Lesson 2.1 – The Metric Toolkit: Length, Mass, and Volume

Quarter 2 · Technology, Measurement & Analysis · Week 1

Name: _____ Partner(s): _____ Date: _____ Class: _____

Big Question: Which tool and unit should a scientist choose for each measurement?

Word Bank: meter · gram · liter · milli- · kilo- · tare · graduated cylinder · balance

My Task

Record your station data. Then graph mass vs. volume for the water samples.

Station	Item	Reading	Unit	Tool used
Length				
Length				
Mass				
Mass				
Volume				
Water 300 mL				
Water 400 mL				
Water 500 mL				

Graph: mass of water (g) vs. volume (mL)

Scaffolded support: Plot the three points on a labeled grid and draw a line through them.	**Grades 9–12 Challenge:** Calculate the slope (g/mL) and percent error from 1.00 g/mL; propose two reasons for any error (reading the meniscus, scale precision, water temperature).

Think & Respond

1. Is the claim “500 mL of water has a mass of 500 g” supported? Use your data.

EXIT TICKET

1. Name the tool and unit for: radish mass, leaf length, watering volume.

2. Convert 350 mL to liters.

3. Why do we tare a container?