

LAB INSTRUCTIONS: SIGHT

Objectives

- Identify and describe objects on a tray using students' sense of sight.

Materials: Tray with 5 objects, tray with 20 objects, 2 towels. Optional: paper, pen.

Step 1: Describe & Remember 5 Items on Tray

- Place 5 different objects on a tray & cover the tray up with a towel.
- Uncover the tray containing 5 objects.
- Ask students to name the objects they see and describe them. Encourage them to use lots of details and describing words.
- Cover the tray with the towel and ask students what the five objects on the tray were. Ask them to describe the objects using as many details as they can remember.
- Uncover the tray and see how they did.

Step 2: Which Item is Missing?

- Remove one object from the tray - but don't let the students see which object you've removed.
- Show them the tray and ask them which object is missing.

Step 3: Describe and Remember 20 Items on a Tray

- Grab the 2nd tray with 20 objects to the tray.
- Uncover the tray and ask students to name the objects they see and describe them.
- Cover the tray with the towel and ask students what the 20 objects on the tray were. (You may want to write them down.)
- Uncover the tray and see how they did.

Step 4: Which Items are Missing?

- Remove 3-5 items from the tray without letting the students see which objects were removed.
- Uncover the tray and have them determine which objects (and how many) are missing.

Step 5: Using the senses to compare objects

- Have one student close his eyes.
- Select one object and place it in front of the student. Allow the student to touch the objects and see if they can determine by touch and sound (shake) which object is in their hand.

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- Let them open their eyes to see if they are right. Allow each student who would like to play this game to have a turn.

Follow-Up

- Emphasize the importance of sight and how much we rely on it everyday.
- Ask the students what it would be like if they couldn't see.
- How could you have identified the shapes on the tray if you couldn't see them?

LAB INSTRUCTIONS: HEARING

Objectives

- Predict what sound an object will make when shaken.
- Predict which objects will be quieter or louder when shaken.

Materials: containers filled with a variety of objects; five covered test tubes marked "hear 1", "hear 2", "hear 3", "hear 4", "hear 5"; three empty test tubes.

Step 1: Listening to Sounds Produced by Shaking Various Objects

- Select one test tube from the set and let the students know only one type of object fills each tube.
- Shake the tube and ask the students which item in the containers could be making the noise.
- After they guess, reveal the objects to see if the students were correct. Repeat with a few other test tubes.
- Now compare the containers and predict which objects will make more noise when you shake it and why.

Step 2: Students Make Their Own Sounds

- Give each student (or pairs of students) an empty test tube.
- Allow them to pick an object from the containers and test the sound of one of those objects.
- Next have them add more of the same object and compare the sound when more objects are in the tube. Why are the noises different?

Step 3: Mystery Test Tubes – Matching Sounds

- Find the Mystery tube and shake it.
- Ask the students to work together in pairs to select items from the bin that would make the same noise when placed in their empty test tube and shaken.
- Reveal the tube to see if they picked correctly. If they are not correct, are the sounds close? Why might two objects sound similar? Shake them again. Knowing they are different, see if the students can find a way to tell the objects apart by sound. You might even have them close their eyes and test them. Repeat with different tubes from step 1 if time permits.

Follow Up

- How does our sense of hearing help us? What would it be like if we couldn't hear?

LAB INSTRUCTIONS: TOUCH

Objectives

- Discover how sensitive touch is by identifying objects through touch only.
- Match objects using sense of touch.
- Compare sensitivity of touch with and without socks on hands.

Materials: Brown bags filled with a diamond shape, square shape, and a hexagon shape; socks; mystery bags filled with random items.

Step 1: Exploring Objects Using Sense of Touch

- Show the students a brown bag filled small shapes: a diamond, hexagon, and square. Let them hold and touch the shapes to become familiar with them.
- One at a time, ask a student to find one of the objects (diamond, hexagon, or square) without using their eyes and by just feeling the objects.
- Ask the students:
 - Is it easier to find the hexagon than the diamond? Why?
 - How does your sense of touch help you to find the hexagon and the diamond?
 - How does your sense of touch help you to find a diamond or a square? What are you feeling for?

Step 2: Comparing the Sensitivity of Touch

- Now put a sock on the student's hand and repeat the activities comparing how easy it is with and without a sock.

Step 3: MYSTERY Bags

(Note: Students can choose to feel inside the Mystery Boxes either with or without a sock on their hand)

- Do not let the students look in the bag and do not show the students any of the items in the bag before starting this step.
- Have each student - one at a time - reach into a Mystery Bag, without looking, and describe what they feel (hard, round etc.). The student can also shake the object inside their hand, inside the bag.
- Ask the student to predict what item is inside the bag and then have them reveal the object. Do not return the item to the bag.
- Continue this until all the objects in the Mystery Bag have been revealed and removed.

Follow-Up

In the Mystery bags what sense(s) can you use? (touch and hearing).

LAB INSTRUCTIONS: SMELL

Objectives

- Try to identify various smells without touch or sight.
- Learn that colors are associated with smells (and tastes).
- Make an artistic nameplate.

Materials: Five covered test tubes marked “smell 1”, “smell 2”, “smell 3”, “smell 4”, “smell 5”; each tube is filled with various items. Small shaker containers with different Jell-o powders; cardstock (1 per student); glue; pencils.

Step 1: Investigating a Colored, Scented Powder

- Select one of the test tubes and demonstrate how to properly waft to smell the powder.
- Starting with one tube, have students smell the tube without letting them see what is inside the tube. Each student should predict what he/she smells. Next, have students predict the color based on the scent.
- Look to see if the student is correct. Are there any surprises?

Step 2: Making an Artistic Nameplate

- Give each child a piece of cardstock.
- Let students write their name with pencil (or first letter of their name if time is running short; if first letter only, then write names on back). Place each card on a cookie sheet in front of the student.
- Have students use the glue to trace their name or letter on the card.
- Set out the shaker containers. Ask each student to select a scent for his/her name and sprinkle that powder on top of the glue.
- Let them set for a few seconds, then carefully tap excess powder off card and onto cookie sheet.

Follow Up

- How do we rely on our sense of smell every day? (*smell smoke in case of a fire, smell someone baking cookies in the oven*)
- What would it be like if we couldn't smell anything?
- What other sense could you use to “read” your name (or letter) on the cards we made? (*touch, sight*)
- Remind students that we NEVER eat in science lab. But, ask the students to predict what they think something might taste like - like the gelatin powder. If the color is orange, and it smells like oranges, do they think it will taste like oranges or apricots or carrots (or something else that is orange)?