

## LENGTH AND VOLUME EXPLORATION

### Performance Standard 7A.A

Use non-standard units to measure and order length and volume, using real-life objects and containers:

- *Mathematical knowledge:* Measure length and volume using non-standard units.
- *Strategic knowledge:* Apply correct strategies when measuring length and volume.
- *Explanation:* Explain what was done and why it was done.

### Procedures

1. *In order to measure and compare quantities using appropriate units, instruments, and methods (7A)*, students should experience sufficient learning opportunities to develop the following:
  - Compare and order objects according to measurable attributes.
  - Measure objects using non-standard units.
2. This task must be assessed individually and videotaped to show strategy.
3. Length – Offer students 4 pencils of different lengths. Direct students to ‘measure’ the pencils using Unifix Cubes and tell the length. Ask students to put the pencils in order from shortest to longest. Be sure they have had a chance to measure all pencils before ordering.
4. Volume – Offer students different containers with lids (e.g. butter tub, tennis ball can, assorted Tupperware.) Direct students to fill the containers with Unifix Cubes. Explain that the container must be full but the lid must still fit on top. Students must give the number of cubes that measure the container’s volume. Direct students to order the containers from the least to the most.
5. Assess using of the standard rubric. Assess Mathematical Knowledge by observing the student measure, count, and order. Assess Strategic Knowledge Does the student start at the end of the pencil to measure? Does the student fill appropriately according to the given rule? Assess Explanation by listening for the student to describe what was done and why it was done.

### Examples of Student Work not available

### Time Requirements

- 20 - 25 minutes

### Resources

- Pencils of various lengths
- Unifix Cubes
- Assorted containers with lids
- Mathematics Rubric