In this lesson, your students will play "I Spy" to identify 3-D shapes. They will use language to describe the shapes and be able to compare them easily.

**Learning Objectives**

Students will be able to use language such as pyramid, prism, face, and edge to describe solids. Students will be able to compare 3-D solids using their attributes.

**Materials and Preparation**

- 3-D solids, such as a cone, cylinder, cube, sphere, triangular prisms and pyramids, and rectangular prisms and pyramids
- Examples of 3-D solids, such as cereal boxes, gift boxes, photos of Egyptian pyramids (cereal boxes, gift boxes, photos of Egyptian pyramids)
- Journal
- Paper
- Pencils
- Crayons

**Key Terms:**

- faces
- vertices
- edges
Lesson

Introduction (10 minutes)

- Invite your students to play "I Spy" with something familiar, such as colors.
- Reintroduce the game by using the attributes of shapes of solids. For example: *I spy with my little eye something that can stack.*
- Give your students three guesses before another attribute is added, such as: *I spy with my little eye something that can stack and has 6 faces.*
- Ask your students to guess the shape. When it has been guessed, have that same student come up with another clue.

Explicit Instruction/Teacher Modeling (15 minutes)

- Explain to the students that they will be learning more about these solids.
- Display a rectangular prism, and raise a discussion on the shape. Potential guiding questions include: *What attributes does this rectangular prism have? Where have you seen a rectangular prism?*
- Repeat the questions with a cube and a pyramid.
- Explain to your students that they will be using new vocabulary to describe the shapes.
- Show a cube, and explain that the cube has six *faces,* or flat surfaces. Show that the cube has 8 *vertices,* or points, and that there are 12 *edges,* or lines that connect faces.

Guided Practice/Interactive Modeling (10 minutes)

- Give each group of students a rectangular prism, a triangular prism, or a square pyramid.
- Have your students discuss how their solid is the same as another solid. Then, ask them to discuss how it is different from another group's solid.
- Instruct your students to select a cone, a cylinder, a sphere, or a cube and compare it to their first solid.
- Make sure your students are using new vocabulary to describe the solids.
- Ask your students to record their observations on a sheet of paper or in a journal.

Independent Working Time (10 minutes)

- Have groups of students display their solids and tell which attributes are the same and which are different.

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Extend

Differentiation

- **Enrichment:** Have your students draw the shapes on their own and fill in the faces with different colors. Ask your students to write a story that includes different solids.
- **Support:** Bring in more real-world objects to show your students what 3-D shapes can look like.

Review

Assessment  *(5 minutes)*

- Collect your students' notes on how their objects are similar and different.
- Make sure that they are using the vocabulary from earlier in this lesson.

Review and Closing  *(5 minutes)*

- Review the names and attributes of solids.
- Hold up two solids, such as a triangular prism and a pyramid. Ask questions about the shapes, such as: *How are a pyramid and a triangular prism the same? How are they different? How do you think a triangular prism got its name?*