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| **Grade Level:** Basic (Grades 1-2) with Advanced (Grades 3-5) Adaptations | | | | |
| **Title:** Sticky Situation Designing Walls  **Topic: Materials Engineering** | | **Lesson: Prep Lesson~ Technology in a Bag** | | **Focus Question:**  *What are technologies and who designs them?* |
| **Unit Learning Targets:** *(Big Ideas Built Over Time)* | | | | |
| **Science Standards/Practices** | | **CCSS-ELA**  **CCSS-M** | | **8 Criteria: TPEP** |
| **Time For Lesson:** | | | | |
| **Content Objectives: *(Student Friendly)***  *I can identify everyday objects made by people as technology.*  *I can identify engineers as people who design objects to help people.* | | | **Language Objectives:***(Throughout unit make sure all four language modalities, reading, writing, speaking and listening are addressed)*  *I can talk with my group to discuss why an object is a technology and discuss who creates these technologies.*  *I can write complete sentences to share my ideas about what an object can do and what problems that object solve.* | |
| **Student Engagement: Leadership**  *I can work with other people in my group cooperatively by showing respect, making good decisions and solving problems.*   * Developing Relationships * Making Choices * http://lh4.ggpht.com/-PHpkg9D7Wrg/SVWO4cJ5leI/AAAAAAAAAbg/HcU9xpZrHyk/s640/IMG_0963.JPGSetting Goals * Problem Solving * Future Action Planning   *Students discuss in groups what an object does, who created that object and what problem the object solves.*  *(Discussion of how problems can be solved through technologies)*   * Prior to Preparatory prepare students to work in cooperative teams by using the GLAD Strategy of T-Chart of Social Skills- Set up groups, define cooperation * Utilize the strategy of Numbered Heads together * Utilize Super Scientist Awards | | | | |
| **Key Vocabulary:**   * Engineering- * Engineer * Material * Problem * Technology * Solution | **Lesson Supports**  Super Engineer Awards  T-Chart of Social Skills  Number Spoons  *(Graphic Organizers, Adapted Texts, Notes, Photos, Charts, Realia)*  *Inquiry Chart*  *What is…*   |  |  | | --- | --- | | *An Engineer* | *Technology* | |  |  |   *Template Chart-With Questions* | | | **Materials:**  *Brown Paper Bag*  *Materials from Pg. 33*  *Include materials from the migrant lifestyle*   * *Asparagus cutter* * *Trompo* * *Molcajete* * *Recipe card for traditional dish* * *Panuelo* |
| **Other Vocabulary:**  *List of objects in bags found on page 33. (Realia)* |
| **Higher Order Questions:**  What is an engineer?  What is technology?  Do you know someone who is an engineer? What kind of work do they do? | | | **During Lesson:** Template/Chart…   * Is the object natural or human-made? * What is material(s) is it made of? * What problem does it solve? * How else could you use it? * What other materials could the object be made of? * Who do you think creates these technologies? | |
| **Social and Cultural Processes:**  Adding migrant related realia during the Technology in a Bag activity. | | | | |
| **Building Background Activities**   * Introduction on pages 34-35 | | | | |
| **Comprehensible Input and Output**   * Charts-T Chart of Social Skills * Charts: Inquiry Chart * Realia-Items in Bag * EL Achieve Cards during student discussions-Specific Strategies- ***Share your Thinking Card*** | | **Learning Strategies: Student Activities**  Student Notebooks  Learning Log-at the end of the notebook (write or sketch)  Charts | | **Practice and Application:**  Discussion of realia in bags  Technology Around Us Worksheet P-1 |
| **Student Interaction**   * Discussion and Discourse of objects (EL Achieve Cards-Present and Idea… I think…, I noticed that… * Collaboration using “Leadership” team building using Social Skills and Number Heads. * Positive Interdependence | | | | |
| **Student Reflection**   * Return to the Inquiry Chart What is an Engineer-What is technology) (See page 37) * Realize that nearly everything we use is engineered, that we all engage in engineering… * How did you work in your group? | | | | |
| **Review and Assessment**   * A-1 and A-2 Prior to the Lesson- Place in notebook. At the end of the unit | | | | |
| **Parental Support Opportunities**  Home-School Connection: Take or draw a picture, or bring in real object of a “technology” found in the child’s home. Explain how it is used in the child’s home, explain what problem it solves, who created it.  Ask your parents the following question:   * What technology do you remember your parents (child’s grandparents) using? * How has the technology changed from your parents to your generation? | | | | |