



Overview:

In this lesson, students explore the physical properties of various objects by touching them while blindfolded.

Objectives:

The student will:

- identify objects by touch;
- use simple words and phrases to describe objects; and
- classify objects using a Venn diagram.

GLEs Addressed:

Science

- [3-4] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.
- [3] SA1.2 The student demonstrates an understanding of the processes of science by observing and describing the student's own world to answer simple questions.
- [4] SA1.2 The student demonstrates an understanding of the processes of science by observing, measuring, and collecting data from explorations and using this information to classify, predict, and communicate.
- [3] SB1.1 The student demonstrates an understanding of the structure and properties of matter by classifying matter according to physical properties (i.e., color, size, shape, weight, texture, flexibility).

Math

- [3-4] S&P-2 The student demonstrates an ability to analyze data (comparing, explaining, interpreting, or justifying conclusions) by using information from a variety of displays (tallies, tables, pictographs, bar graphs, or Venn diagrams).

Whole Picture:

Observation is important to science. The five senses (taste, touch, sound, sight, and smell) tell us about the world around us. Scientists often use their five senses to learn about the objects they are studying. When University of Alaska Fairbanks permafrost researcher Kenji Yoshikawa wants to determine the type of soil he is looking at, he can touch or feel it. The soil's texture, or how it feels, can help identify it. A smell (or odor) similar to manure means methane is present, indicating that plant and animal life is decomposing. To determine if sea ice is first year or second year ice, Native Elders will often taste the ice, because new ice is saltier than old ice. Listening for the sound of animals can help Native Elders and scientists track them. Practice using the five senses helps students become better observers and more effective scientists.

Materials:

- Chocolate chips
- Marshmallows
- Crayons
- Paper
- Popcorn kernels
- Feathers
- Orange, or other edible object, cut into bite size pieces
- Two hula-hoops, or other circular objects

- Three red objects*
- Three yellow objects*
- One red and yellow object*
- Small dishes, such as aluminum tart tins (six per group)
- Napkins or paper towels
- Blindfold (one per group)
- STUDENT WORKSHEET: “Touch and Discover”

*Other colors can be used as long as there are three sets of objects: one that is all one color, one that is all another color, and one that contains both of the other two colors.

Teacher’s Note: Any common objects can be used for this activity. Students will gain the most from a variety of objects with varying textures. Please save crayons and small dishes for use in other ACMP activities, such as the lesson: “Melt Away.”

Vocabulary:

texture – the feel of something (wood has a rough *texture*)
blindfold – to cover the eyes

Activity Preparation

Fill each dish with chocolate chips, marshmallows, crayons, paper, popcorn kernels, or feathers, so there is one set of dishes per group (one type of item per dish). Cover the dishes with a napkin or paper towel.

Activity Procedure:

1. Ask students to name their five senses (*taste, touch, smell, sound, and sight*). List the five senses on the board. Give each student a piece of orange, but tell students not to eat it right away.
2. Distribute the orange pieces, and ask students to describe the orange by sight. Accept all answers, and write them on the board.
3. Ask students to describe the orange by sound, then by smell, then touch, and finally taste. For each sense, list all student observations on the board. Use the word texture when discussing touch and taste.
4. Divide students into small groups. Distribute the STUDENT WORKSHEET: “Touch and Discover” to each student. Distribute one set of covered dishes and a blindfold to each group.
5. One student in each group should put on the blindfold. The other students in the group should hand the student the dishes, one at a time. The blindfolded student should touch the object(s) in the dish and describe by touch. For example, students may describe the crayon as smooth or waxy. Encourage students to come up with two or three words to describe each object and then guess what the object is.
6. Ask the other students in the group to write the name of each object, draw a picture, and record the words used to describe each object on their worksheet.
7. When each student has had a turn, ask groups to share their describing words (adjectives). List student responses on the board.

Critical Thinking Activity: Venn Diagram Method. Venn diagrams are used to classify objects and attributes to sort, compare, and contrast. Students can use Venn diagrams to help them sort information and items. Place two hula-hoops on the ground and ask the class to work together to sort the objects they used in the previous activity. (NOTE: There is more than one way to sort the objects.)

Students may need more or less guidance with sorting depending upon their previous experience. If students do not have experience with Venn diagrams, complete the following activity first:

Place the two hula-hoops on the ground, not touching. Show students the three red and three yellow colored objects, and ask them to help sort the objects by placing all the red items in one hula-hoop and the yellow objects in another hula-hoop. Encourage students to discuss their thinking as they sort. Show students the red and yellow object, and ask them which set it would go in. Encourage students to think and discuss their thoughts. Overlap a section of the two hula-hoops, and demonstrate how the red and yellow object can go into the middle section. Use index cards or paper to help students label the three sections.

Answers:

Answers will vary; however, the picture and description should match the object named.

Name: _____

Touch and Discover

Student Worksheet (page 1 of 3)

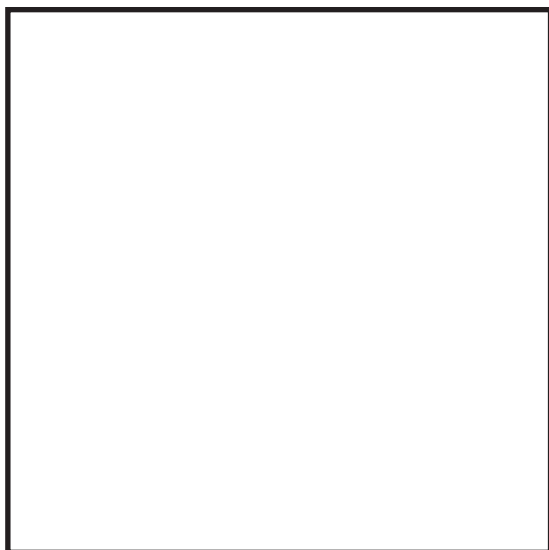
Levels



- Directions:**
- A. Write the name of each object.
 - B. Draw a picture of each object.
 - C. Write some words used to describe each object.

1. A. Name: _____

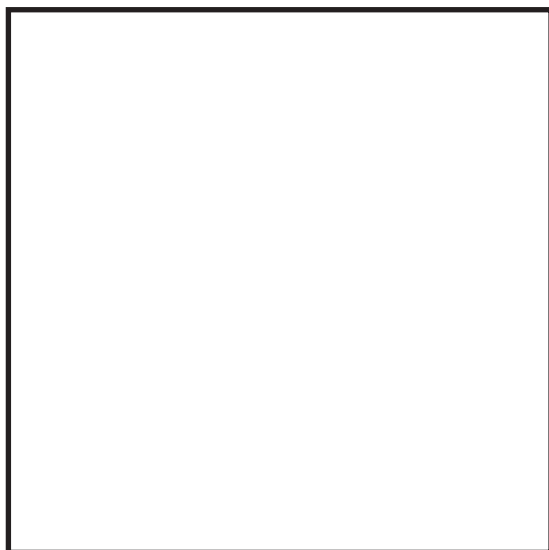
B. Picture



C. Describe

2. A. Name: _____

B. Picture



C. Describe

Name: _____

Touch and Discover

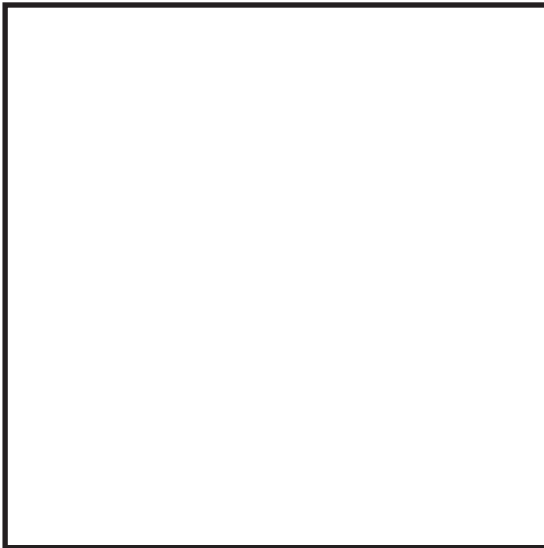
Student Worksheet (page 2 of 3)

Levels



3. A. Name: _____

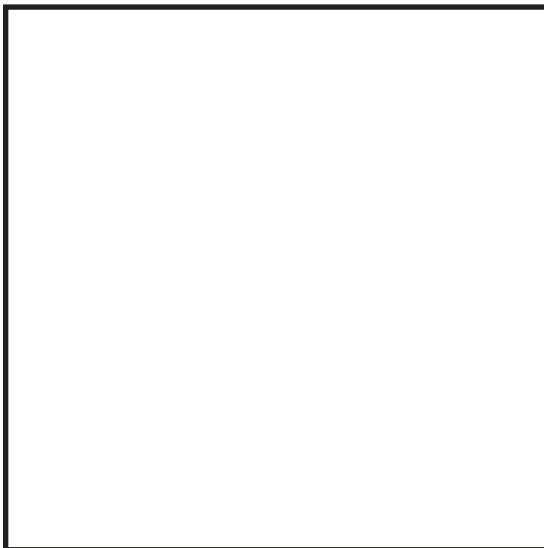
B. Picture



C. Describe

4. A. Name: _____

B. Picture



C. Describe

Name: _____

Touch and Discover

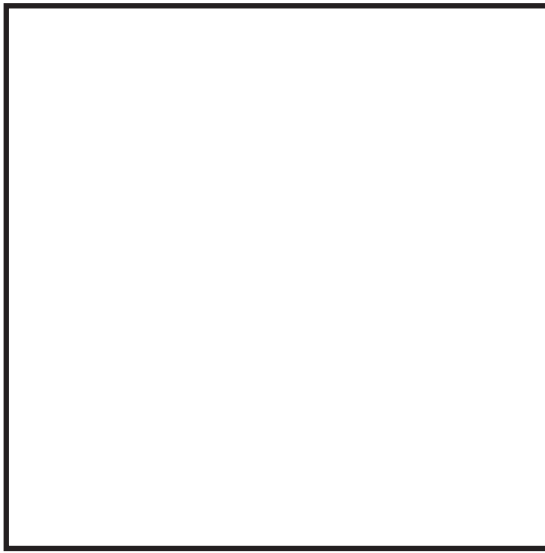
Student Worksheet (page 3 of 3)

Levels



5. A. Name: _____

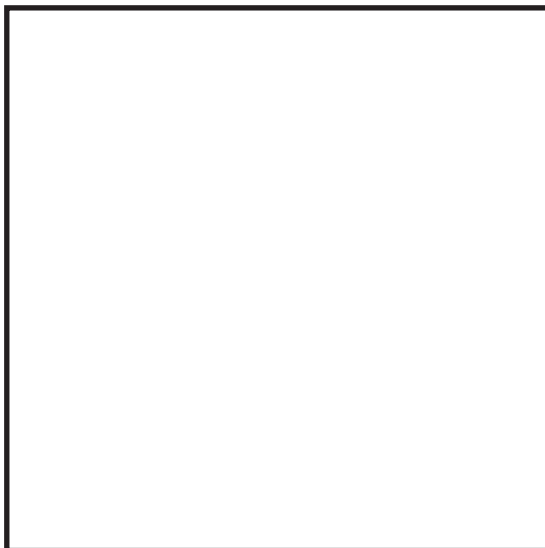
B. Picture



C. Describe

6. A. Name: _____

B. Picture



C. Describe
