Your class will love this outdoor activity that teaches them how to compare the capacity of different containers.

**Learning Objectives**

Students will be able to compare the capacity of different containers based on the container's attributes.

**Materials and preparation**

- Six small buckets or containers of water
- Six scoops (1/2 cup or 1 cup measuring cup)
- Plastic coverings for student tables
- Math journal or paper
- Pencils

**Key terms**

- capacity
- attribute
- prediction

**Introduction (10 minutes)**

- Gather the students together and show them your cup of water, tea, or coffee.
- Ask the students to think-pair-share what the maximum amount of liquid your cup can hold is called.
- Allow a few students to share their ideas with the rest of the class.
- Explain to the students that the maximum amount of liquid your cup can hold is called its **capacity**.
- Tell the students that today they will be comparing the capacity of different containers based on the container's **attributes**.

**EL**

**Beginning**

- Provide students with a notecard with the word capacity in English and their home language (L1).
- Ask students to draw a picture of your cup of water, tea, or coffee on the back of the notecard to refer to throughout the lesson.
- Encourage students to say the word "capacity" orally in English and their L1.

**Intermediate**

- Encourage students to explain what capacity means in their own words to a partner.

**Explicit Instruction/Teacher modeling (15 minutes)**

- Put the students in small groups of 5-6 students. Pass out the plastic coverings and ask students to tape/drape the coverings over their tables.
- Give each small group 3-5 different containers including pudding containers, applesauce containers, rectangular tupperware containers, yogurt containers, and tin cans. Each small group needs the same containers.
- Provide each group with a scoop of some kind, such as a measuring cup (1/2 cup or 1 cup). Make sure each small group has the same size scoop.
- Place the bucket of water on each table.
- Explain to the students that in their small groups, they will first predict how many scoops they think each container will hold (e.g. The tin can will hold ____ scoops of water.) They should record this information in
their math journals.  

- Model completing a **prediction** to support students in understanding the task.

**EL**

**Beginning**

- Allow students to use words, phrases, and gestures to show their understanding of a prediction.  
- Write a sentence frame on the board to support them as they jot their ideas down in their math journals, such as:  
  - I predict that the ___ (object) will hold ___ (number) scoops of water.

**Intermediate**

- Ask students to explain what a prediction is with their elbow partner.

**Guided Practice (5 minutes)**

- Ask a small group to model the process and orally share their prediction with the rest of the class.  
- Give students five minutes to make their predictions. Rotate around the classroom and support students as needed.

**EL**

**Beginning**

- Have students work in a small, teacher-led group.  
- Encourage students to share their predictions aloud, using the sentence frame for support.  
- Allow students to share their predictions in their L1, if possible.

**Intermediate:**

- Have students share their predictions aloud with their small group.  
- Encourage students to agree/disagree with other students' predictions, and provide a sentence frame to support them: I agree/disagree with your prediction because ___.

**Independent working time (10 minutes)**

- Instruct students to figure out how many scoops of water each object holds and record their findings in their math journals.  
- Provide sentence frames to support students in writing down their findings, such as:  
  - My prediction was right/wrong because the ___ (object) held ___ (number) scoops. I thought the ___ (object) would hold ___ scoops.

**EL**

**Beginning**

- Guide students as they record how many scoops of water each object actually holds.  
- Draw a green check mark above the word "right" on the sentence frame and a red X above the word "wrong" on the sentence frame to support student understanding.  
- Help students read the sentence frame aloud in English.

**Intermediate**

- Encourage students to compare/contrast their findings with their group members' findings.  
- Allow students time to discuss their reasonings with their group members.

**Related books and/or media**

- Find [interactive books](https://www.education.com/lesson-plans/) for each child's level.
Differentiation

**Enrichment:** Advanced students may want to measure the capacity of more objects or oddly shaped objects.

**Support:** Struggling students may benefit from working with a partner.

**Assessment (10 minutes)**

- Have students indicate which container has the greatest capacity and which container has the least capacity.
- Ask students to answer these questions in their journal: Which container has the greatest capacity? How do you know?

**EL**

**Beginning**

- Define greatest and least for students in English and their L1.
- Have students draw the container that has the greatest capacity and the least capacity and share their ideas orally.

**Intermediate**

- Encourage students to read their answers back to an elbow partner to check for clarity.

**Review and closing (5 minutes)**

- Allow a few students to share out their findings.
- Hold a discussion about how the attributes of the objects might have caused them to predict the capacity would be less or more than its actual capacity.

**EL**

**Beginning**

- Encourage students to share their findings with students who speak the same L1, if possible.
- Provide students with a word bank of attributes of objects (size, shape, color) to use when discussing their ideas.

**Intermediate**

- Call on students to share their findings with the class and allow them to refer to their math journals for support.