

SCIENCE PARENT GUIDE – UNIT 2



IMPORTANT CONCEPTS YOUR STUDENT SHOULD KNOW AND ACTIVITIES TO DO AT HOME

Light

Description

First grade Georgia Standards of Excellence for Science engage students in constructing meaningful models that allow them to gain understanding of the natural world. In this unit students will recognize sources of light, including the Sun. They will explain how shadows are formed and how shadows differ. As students explore a variety of light sources, discovery learning will help them form enduring understandings about the importance of light in everyday life. Students will investigate what makes sound and how sound can be used. Students will determine that sound is produced from vibrations. Students will recognize that sounds have different pitches and volumes. Students will identify sounds with the appropriate emergency type (match sirens with appropriate emergency vehicle). Students are asked to plan and carry out simple investigations to understand sources of light and sound observed in the world around them and make predictions based on these investigations.

KEY WORDS TO KNOW

Light- A kind of energy that lets us see.

Shadow- A dark place made when an object blocks light.

Absorb- To soak up or take in.

Dark- Having little or no light.

Reflect-To send light, sound, or heat back toward where it came from.

Source- A person, place, or thing from which something comes.

Identify- Provide an answer from a number of possibilities.

Recognize and state briefly a distinguishing factor or feature.

Compare/Contrast- Explain how two or more persons, places, things, or ideas are alike and/or how they are different

Visible- Able to be seen by the human eye.


Light Source – An object that gives off light.



Recommended Children’s Literature

Light: Shadows, Mirrors, and Rainbows. By Natalie M. Rosinsky
Let it Shine. By Ashley Bryant
Light Shining Through the Mist. By Tom L. Mathews
Sensing Light and Sound. By Jennifer Boothroyd
All About Light. By Lisa Trumbauer

Light

| Important Concepts Addressed in this Unit | Sample Problems | How You Can Help Your Student |
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| <p>Georgia Standards of Excellence</p> <p>S1P1. Obtain, evaluate, and communicate information to investigate light and sound.</p> <p>a. Use observations to construct an explanation of how light is required to make objects visible.</p> <p>b. Ask questions to identify and compare sources of light.</p> <p>c. Plan and carry out an investigation of shadows by placing objects at various points from a source of light. .</p> <p>e. Design a signal that can serve as an emergency alert using light to communicate over a distance</p> | <p>1. In a dark room, which of the following items can still be seen?</p> <p>A. Large table</p> <p>B. Burning candle</p> <p>C. Small rock</p> <p>D. Growing plant</p> <p>2. Students see a ball sitting on the playground outside their school. The students can see the ball because _____.</p>  | <p><u>Interactive Learning Games</u></p> <p>Interactive Sites for Education - http://interactivesites.weebly.com/light.html</p> <p><u>Videos</u></p> <p>Study Jams - http://studyjams.scholastic.com/studyjams/jams/science/energy-light-sound/light.htm</p> <p>Brainpop - https://www.brainpop.com/science/energy/light/</p> |

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| <p>Science and Engineering Practices</p> <ul style="list-style-type: none"> ● Obtain, evaluate and communicate information. ● Plan and carry out investigations ● Ask questions ● Design a solution <p>Crosscutting Concepts</p> <ul style="list-style-type: none"> ● Cause and Effect <p>Core Idea</p> <ul style="list-style-type: none"> ● Light behavior | <p>A. the playground is noisy</p> <p>B. the ball is not very big</p> <p>C. the Sun is shining on it</p> <p>D. the school is new</p> | |
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Georgia Standards of Excellence for Science

Students are expected to perform the practices while learning the content and understanding the crosscutting concepts.

Science and Engineering Practices

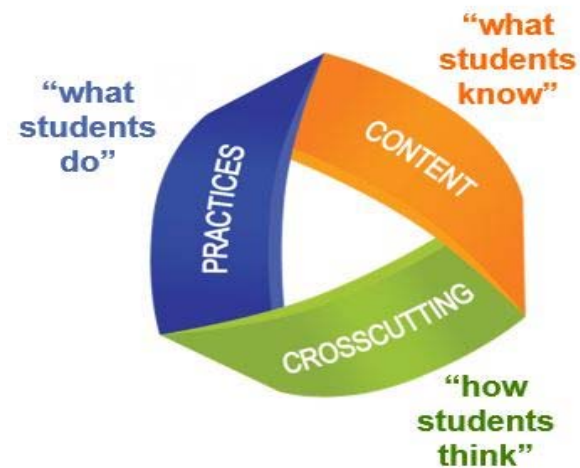
Students can use their understanding to investigate the natural world through the practices of science inquiry, or solve meaningful problems through the practices of engineering design.

Crosscutting Concepts

Provide students with connections and intellectual tools that are related across the differing areas of disciplinary content and can enrich their application of practices and their understanding of core ideas

Core Ideas

Core ideas cover the four domains: physical sciences, earth and space sciences, life science, and engineering and technology.



Quoted text from Peter A'Hearn