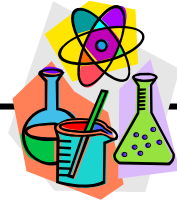


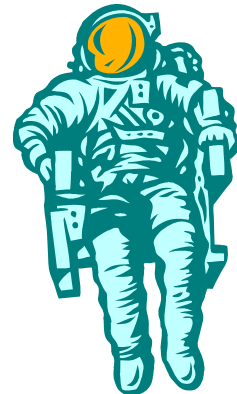
Grade 9 Unit E: Space Exploration



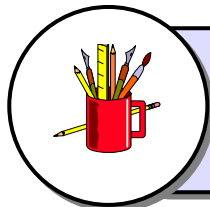
Space Exploration Technologies

1. Investigate space environments and identify the needs of astronauts in terms of life support. Consider:
 - gravity
 - temperature
 - availability of water.

2. With your class, investigate technologies such as the following that have contributed to space exploration.
 - materials created to withstand the environment of space or our atmosphere, e.g., heat resistant materials
 - technologies used for space transportation
 - technologies that allow us to know more about space before sending humans there, e.g., radio waves, telescopes
 - technologies that make it possible to support human life in space, e.g., space suits, oxygen conversion tanks
 - technologies that allow us to communicate with astronauts in space, e.g., communication satellites



Combine information with classmates and prepare a display, wall mural, computer-generated presentation or other presentation about space travel and exploration technologies.



Use Tools [Preparing for Group Work](#) and [Thinking About Form for Presentations](#).

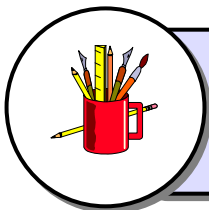
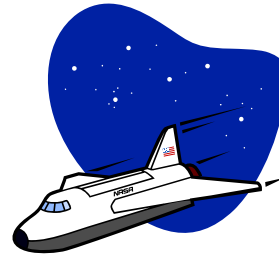
3. Work with classmates to create a chart with information about space exploration; e.g., of a moon, a planet or other celestial body. Generate and answer a list of questions like these.
- When did the exploration occur?
 - What technologies did they use during the exploration?
 - What materials and processes did they use during the exploration?



Use Tools [Question Organizer I](#) or [Question Organizer II](#) and [Note Taking III](#).

4. Choose a space vehicle or structure, such as a shuttle, probe, satellite or space station. Create a model replica and write a description to accompany your model.

Present your model to classmates and discuss the technologies used in the real structure.



Use Tools [Paragraph Planner I](#) or [Paragraph Planner II](#) and [Preparing to Share Ideas](#).

5. Investigate and describe how space technologies affect everyday life on Earth.

Examples:

- heat resistant materials for buildings and clothing
- communications technologies such as radio transmissions
- global positioning systems.