



Name _____ Date _____

Mass and Capacity in the Metric System

(pages 164–166)

In the metric system, all units are defined in terms of a basic unit. The basic unit of mass is the **gram** (g). The basic unit of capacity is the **liter** (L).

| | | | |
|---------------------------------|------------------------|----------------|---|
| Metric Units of Mass | gram (g) | | A small paperclip has a mass of about 1 gram. |
| | kilogram (kg) | 1 kg = 1,000 g | A textbook has a mass of about 1 kilogram. |
| | milligram (mg) | 1 mg = 0.001 g | A grain of salt has a mass of about 1 milligram. |
| Metric Units of Capacity | liter (L) | | A small pitcher has a capacity of about 1 liter. |
| | milliliter (mL) | 1 mL = 0.001 L | An eyedropper holds about 1 milliliter of liquid. |

EXAMPLES

What unit would you use to measure each of the following?

A the mass of a compact car

Even a compact car has quite a bit of mass. The kilogram is the appropriate unit to measure the mass of a compact car. The average compact car has a mass of about 1,200 kilograms.

B the capacity of a soda can

Since a liter is about the same capacity as a quart, you know that a soda can has less than one liter of capacity. The milliliter is the appropriate unit to measure the capacity of a soda can. The average soda can holds about 355 mL.

Try These Together

What unit would you use to measure each of the following? Estimate the mass or capacity.

1. a coffee cup

HINT: A coffee cup is smaller than a soda can.

2. a candy bar

HINT: A candy bar has less mass than a textbook.

PRACTICE

Write the unit that you would use to measure each of the following. Then estimate the mass or capacity.

3. a wading pool

4. a hammer

5. the wings of a housefly

6. the ink in a fountain pen

7. a nickel

8. a bird bath

Name an item that you think has the given measure.

9. about 20 g

10. about 500 mL

11. about 2 L

12. about 5 kg

13. **Food** A bottle of grape juice has a capacity of 1890 mL. If the bottle has eight servings, how many mL is one serving?



14. **Standardized Test Practice** What is the mass of a large can of tomatoes?

A 1 mL

B 1 L

C 1 g

D 1 kg

Answers: 1. milliliter; about 200 mL 2. gram; about 50 g 3. liter; about 1,000 L 4. kilogram; about 1 kg 5. milligram; about 2 mg 6. milliliter; about 1 mL 7. gram; about 5 g 8. liter; about 8 L 9–12. Answers will vary. 13. 236.25 mL 14. D