


# Module 12

## Measurement

- Language associated with capacity and **mass** (or **weight**) is explored in this module. Expressions like *full*, *empty*, *half-full*, *nearly full* describe capacity, or the amount a container can hold. For mass, the language includes *heavy*, *heavier*, *light*, etc.

**12.9 Capacity: Making direct comparisons**

**Step In** Each of these bottles is full of water. Which bottle holds the most water?  
How could you order these bottles by the amount of water that they each hold?



Two of these water bottles have the same **capacity**.

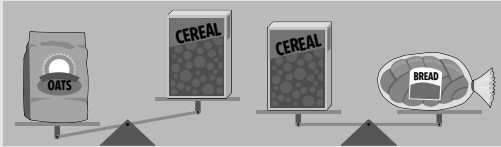
**Capacity** tells the amount of liquid that a container can hold.

In this lesson, students fill bottles with water and then compare and order capacities.

- Counting non-standard units (for example, the number of same-size cubes, or equal-size scoops of water) is foundational to exploring capacity and comparing mass.

**12.11 Mass: Making direct comparisons**

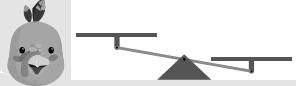
**Step In** What do you know about the mass of each grocery item in this picture?



How could you compare the mass of the bread and the oats?

Write **bread** and **oats** on this pan balance to show your thinking.

The bread and cereal have the same mass. The oats are heavier than the cereal.



In this lesson, students count and record the number of uniform non-standard units (cubes) to compare the masses of objects.

## Ideas for Home

- Explore capacity by asking, “Which container seems the right size for these leftovers?” or, “Which glass will hold more milk — the tall, skinny one, or the short, fat one?”
- Use marbles, beans, or cups of water to measure the capacity of different-sized containers.
- Ask questions, like, “Can a hairbrush fit into your backpack?” or “Can a garden shovel fit in the kitchen cabinet?”
- Create a coat hanger balance scale. Place objects in plastic bags and hang them from the ends of the hanger. Ask, “How many pennies does it take to balance the mass of a pencil?”

## Glossary

- Mass** and **weight** are not the same thing. However, for students in earlier grades, it is acceptable to use the two terms interchangeably, especially when most students hear *weigh* and *weight* more often in everyday conversation. The distinction between *mass* and *weight* will be addressed in later grades.