

# Lesson Notes

## 12.1

NAME \_\_\_\_\_

Module 12 Attributes and Tools  
Lesson 1 Measurement Systems

### Lesson Objectives

- Identify and select appropriate units and tools from both systems, customary and metric, to measure (e.g. distance with feet/meters).
- Establish through experience benchmark prefixes of milli-, centi-, deci-, deca-, hecto-, and kilo-.
- Distinguish the difference between weight and mass.
- Understand, select, and use the appropriate units and tools (metric and customary) to measure length, weight, mass, and volume to the required degree of accuracy for real-world problems.

### Subtopic 1 The Customary System

Customary Units of \_\_\_\_\_

- \_\_\_\_\_ (in.)
- Feet (ft)
- \_\_\_\_\_ (yd)
- Miles (mi)

\_\_\_\_\_ is the heaviness of an object or person.

Weight is the \_\_\_\_\_ force required to support an object against the pull of gravity.

Customary Units of Weight

- \_\_\_\_\_ (oz)
- Pounds (\_\_\_)
- Tons (T)

\_\_\_\_\_ is the volume of a container given in units of liquid measure.

Volume is the measure of the \_\_\_\_\_ space of a three-dimensional figure.

## Customary Units of Capacity

- \_\_\_\_\_ (fl oz)
- Cups (c)
- Pints (pt)
- Quarts (qt)
- Gallons (\_\_\_\_\_)

**1**

Choose the most reasonable customary unit of length to measure each item.

Length of laptop

Distance between cities

Height of a ceiling

**2**

Choose the most reasonable customary unit of capacity to measure the capacity of each item.

Coffee mug

Perfume bottle

Swimming pool

**3**

Choose the most reasonable customary unit of weight to measure each item.

A remote control

An elephant

Box of books

NAME \_\_\_\_\_

**Module 12    Attributes and Tools**  
**Lesson 1      Measurement Systems**

**Subtopic 2    The Metric System**

Metric Units of Length

\_\_\_\_\_ (1,000 meters)

Hectometer (100 meters)

Dekameter (10 meters)

Meter

Decimeter (0.1 meters)

Centimeter (\_\_\_\_\_ meters)

Millimeter (0.001 meters)

Mass

- Measures the amount of \_\_\_\_\_ in an object
- \_\_\_\_\_ at any place or time
- Independent of any external force

Weight

- The force required to support an object against the pull of \_\_\_\_\_
- Is measured using a \_\_\_\_\_

Metric Units of Mass

Kilogram (kg) (\_\_\_\_\_ g)

Hectogram (hg) (100 g)

Dekagram (dag) (10 g)

Gram (g)

Decigram (dg) (0.1 g)

Centigram (cg) (0.01 g)

\_\_\_\_\_ (mg) (0.001 g)

Metric Units of Capacity

Kiloliter (kL) (1,000L)

Hectoliter (hL) (100L)

Dekaliter (daL) (10L)

\_\_\_\_\_ (L)

Deciliter (dL) (0.1L)

Centiliter (cL) (0.01L)

Milliliter (mL) (0.001L)

**4** Solve.

- A kiloliter contains how many liters?
- A milligram is what fraction of a gram?
- A centimeter is what fraction of a meter?

**5** Choose the metric unit that is most reasonable for measuring each item.

- Height of a building  
km or m?
- Mass of a slice of cheese  
g or kg?
- Capacity of a juice glass  
mL or L?

**6** Choose the metric unit that is most reasonable for measuring each item.

- Mass of motorcycle  
g or kg?
- Length of grain of rice  
m or mm?
- Capacity of aquarium  
mL or L?