



Dear Parents,

During the 2nd 9 weeks, 5th grade students will recognize natural patterns of change, compare characteristics of the Earth, Moon and Sun, demonstrate that Earth rotates on its axis, differentiate between weather vs. climate, explain the water cycle and design an experiment to test force.

Student expectations for Earth's Rotation & Sun Movement: Students will demonstrate that Earth rotates on its axis once approximately every 24 hours causing the day/night cycle and the apparent movement of the Sun across the sky. Students will also be expected to identify and compare the physical characteristics of the Sun, Earth, and Moon.

1. The day and night cycle occurs every 24 hours due to the rotation of the Earth.
2. We can demonstrate that the rotation of the Earth causes the day and night cycle.
3. The Sun appears to move across the sky each day due to the rotation of the Earth.
4. We can identify and compare the physical characteristics of the Sun, Earth, and Moon, such as surface, temperature, geological features, composition, and size.
5. The Sun is made of gases while the Earth and Moon are made largely from rock.
6. The Sun and Earth have very different atmospheres, while the Moon does not have a significant atmosphere. Only the Earth has liquid water.

Student expectations for weather vs. climate and the water cycle: In this unit, students will differentiate between weather and climate and be able to explain how the Sun and the ocean interact in the water cycle.

1. Weather refers to the daily environmental conditions we experience around us. It is also used to describe the condition of the atmosphere in a place at a certain time.
2. Climate refers to the average conditions in a place over a longer period of time.
3. Weather can be observed each day, whereas climate must be observed over time.
4. The Sun provides the energy that evaporates water on Earth.
5. While evaporation can be used to separate solutions, water that evaporates from the ocean does not contain salt.
6. Much of the water cycle begins when the Sun's energy evaporates water from oceans, which collectively cover approximately 71% of the Earth's surface.

Student expectations for force and motion: Experimenting with force is the next topic we will address in science. During this topic students will design an experiment that tests the effect of force on an object.

1. Experiments can be designed to test the effects of forces such as gravity, friction, and magnetism on objects.
2. Forces can change the movement, shape, or position of objects.
3. The effects of force can change depending on the amount and type of force applied to the object.

Helpful websites and STEMscope login information can be found on the Eagle Mountain Saginaw ISD website on the EMSISD Science Curriculum page. If you have any questions, please contact your fifth grade team.

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Sincerely,
The Fifth Grade Team