
TEKS (1.6) Force, motion, and energy. The student knows that force, motion, and energy are related, and are a part of everyday life. The student is expected to:

(A) identify and discuss how different forms of energy such as light, heat, and sound are important to everyday life.

Background Knowledge

Light – Light comes from the Sun. Light also comes from man-made sources like lightbulbs. We see light with our eyes.

Heat – Heat also comes from the Sun. Heat from the Sun warms the Earth so that we can live on it. We get heat from heaters that keep us warm in cold weather. We use heat to cook. We can feel heat with our hands and our bodies. If we touch something too hot it hurts us.

Sound – We hear sound with our ears. Sounds come from things all around us. A dog barking sounds different than a piano playing. People’s voices sound different. We can tell if our mom or sister is talking to us because we recognize the sound of their voice.

All of these are forms of energy. We call them light energy, heat energy, and sound energy.

Essential Questions

Why is light important to us?
(Light makes it possible for us to see.)

Why is heat important to us?
(Heat makes life on Earth possible. It keeps us warm. It cooks our food.)

Why is sound important to us?
(We can hear sound so we can communicate. We can hear sounds that warns us of danger. We can recognize different sounds. We can hear music.)

Name That Sound

Objective:

Students will distinguish sounds made by common objects and tell why sounds are important.

Materials:

Common objects that make sounds, such as a whistle, cell phone, CD player

How to Conduct:

Work behind a partition, so that students can't see the objects. Make sounds with different objects, like a CD player, whistle, ringing sound of a cell phone. Have the children identify the different objects.

Have two students step behind the partition and take turns speaking. Ask the students to identify which student is speaking. Ask, "How do you know who is speaking?" Discuss how voices sound different to us.

Discuss how sound is important in daily living and especially for the visually challenged. (E.g. Fire alarms, sound of the traffic signal while crossing a street.) Discuss ways we depend on sound every day. We listen to our friends talk, and we listen to the teacher teach. We hear when we watch TV and when we listen to music.

Light Up My Life

Objective:

Students will explain why light is important to us.

Materials:

- flashlight
- dark room or closet
- timer

How to Conduct:

Take students to an inner room where there are no windows. Turn off the lights for 30 seconds (use the timer) so children can experience complete darkness. Then shine a small flashlight. Discuss how light is important in our daily living. Talk about all the places we have light in our homes and at school. Ask, “How would our learning be different if we did not have lights at school?” Ask, “What would our world be like if we did not have light from the Sun?”

Heat It Up!

Objective:

The student will explain that heat changes things and explain how it is important to us.

Materials:

- Hot plate
- cup with ice
- several raw vegetables
- uncooked spaghetti

How to Conduct:

Have students take turns holding their hands above the surface of the hot plate that is turned on so it is just warm, **not hot**. Warn students not to touch the hot plate directly. Have students take turns feeling the outside of the cup of ice. Ask, “What do each of these feel like.” Ask, “What would happen to the ice if I set the cup on the hot plate?” Discuss how the ice would melt, or change. Set the hot plate aside with the cup on it.

Show students the raw vegetables and uncooked spaghetti. Ask, “How would this taste if you ate it uncooked?” Discuss how some things need to be cooked. Some things can be eaten raw or cooked. Discuss how heat changes things such as food so it tastes better when eat it.

Return to the ice and show the students how the ice has started to melt and change.

Discuss other ways we need heat, such as to keep warm when it is cold outside, take warm showers, etc.

Safety:

Use caution when working with heat and electrical equipment to avoid accidental injury. If turning out lights in an inner room, prepare children so that they are not afraid and keep lights off only for a very short period of time.