

Exploring Light

Content Area: **Science**
Course(s):
Time Period: **Undefined**
Length: **All Year**
Status: **Published**

Unit Overview

Essential Questions

What is light?

How does light change?

What is reflection?

Content

Light and reflection

Skills

Observing

Predicting

Describing

Comparing

Sorting

Vocabulary

Matching

Creating

Assessments

Teacher observation and question

Student response

Lessons/Learning Scenarios

1. tracing shadow's of objects or a partner
2. using overhead projector to make shadows of objects on the board, then trace them
3. shadow puppets with flashlights; changing the size of the shadow by moving the puppet
4. recording how shadows change throughout the day by tracing one in the morning and checking on it every hour
5. placing objects on construction paper, leaving them in the sun and then observing what happened to the paper at the end of the day
6. working with mirrors and other reflective items

Standards

SCI.PK.5.1.1	Display curiosity about science objects, materials, activities, and longer-term investigations in progress (e.g., ask who, what, when, where, why, and how questions during sensory explorations, experimentation, and focused inquiry).
SCI.PK.5.1.2	Observe, question, predict, and investigate materials, objects, and phenomena during classroom activities indoors and outdoors and during any longer-term investigations in progress. Seek answers to questions and test predictions using simple experiments or research media (e.g., cracking a nut to look inside; putting a toy car in water to determine whether it sinks).
SCI.PK.5.1.3	Use basic science terms (e.g., observe, predict, experiment) and topic-related science vocabulary (e.g., words related to living things [fur, fins, feathers, beak, bark, trunk, stem]; weather terms [breezy, mild, cloudy, hurricane, shower, temperature]; vocabulary related to simple machines [wheel, pulley, lever, screw, inclined plane]; words for states of matter [solid, liquid]; names of basic tools [hammer, screwdriver, awl, binoculars, stethoscope, magnifier]).
SCI.PK.5.1.4	Communicate with other children and adults to share observations, pursue questions, make predictions, and/or conclusions.
SCI.PK.5.1.5	Represent observations and work through drawing, recording data, and “writing” (e.g., drawing and “writing” on observation clipboards, making rubbings, charting the growth of plants).
SCI.PK.5.2.1	Observe, manipulate, sort, and describe objects and materials (e.g., water, sand, clay, paint, glue, various types of blocks, collections of objects, simple household items that can be taken apart, or objects made of wood, metal, or cloth) in the classroom and outdoor environment based on size, shape, color, texture, and weight.
SCI.PK.5.2.3	Investigate sound, heat, and light energy through one or more of the senses (e.g., comparing the pitch and volume of sounds made by commercially made and homemade

instruments, recording how shadows change during the course of a day or over time, using flashlights or lamp light to make shadows indoors).

SCI.PK.5.4.2

Explore the effects of sunlight on living and nonliving things (e.g., growing plants with and without sunlight, investigating shadows that occur when the sun's light is blocked by objects).

SCI.PK.5.5.1

Identify and use basic tools and technology to extend exploration in conjunction with science investigations (e.g., writing, drawing, and painting utensils, scissors, staplers, magnifiers, balance scales, ramps, pulleys, hammers, screwdrivers, sieves, tubing, binoculars, whisks, measuring cups, appropriate computer software and website information, video and audio recordings, digital cameras, tape recorders).

Resources
