing from evidence with the prompt they’ve developed. Suggest however using the process with a different investigation or data set. This will provide great discourse for session 2.  **Expectations**:   1. UseConclusion Writing Items with students 2. Return with unscored student responses | |  |
|  | **Homework** | | See slide prompts | |  |
|  | **Closing** | | See slide prompts  Provide time for participants to complete the survey | | Participant Survey Instructions |