

Return to the Moon

Standards Alignment

Science

- 3.P.3A.2** Develop and use models to describe the path of an electric current in a complete simple circuit as it accomplishes a task.
- 3.P.3A.3** Analyze and interpret data from observations and investigations to classify different materials as either an insulator or conductor of electricity.
- 4.E.2A.1** Obtain and communicate information about some of the gases in the atmosphere (including oxygen, nitrogen, and water vapor) to develop models that exemplify the composition of Earth's atmosphere where weather takes place.
- 4.E.3A.1** Develop and use models of Earth's solar system to exemplify the location and order of the planets as they orbit the Sun and the main composition (rock or gas) of the planets.
- 4.E.3A.3** Construct scientific arguments to support claims about the importance of astronomy in navigation and exploration (including the importance of telescopes, astrolabes, compasses, and sextants).
- 4.E.3B.1** Analyze and interpret data from observations to describe patterns in the location, movement, and appearance of the Moon throughout the year.
- 4.P.4A.3** Obtain and communicate information to explain how the visibility of an object is related to light.
- 4.P.4A.4** Develop and use models to describe how light travels and interacts when it strikes an object (including reflection, refraction, and absorption) using evidence from observations.
- 4.L.5B.1** Develop and use models to compare how humans and other animals use their senses and sensory organs to detect and respond to signals from the environment.
- 4.S.1A.2** Develop, **use**, and refine models to (1) understand or represent phenomena, processes, and relationships, (2) test devices or solutions, or (3) communicate ideas to others.
- 4.S.1A.3** Plan and carry out scientific investigations to answer questions or test explanations: (1) formulate scientific questions and predict possible outcomes, (2) identify materials, procedures, and variables, (3) select and **use appropriate tools or instruments to collect qualitative and quantitative data**, and (4) **record and represent data in an appropriate form. Use appropriate safety procedures.**
- 4.S.1A.4** **Analyze and interpret data from informational texts, observations, measurements, or investigations** using a range of methods (such as tabulation or graphing) to (1) reveal patterns and **construct meaning** or (2) support explanations, claims, or designs.
- 4.S.1A.5** Use mathematical and computational thinking to (1) **express quantitative observations using appropriate English or metric units**, (2) **collect and analyze data**, or (3) understand patterns, trends and relationships between variables.
- 4.S.1A.8** Obtain and evaluate **informational texts, observations, data collected**, or discussions to (1) generate and **answer questions**, (2) **understand phenomena**, (3) develop models, or (4) support explanations, claims, or designs. **Communicate observations and explanations clearly through oral and written language.**

Return to the Moon

Math Skills

Students will:

- read/interpret graphs/charts/tables;
- compare data to an accepted range and determine if the data falls in that range or not;
- compare angle measurements to a standard and determine if the angle is acceptable or not;
- calculate averages;
- calculate slope;
- basic arithmetic (add/subtract/multiply/divide);
- measure by difference (if you know the total length of an object and the length of a section of the object, what is the length of the other section);
- compare quantities (measured in percentage);
- convert degrees Fahrenheit into Celsius.