Diagnostic Activity

Match the unit with its symbol.

centimetre	m
kilometre	L
millimetre	kg
metre	mL
gram	km
kilogram	mg
litre	cm
millilitre	mm
milligram	g

Metric Measures

Suggested time: 45 minutes

What's important in this lesson:

In this lesson, you will learn how to demonstrate accuracy in measuring length, capacity, and mass in Metric units; use the correct abbreviations for Metric units; convert between commonly used Metric units; estimate Metric measurements of length, capacity, and mass.

Complete the following steps:

1. Read through the lesson portion of the package on your own.
2. Complete the exercises.
3. Check your answers with the Answer Key that your teacher has.
4. Seek assistance as needed.

Hand in the following:

1. Diagnostic Activity
2. Practice Problems
3. Metric Measures Evaluation

Questions for the teacher:

Metric Measures

Part A: The Metric System

Uses of Metric measurement:

Sports: Track and Field day races are 100m, 200m and 400 m.
Food: A can of pop is 355 mL.
The mass of a bag of sugar is 1 kg.
Travel: The speed limit in Ontario is posted in km/h.

Metric Conversions

Use this chart to help you convert from one unit to another.

Distance	**Capacity**	**Mass**
1 cm = 10 mm	1 L = 1000 mL	1 g = 1000 mg
1m = 1000 mm	1kL = 1000 L	1 kg = 1000 g
1 m = 100 cm		1 kg = 1 000 000 mg
1 km = 1000 m		

If you are converting in the order of the chart, MULTIPLY. Ex: cm to mm, x 10
If you are converting in the opposite direction, DIVIDE Ex. mm to cm, ÷ 10

Examples

0.36 L = _____ mL

0.36 x 1000 mL in 1 L

So… 0.36 L = 360 mL

1200 m = _____ km

1200 ÷ 1000 m in 1 km

So… 1200 m = 1.2 km

Practice

Convert each measurement to the unit specified.

6 cm = _____ mm

500 m = _____ km

1.2 kg = _____ mg

400 L = _____ mL

4 g = _____ mg

1500 mL = _____ L

234 mm = _____ m

0.5 kg = _____ g

Part B: Using Personal References

Measurements can be estimated by using approximate references such as your body or common objects.

Complete the chart:

Personal Reference	Measurement
Your outstretched hand	
The width of your baby finger	
The length of your arm	
Your height	
Capacity of a small carton of milk	
Capacity of a large bottle of pop	

Example

Jerry's outstretched hand is 20 cm. He uses his hand to estimate the length of this piece of paper.

Number of Jerry's hands: 1½

Estimated length of paper: 1.5 x 20cm = 30cm ***Actual*** length: 28 cm

Practice

Complete the following chart:

Item to be measured	Personal Reference	Estimate	Measurement
Height of classroom			
Length of classroom			
Thickness of a loonie			
Capacity of a pop can			

Metric Measures
Evaluation

1. Convert each measurement to the unit specified. [5]

   a. 25 cm = _____ mm

   b. 300 mL = _____ L

   c. 35 kg = _____ mg

   d. 5.6 km = _____ m

   e. 13500 mm = _____ m

2. Complete the following chart: [6]

Item to be Measured	Personal Reference	Reasoning	Estimate
Width of the classroom			
Height of the teachers desk			
Mass of a chair			

3. Complete the following chart. [14]

Object	Actual Measurement	mm	cm	m	km
length of a textbook	28 cm	280	28	0.28	0.00028
length of bulletin board					
diameter of a dime					
width of a student's desk					
width of the teacher's desk					
length of a new pencil					
length of a small paper clip					
length of the classroom					