Measure

Lesson plan and teacher's notes · Grade 2 Mathematics · 1 period of 40 minutes

School	(write school name)	**Teacher**	(write name)
Date	(date)	**Class**	Grade 2
Subject	Mathematics	**Enrolment**	Boys ___ Girls ___ Total ___
Time	40 minutes	**Topic**	Measure

An introduction to measuring for learners with visual impairment. Learners touch real objects to compare how long, how heavy and how much they hold, and learn the words length, weight, capacity, measurement tools, unit and perimeter. One period of 40 minutes. The sub-topic Time and Length follows.

Specific outcomes

By the end of the lesson, learners should be able to:

1. Say what length, weight and capacity mean
2. Say what a measurement tool, a unit and perimeter are
3. Compare real objects by touch

Prior knowledge

- Learners know containers such as a cup and a bucket
- Learners can lift and compare objects

Teaching and learning materials

- A mystery book or bag with objects inside
- A cup, a bottle and a bucket
- Objects of different lengths and weights
- Chalk and board

References

Ministry of Education (CDC) Grade 2 Mathematics syllabus and module; 25Schools learners' note: Measure.

Lesson development

Stage and time	Teacher activities	Learner activities
Present **10 min**	Start with the hook: touch this mystery book, can you measure what is inside. Explain that measures help us know how long something is, how heavy it feels, how much a container can hold and what time an activity happens.	Touch the mystery object and describe it.
Practice **10 min**	Give objects of different lengths, weights and containers. Learners compare them by touch. Explain length, weight, capacity, measurement tools, unit and perimeter in simple words.	Compare objects and name the measure.
Produce **10 min**	Each learner picks two objects and says which is longer, which is heavier or which holds more.	Compare two objects aloud.
Closure **10 min**	Recall the key words: length, weight, capacity, measurement tools, unit and perimeter. Ask where we use each at home.	Recall the words.

Teacher's content notes

Read these before the lesson. They are what you need to know, not what to copy onto the board.

Why measure

Measures help learners understand everyday tasks: how long something is, how heavy it feels, how much a container can hold or what time an activity happens.

Key terms

Length is how long something is. Weight is how heavy an object is. Capacity is the amount a container can hold. Measurement tools are instruments to find size, amount or quantity. A unit is a fixed standard of measurement. Perimeter is the total distance around the outside of a shape.

Later topics

Early exposure to measures prepares learners for perimeter, area and volume.

Questions to ask during the lesson

Question	Expected answer
The teacher holds up a mystery bag and asks learners to feel an object inside without taking it out. (a) What can you say about its length. (b) What can you say about its weight. (c) What word means how much a container can hold.	(a) How long it feels. (b) How heavy it feels. (c) Capacity.

The teacher fills a cup and a bucket with water in front of the class and asks which can hold more. (a) Which holds more. (b) What is this measure called. (c) Which word names the instruments we use.	(a) The bucket. (b) Capacity. (c) Measurement tools.
The teacher asks learners to run a finger around the edge of a tin lid. (a) What are they measuring. (b) What is this called. (c) Where else can we find it.	(a) The distance around. (b) Perimeter. (c) Around any shape.

Worked examples for the board

Comparing heaviness

Step 1: Hold one object in each hand. Step 2: Feel which hand goes down. Step 3: Say: this one is heavier.

Comparing capacity

Step 1: Fill the small cup with water. Step 2: Pour it into the bigger container. Step 3: See if it is full. Step 4: Say which holds more.

Board plan

Write the title Measure. List the words length, weight, capacity, unit and perimeter with a short meaning each.

Word	Meaning
Length	How long
Weight	How heavy
Capacity	How much it holds

The finished board

Mistakes to expect

Learners often think	Put it right
A bigger container always weighs more.	Let learners lift an empty large container and a small full one and compare.
Length and capacity are the same thing.	Let learners feel the length of a stick and the space inside a cup, and name each.

Differentiation

Learners who struggle

Compare only two objects at a time and ask one question, such as which is heavier.

Learners who finish early

Ask learners to find the perimeter of a tin lid by feeling around its edge with a string.

Hearing or visual impairment

Hand each learner real objects, describe them aloud and guide the hands along the edges of the objects.

No projector, no printing

Use cups, tins, sticks and stones from home and a string to compare lengths.

If time is short

Keep the hook and the comparing of objects. Move the word list to the next lesson.

Evaluation

Question or task	A correct answer shows
The teacher gives Bupe a long stick and a short stick and asks her to explain. (a) Which is longer. (b) What do we call how long something is. (c) What do we call the distance around a shape.	(a) The long stick. (b) Length. (c) Perimeter.
The teacher gives Mwamba a cup and a bucket of water and asks him to compare. (a) Which holds more. (b) What is that called. (c) Name a measurement tool word.	(a) The bucket. (b) Capacity. (c) A tool used to measure.

Homework

Njavwa helps her mother fetch water in a bucket and carry a bag of rice home. Her brother asks which word tells how heavy the rice is and which tells how much the bucket holds. (a) What is the first word. (b) What is the second word. (c) What do we call a fixed standard used in measuring.

Extra practice with answers

Question	Answer
1. Mulenga is given two sticks at school and the teacher asks him to compare the sticks by touch. (a) Which word describes how long they are. (b) How can he tell which is longer. (c) Name a measure word that is not length.	(a) Length. (b) Put them side by side and feel the ends. (c) Weight or capacity.
2. Chanda carries a full water bottle and an empty bottle home from school and tells her father which feels heavier. (a) Which feels heavier. (b) What is this measure called. (c) What does a bottle hold.	(a) The full bottle. (b) Weight. (c) Liquid, which is its capacity.
3. Bupe's mother cooks and pours cooking oil from a big bottle into a small cup. Bupe watches her. (a) What is the cup's capacity. (b) What tool word do they use. (c) Why do they measure.	(a) How much the cup can hold. (b) Measurement tool. (c) To pour the right amount.
4. Mwamba wants to know the distance around his desk top, so he walks his hands around the edge of it. (a) What is the distance around called. (b) Is it length or perimeter. (c) What shape is a desk top.	(a) Perimeter. (b) Perimeter. (c) A rectangle.

Answers to the learners' check-yourself questions

1. What is length.
   How long something is from one end to the other.
2. What is capacity.
   The amount a container can hold.
3. What is weight.
   How heavy an object is.
4. What is perimeter.
   The total distance around the outside of a shape.
5. Mulenga's mother asks him to pour water from a bucket into a cup and then a jug at home. He wants to know which container can hold more. (a) What do we call how much a container can hold. (b) Which tool word names things we use to measure. (c) Why is measuring useful in pouring water.
   (a) Capacity. (b) Measurement tools. (c) It helps us know how much to pour.
6. Chanda carries a bag of maize and a bag of groundnuts to the market in Feira and feels one is heavier. Her aunt asks her to explain. (a) What do we call how heavy an object is. (b) Which of the two words, length or weight, is that. (c) Name one other thing we can measure.
   (a) Weight. (b) Weight. (c) Length, capacity or time.

Teacher's reflection

What went well:

What I will change next time:

Learners who need follow-up: