

The Five Senses: Sight

Strand Scientific Investigation, Reasoning, and Logic

Topic Investigating the sense of sight

Primary SOL K.2 The student will investigate and understand that humans have senses that allow them to seek, find, take in, and react or respond to information in order to learn about their surroundings. Key concepts include

- a) the five senses and corresponding sensing organs;
- b) sensory descriptors used to describe common objects and phenomena.

Related SOL K.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations in which

- a) basic characteristics or properties of objects are identified by direct observation.

K.4 The student will investigate and understand that the position, motion, and physical properties of an object can be described. Key concepts include

- a) colors of objects;
- b) shapes and forms of objects;
- d) relative sizes and weights of objects;
- e) relative positions and speeds of objects.

Background Information

The sensing organs—eyes, ears, nose, tongue, and skin—are associated with the five senses. Using the senses, we can make observations about the world. To communicate what is observed, descriptors are used.

People depend on their eyes every day in a variety of ways. The retina contains two types of photoreceptors—cones and rods. The cones are active at higher light levels and are capable of color vision. The rods are responsible for vision at low light. These receptors collect information and send it to the brain so we can see in various levels of light.

Materials

- Magnifying glasses
- Paper plates
- Large plastic zip bags, one per student and each containing the following objects:
 - Pieces of round cereal
 - A pipe cleaner cut into several pieces
 - Rice
 - Newspaper: black-and-white and color pages
 - Paper towels torn in small squares
 - A piece of cloth – ripped into several small pieces
 - Pretzel sticks
 - A small plastic zip bag containing kosher salt

Vocabulary

five senses, sight, eyes, bright, dull, color, black, white

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

Introduction

1. Play a game of “I Spy.” Tell students they are looking for something in the room. Gradually give them clues about the object, adding one clue at a time. Share its color, shape, and size. Wait between clues so they can process ideas and share guesses.
2. Let several students choose “I Spy” objects and share clues about them.
3. Talk about what types of clues were given—i.e., colors, shapes, sizes, locations. Make a list of words that fit under each category, as follows:
 - Color (*red, yellow, orange, green, blue, purple, black, brown, white*)
 - Shape (*circle, square, triangle, rectangle*)
 - Size (*big, little, small, short, tall*)
 - Location (*above, below, on, behind, near*)

Procedure

1. Discuss the part of our body (the eye) that lets us know about colors.
2. Pass out the large zip bags and paper plates. Ask students to carefully pour the contents of their bags onto their paper plates.
3. Have students examine the items on their plates. Let them choose one object at a time and describe it to the class by using words for color, shape, and size. Have students put the items back in the zip bag.
4. Ask students to observe the salt in the small zip bag. Ask them what instrument scientists use to see small items. Students may mention magnifying glasses or microscopes.
5. Pass out magnifying glasses. Have students pour the salt onto their paper plates, observe the salt using the magnifying glass, and describe the salt.
6. Have students carefully put the paper plate with the salt on it in the trash.
7. Let students explore objects in the room, using the magnifying glasses.

Assessment

- **Questions**
 - What do we use to “see” things?
 - What are some words that are used to describe something you see?
- **Journal/Writing Prompts**
 - Play a game of “I Spy.” Record the clues (color, shape, size) in your science journal. When you think you know what the object is, draw it in your journal.
- **Other**
 - Place four objects on the table, three that are alike in some way (e.g., color, shape, or size), and one that is different. Have students decide which object does not belong in the group and explain why.

Extensions and Connections (for all students)

- Review the five senses, and discuss the importance of all five working together. Place a mystery object in a brown bag. Have students use one sense at a time, leaving taste and sight last, to collect clues about the object. Encourage them to use descriptive words to describe the mystery object.
- Collect several items, and place them in front of you. While students cover their eyes, remove one of the objects. Ask students to observe the remaining objects and decide which item is missing.
- Select objects for students to observe such as shells, rocks, marbles, and feathers. Have them list the colors they observe, count the number of colors, and compare the sizes and shapes of the various objects.
- Have students make a class mural of a rainbow by cutting out magazine pictures. Have them cut out pictures that are red, orange, yellow, green, blue, and violet. Have them glue pictures on a large sheet of butcher paper to form a class rainbow.
- Have students sort attribute blocks, bears, or other objects by color and/or size.

Strategies for Differentiation

- Make picture cards with the descriptor words (colors, shapes, sizes, locations) and use these to preteach the vocabulary before playing the “I Spy” game. After playing the game, use the picture vocabulary cards to review the kinds of clues that were given.
- Use a digital microscope to enlarge the items being viewed onto the interactive whiteboard.
- Have students record their descriptions so they can hear them repeatedly.
- Use talking software to describe the items students are viewing.
- Use a software program that shows the signs for the words students are viewing.
- Use premade sorting charts of shapes, colors, and sizes.