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| Science 9 Unit Overview – Space - Technologies |
| Unit Name: | Space - Technologies |
| Duration:  | 2-3 Weeks |
| Project Idea: | Students will present tessellation math pieces in a tessellation Art gallery for viewing by the entire school  |
| IRP Standards: | -Explain how a variety of technologies have advanced understanding of the universe and solar system-Analyze the implications of space travel |
| 21st Centuary Skills Assessed and taught(will be used for effort assessment) | - Designing a model based on a space technology assigned to a student- Critical Thinking- Potential to use computers to generate a model- Creativity in design |
| Driving Question: | What are the technologies of the past, now and future that have allowed us to understand our universe?  |
| Further Questions that focus on the IRP standards:  | See Appendix A for submission requirements  |
| Major Products and Performances | Group: | This is an individual project. The goal is for students to learn about their technology and then to teach it to the rest of the class  |
| Individual: | Students will need to learn about a technology, create a model of that technology and present their findings to the class |
| Entry Events/Lessons | Day 1 | -Reveal the project to the students and explain the rules and deadlines-Show examples from previous years  |
| Day 2-9 | Students get independent class time to work on project  |
| Reflection methods | - Students will self and peer rubric and discuss how their presentation went for them |

# Appendix A - The Assignment as Posted on the Wikipage

How We Gather Space Information

Why: To be able to explain how a variety of technologies have advanced our understanding of the universe and solar system (D1) and
to analyze the implications of space travel (D5)

We will have a day of technologies!
Here's what will happen: We will set up the classroom like a science fair (but it's not). On that day, you will present information on one of the technologies below.

-telescope
-spectroscope
-satellites (only discuss how satellites are used to understand the universe...nothing about tv or telecommunications)
-Mars Lander/ Mars Explorer
-space probe
-robotic device (like the Canada Arm)
-International Space Station
-Hubble telescope
-Space elevator
-space shuttle
-MIR
-unmanned space rockets
-astrolabe
-China's Space program
-U.S. Moon landers (first moon landing)

You will need to build a model or diagram(s) of you technology, and a powerpoint presentation based on your findings (no more than 3-5 minutes in length). Also have two test type questions (easy, medium/hard) that are associated with your technology. These questions will be presented to people on the day of you presentation (to be put on your powerpoint) to check their understanding.

All of this will then be added to the science web page

Your work will based on
1. The detail and neatness, proper labeling in the model or diagram (or better yet, both)
2. The description of purpose(s) for the instrument
3. Inclusion of information on what data have been gathered or what important work has been done to date or how the instrument can be used in the future
4. A powerpoint presentation with mostly pictures (very few words)
5. A webpage with your powerpoint presentation AND speech to be put on

<http://mrarcasclassdoesscience.weebly.com/>