

FORMS OF ENERGY (LIGHT ENERGY)

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Subject

Basic Science

Prepared By

[Instructor Name]

Grade Level

2

Overview

This lesson plan covers teaching content for;

1. Sources of Light.
2. Uses of Light Energy.
3. Reflection of Light.
4. Uses of a Mirror.
5. Formation of images by the Mirror.
6. Types of Mirror.

Objectives

Students will be able to:

1. Explain the meaning of energy.
2. Mention the sources of light.
3. Discuss the uses of light.
4. Show that some objects reflect light.
5. Use mirrors to form.

Information/Instruction

1. Ask your students; have you ever wondered why you can see your face in a mirror?
2. Tell them this occurs because mirrors are

Teacher Guide

Day 1/Lesson 1- 15 Mins

1. Cut a rectangular hole in the top of a shoe box 3 inches wide by 6 inches long.
2. Cut out a rectangular piece of red cellophane (or paper bag) about 8 inches wide by 14 inches long.
3. Fold it in half twice to produce a filter of four layers with a size of about 4 inches by 7 inches.
4. Tape the red cellophane filter to the inside of the shoe-box top so that it completely covers the rectangular hole.
5. Cut a 1-inch round hole in one end of the shoe box.
6. Put the gumballs inside the shoe box and put on the cover.
7. Go out in the sunshine or shine a lamp through the cellophane.
8. Tell the student to look into the box through the round hole.
9. See what colors the gumballs are.
10. Repeat this experiment with different

Guided Practice

Day 2/ Lesson 2- 15 mins.

1. Take a glass of water and paper to a part of the room with sunlight (near a window is good).
2. Hold the glass of water (be careful not to spill it) above the paper and ask the students to watch as sunlight passes through the glass of water, refracts (bends) and forms a rainbow of colors on your sheet of paper.
3. Try holding the glass of water at different heights and angles to see if it has a different effect.
4. Tell them that while they normally see a rainbow as an arc of color in the sky, they can also form in other situations.
5. They may have seen a rainbow in a water fountain or in the midst of a waterfall and they can even make their own such as you did in this experiment.
6. Have them know that rainbows form in the sky when sunlight refracts (bends) as it passes through raindrops; it acts in the same

Materials Required

- Rectangular shoe box
- Cellophane or paper bags
- Glass of water
- Straw
- Flashlight
- Gumball

Additional Resources

- <https://study.com/academy/lesson/light-energy-sources-lesson-for-kids.html>
- <https://thesciencepenguin.com/2014/0/to-teach-reflection-and-refraction-of-light.html>
- <https://www.optics4kids.org/classroom-activities/5-10/mirror-mirror-on-the-wall-angles-of-reflection>
- <https://www.optics4kids.org/classroom-activities/5-10/watch-tv-upside-down-a-piece-of-paper>

Additional Notes

very smooth and shiny.
Light bounces, or reflects, off of the smooth and shiny surface of mirrors.
3. When you see your face in a mirror you are seeing light from your face reflecting off of the mirror.

Teacher Guide

colors of cellophane.

Day 3/ Lesson 3- 15 mins

1. Tell the students that they are going to be using the power of their eyes in today's activity.
 2. Divide the class into four groups.
 3. Give each group a glass of water, and a straw.
 4. Ask each group to bend the straw sitting in half the glass of water without even touching it!
 5. Ask them to look at the straw from the top and bottom of the glass.
 6. Ask them to look at the straw from the side of the glass.
 7. Tell them to focus on the point where the straw enters the water and ask what is strange about what they see?
 8. Tell them our eyes use light to see various objects all the time, but when this light travels through different mediums (such as water & air) it changes direction slightly. Light refracts (or bends) when it passes from water to air.
 9. Tell them that the straw looks bent because they are seeing the bottom part through the water and air but the top part through the air
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Guided Practice

way when it passes through a glass of water.
The sunlight refracts, separating it into the colors red, orange, yellow, green, blue, indigo and violet.

Day 4/ Lesson 4- 15 mins

1. Ask your students to work in pairs and have them collect small objects around the classroom.
 2. Give each pair a flashlight and turn off the lights in the classroom.
 3. Have one student place an object in front of the flashlight and have the other student guess the object that made the shadow.
 4. What clues did he or she use to find the answer?
 5. Encourage students to write their thoughts and ideas down in their notebooks.
 6. Then have pairs experiment using the flashlight to change the shape of the shadow. Ask, how can you make the shadow bigger? How can you make the shadow smaller? Do some objects create a darker shadow, and some a lighter one? Why would that happen?
 7. Discuss results with the entire class.
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	Teacher Guide	Guided Practice
	only.	
Assessment Activity	Assessment Activity	
1. Have them list three instruments that produce light.		
Summary		