

## SAMPLE LESSON

**Subject:** Mathematics  
**Grade:** 2  
**Strand:** Measurement  
**Sub-topic:** Units of measurement.  
**Duration:** 60 minutes

**Standard:** Students will use non-standard and/or standard metric (SI) units, instruments, and procedures to estimate and measure quantities of different attributes, and to compute and solve problems.

**Benchmark: Students will:** given a situation to measure a quantity (length, mass or capacity) know which units and instruments are best used.

**Attainment Target: Students will:** estimate, compare and use various types of measurements.

**Specific Objectives:** By the end of the lesson, pupils will be able to:

- Identify at least two measurable attributes of a given item.
- Use measurable attributes to determine units of measurement
- Select the most appropriate unit to be used in a given situation

**Prerequisite Knowledge: Students should already know or have an idea of:**

- The measurable attributes of an object
- The units for length, mass, capacity

**Key Vocabulary:** units, centimetre, metre, kilogram, measure, measurement, attribute, length, mass, capacity, object, suitable

### Content outline

There are different attributes of an object which can be measured. Some attributes include the length, mass and capacity. Some units are more suitable than others to measure a given attribute of an object. For example, to measure the length of a pencil, it is more suitable to use centimetres (cm), than metres (m). Also to measure the mass of the pencil it is more suitable to use grams (g), than kilograms or milligram (mg).

### Materials/Manipulative

Plastic bags, parcel of flour, pencil, bottle of water, chart, strips of paper.

### Procedure

### Engage/Evaluate/Explain

Display a chart on the board, (**See Resource document 1**). Place the cards with the given words at different locations in the class. (**See Resource document 2**). Ask students to hunt for the cards and have them come to the board individually to stick their card under the correct heading (column), justifying their selection at the same time.

### Engage/Explain/ Communicate

Have students observe an object (a bottle with water). Question students to elicit the measurable attributes, for example the height of the bottle, the weight of the bottle and the capacity of the bottle, the temperature of the water, etc. Discuss with students that there are different attributes of an object or item which can be measured, namely it's length, width, capacity and temperature. Based on these attributes, the appropriate unit of measurement is used.

### Explore/ Explain//Evaluate/Collaborate

Allow students to work in groups. Give each group a plastic bag containing the following items: a small parcel of flour labelled **2 ½ cm**, a piece of fabric labelled **5 kg**, a pencil labelled **2L** and a bottle of water labelled **250 m**. Display other items with labelled attributes; have students compare the displayed items with the items in the bag, identifying similar attributes.

Have each group display the contents of their bag on their desk and allow them to examine each item and their respective labels. Students should discuss among themselves the suitability of the labelling on each item they received based on the attribute (length, mass or capacity).

For each item discuss with students the attribute of the item that is most likely being measured and then engage them in a whole class discussion on the unit used to measure each item. For example in measuring the weight of the flour would centimetres be an appropriate unit? What attribute of the parcel of flour could I be measuring if I allow the 2 ½ cm label to remain on the parcel of flour?

### Expected Answer: The height or width of the flour bag.

Select a representative from each group to choose an item and tell the attribute that is being measured based on the label. Allow students to discuss the most appropriate unit of measurement that could be used to measure the attribute.

**Evaluate (Student):** Ask students to complete the table below giving two attributes of each item in their bags that can be measured with the labelling (cm, kg, m, l). **For example:**

Item	Attribute being measured	Appropriate unit of measure
Pencil		
Parcel of Flour		
Bottle of Water		
Piece of Fabric		

### Elaborate:

1. Teacher will place several items on a desk ( banana, oranges, rice, flour etc) and have students role play a market/shopping scene; assigning a measurable attribute to each item without being told.

2. Ask students to draw three things whose:

- length can be measured in cm
- length can be measured in m
- Mass can be measured in kg
- Capacity can be measured in litre

### Extended Learning:

Allow students to identify objects in their homes and state the different attributes of the objects that can be measured.

### Evaluation (Teacher):

Were students able to:

	0% - 50%	51% - 80%	81% - 100%
Identify at least two measureable attributes of a given item.			
Use measureable attributes to determine units of measurement			
Select the most appropriate unit to be used in a given situation			
Work collaboratively			

### Comments:

*Areas of strengths:*

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*Areas of weaknesses*

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*Actions to be taken*

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