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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
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| **Key Vocabulary:** * Engineering-
* Engineer
* Material
* Problem
* Technology
* Solution
 | **Lesson Supports**Super Engineer AwardsT-Chart of Social SkillsNumber Spoons*(Graphic Organizers, Adapted Texts, Notes, Photos, Charts, Realia)**Inquiry Chart* *What is…*

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| *An Engineer* | *Technology* |
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*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*
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| **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?
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| **Social and Cultural Processes:** Adding migrant related realia during the Technology in a Bag activity. |
| **Building Background Activities*** Introduction on pages 34-35
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| **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 NotebooksLearning Log-at the end of the notebook (write or sketch)Charts | **Practice and Application:**Discussion of realia in bagsTechnology 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
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| **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?
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| **Review and Assessment*** A-1 and A-2 Prior to the Lesson- Place in notebook. At the end of the unit
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| **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?
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