

Chapter 8
Lesson 9

Estimating and Measuring Capacity

You will need

- measuring spoons
- marked measuring containers (125 mL, 250 mL, 500 mL)
- a 1 L container
- a 2 L container
- a plastic glass
- a variety of containers to measure
- pourable material to fill containers

GOAL

Estimate, measure, and compare capacities using litres and millilitres.

Mateo's class is going to have a Bread Tasting Day. Everyone is going to bring a different kind of bread.

Mateo is planning to bake prairie flax bread.



Which containers should Mateo use to measure the ingredients?

Prairie Flax Bread

- 300 mL water
- 25 mL honey
- 25 mL canola oil
- 500 mL bread flour
- 250 mL whole wheat flour
- 5 mL salt
- 75 mL milled flax seed
- 30 mL sunflower seeds
- 15 mL poppy seeds
- 10 mL yeast



small scoop



big scoop



big cup



small cup



big spoon



small spoon



Mateo's Measuring

The smallest amount that I need to measure is 5 mL of salt. 5 mL is about the size of five centimetre cubes. The smallest spoon looks like it would hold about that much.



- A.** If Mateo's smallest spoon holds 5 mL, which of his containers holds 15 mL? Explain your thinking.
- B.** If the milk container holds 1 L, or 1000 mL, which container holds 250 mL? Explain your thinking.
- C.** Estimate the amount that each of Mateo's other measuring containers will hold. Explain your thinking.
- D.** How could Mateo use the containers to measure the ingredients for his prairie flax bread? Use your estimates for Part C to help you.

Reflecting

- E.** If Mateo bakes two loaves of bread, he will need 1 L of bread flour. Describe at least three different ways he could use a 500 mL cup, a 250 mL cup, and a 125 mL scoop to measure 1 L.
- F.** Why is it useful to use two different units—litres and millilitres—for measuring capacity?

Checking

1. Would you use millilitres or litres to measure the capacity of each container below? Explain.
 - a)** an aquarium
 - b)** a toothpaste tube
 - c)** a bathtub
 - d)** a juice box

2. How much milk are you likely to put in a bowl of cereal: 50 mL, 200 mL, or 1 L?

Practising

Use these measurements to answer the questions below.



about 5 mL



about 125 mL



about 350 mL



2 L



about 10 L



3. a) About how many millilitres of saskatoon berries would fit in the container shown in the picture?
b) About how many millilitres of jam would you put on a slice of toast?
4. a) Which containers below could hold about 1 mL?
b) Which containers could hold about 1 L?





5. To stay healthy, people should drink about 2 L of water every day. Many people drink only about 1500 mL.
- Find a container that holds 2 L. About how much of the container will be full if you pour in 1500 mL of water? Sketch a picture to show your estimate.
 - Pour 1500 mL of water into the 2 L container to test your estimate for part a). Sketch the result.
 - Find a glass. About how many glasses would you need to fill the 2 L container? Explain your estimate. Then check by filling the 2 L container.

6.
 - Choose three containers. Estimate the capacity of each container.
 - Measure the capacity of each container.
 - Which container has the greatest capacity?

7. Order these capacities from least to greatest.
120 mL 1800 mL 1 L 3700 mL 3 L



60 mL



80 mL



125 mL



250 mL

8. How can you use the scoops shown at the left to measure each quantity?

- 140 mL
- 1.5 L

9. Write the equal measurement in millilitres.

- 3 L
- 0.5 L
- 7 L
- 4.5 L

10. A can holds 350 mL of frozen orange-juice mix. To make juice, you add three cans of water. Will a pitcher that holds 1 L be large enough to hold the juice? Show your work.
11. A leaky tap drips 1 mL of water every 15 s (seconds).
- How many millilitres does the tap drip every minute?
 - How many millilitres does the tap drip every hour?
 - About how many litres of water are wasted every day by this leaky tap?
12.
 - How can you describe to someone how much 1 L is?
 - How can you describe how much 1 mL is?