Time and Length

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

School	(write school name)	**Teacher**	(write name)
Date	(date)	**Class**	Grade 2
Subject	Mathematics	**Enrolment**	Boys ___ Girls ___ Total ___
Time	80 minutes	**Topic**	Time and Length

Learners tell time in full hours and half hours using an analogue clock, experience duration with simple timers, and measure length in metres. Two periods of 40 minutes.

Specific outcomes

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

1. Identify the hour hand and the minute hand
2. Show and read full hours and half hours on an analogue clock
3. Compare how long routines take
4. Measure the length of objects using a metre ruler

Prior knowledge

- Learners know morning and night
- Learners know numbers up to 12

Teaching and learning materials

- Large analogue clock model without a second hand
- Small clock models for each group
- Work cards with times
- Sand timer or container of sand
- Metre rulers or metre sticks, measuring tape
- Picture cards of daily routines

References

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

Lesson development

Stage and time	Teacher activities	Learner activities
Period 1 **Present** **10 min**	Create a scenario: mother woke up at 05 hours and prepared lunch at 11 hours. Hang a large clock. Ask learners what they see. Show the short hour hand and the long minute hand. Explain the long hand tells minutes and the short hand tells hours. Ask which moves faster.	Touch the clock and name the hands.
Period 1 **Practice** **20 min**	Explain that when the minute hand points to 12 we say o'clock. Show 7 o'clock (07:00 hours). Give groups clock models. Call a time such as five o'clock in the morning and ask learners to show it. Ask where each hand points. Then introduce half past: minute hand at 6, for example 07:30 hours, half past seven, with the hour hand half way between 7 and 8.	Set the hands for full hours and half hours.
Period 1 **Closure** **10 min**	Give each group a work card with a time. Emphasise saying whether it is morning or night.	Read the time and say morning or night.
Period 2 **Duration** **20 min**	Ask: how can we know how long an event takes. Use simple timers: some learners sing a short song while others empty water bottles; time by hand claps or swings of a weighted object on a string. Two groups arrange sticks from shortest to longest within the sand timer time. Give groups picture cards of daily routines to arrange from the one that takes the shortest time to the one that takes the longest.	Time activities and arrange cards.
Period 2 **Length** **20 min**	Hook: do you know the standard units used to measure length and width. Let learners feel a 1 metre ruler and metre sticks. Introduce the metre. Learners estimate, measure and record lengths of objects in metres.	Feel the metre stick and measure objects.

Teacher's content notes

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

Analogue clock

The hour hand is short and tells hours. The minute hand is long and tells minutes. The minute hand moves faster.

Full and half hours

When the minute hand points to 12 we say o'clock. When it points to 6 we say half past or 30 minutes past. At half past seven the hour hand is half way between 7 and 8. Say if it is morning or night.

Duration and length

Duration is how long an activity takes, measured with simple timers such as hand claps or a sand timer. Length is measured in standard units such as the metre using rulers, tapes and a trundle wheel.

Questions to ask during the lesson

Question	Expected answer
The teacher hangs a large clock and tells the class that mother woke up at five o'clock in the morning to prepare for the day. (a) Where does the minute hand point. (b) Where does the hour hand point. (c) What should we say about the time of day.	(a) At 12. (b) At 5. (c) Morning.
The teacher says father goes to work at 07:30 hours each morning and asks how to show it on a clock. (a) How do we say the time. (b) Where does the minute hand point. (c) Where is the hour hand.	(a) Half past seven. (b) At 6. (c) Half way between 7 and 8.
The teacher times how long some learners take to jump across the classroom by counting hand claps. (a) What does the number of claps show. (b) What do we call how long an activity takes. (c) Name another timer.	(a) How long the event lasted. (b) Duration. (c) A sand timer.

Worked examples for the board

Showing 7 o'clock

Step 1: Set the minute hand at 12. Step 2: Set the hour hand at 7. Step 3: Say seven o'clock. Step 4: Say if it is morning or night.

Showing half past 7

Step 1: Set the minute hand at 6. Step 2: Set the hour hand half way between 7 and 8. Step 3: Say half past seven.

Board plan

Write the title Time and Length. Draw two lines: o'clock minute hand at 12; half past minute hand at 6.

Time	Minute hand points to
7 o'clock	12
Half past 7	6

The finished board

Mistakes to expect

Learners often think	Put it right
The long hand tells the hour.	Let learners feel the short and long hand and say that the long hand tells minutes and the short hand tells hours.
Half past seven means the hour hand is on 7.	Show that at half past seven the hour hand is half way between 7 and 8.

Differentiation

Learners who struggle

Practise o'clock times only first, such as 5 o'clock, before adding half past.

Learners who finish early

Ask learners to show a time on the clock and say which daily activity happens then.

Hearing or visual impairment

Use a tactile clock with raised numbers. Guide the learner's fingers to the hour hand and minute hand and describe each move aloud.

No projector, no printing

Make a clock from a cardboard plate with two sticks as hands. Use a string with a stone for a swing timer and clap counts.

If time is short

Keep full hours and half hours in Period 1. Move the length measuring to the next lesson.

Evaluation

Question or task	A correct answer shows
The teacher gives Bupe a clock model and asks her to set the clock for the time her father leaves home. (a) Set 07:00 hours. (b) Set 07:30 hours. (c) Say where the minute hand points for each.	(a) Minute hand at 12. (b) Minute hand at 6. (c) 12 and 6.
The teacher gives Mwamba a metre stick and asks him to measure a desk. (a) What unit does he use. (b) Does he feel the full length. (c) What does he say.	(a) The metre. (b) Yes. (c) The length in metres.

Homework

Njavwa's mother tells her that she cooks lunch at 11 o'clock and the family goes to the field at half past six in the morning. Njavwa wants to show both times on a clock at school. (a) Where does the minute hand point at 11 o'clock. (b) Where does it point at half past six. (c) Which of the two activities is in the morning.

Extra practice with answers

Question	Answer

1. Mulenga is given a clock model and the teacher says five o'clock in the morning. He must show it to the class. (a) Where does the minute hand go. (b) Where does the hour hand go. (c) Is it morning or night.	(a) At 12. (b) At 5. (c) Morning.
2. Chanda's mother goes to the field at half past five in the morning and returns home later to cook. Chanda shows the time on a clock. (a) Where does the minute hand point. (b) How do we say 05:30. (c) Where is the hour hand.	(a) At 6. (b) Half past five. (c) Half way between 5 and 6.
3. The class sorts picture cards of daily routines: brushing teeth, eating lunch, and sleeping at night. The teacher asks them to order them. (a) Which takes the shortest time. (b) Which takes the longest time. (c) What do we call the time an activity takes.	(a) Brushing teeth. (b) Sleeping. (c) Duration.
4. Bupe is given a metre stick at school and asked to feel its length before measuring the length of a bench. (a) What unit is the metre stick. (b) Name one other tool for length. (c) What is she measuring.	(a) The metre. (b) A measuring tape. (c) Length.

Answers to the learners' check-yourself questions

1. Which hand tells the hours.
   The short hand, the hour hand.
2. What do we say when the minute hand points to 6.
   Half past.
3. What does duration mean.
   How long an activity takes.
4. Name one standard unit of length.
   The metre.
5. Mulenga's mother says she woke up at five o'clock in the morning to prepare for the market in Feira. His teacher asks him to show it on a clock. (a) Where does the minute hand point. (b) Where does the hour hand point. (c) What should he say about the time of day.
   (a) At 12. (b) At 5. (c) That it is morning.
6. Chanda's father leaves for work at 07:30 hours each morning. Chanda wants to show this time on a clock model at school. (a) How do we say this time. (b) Where does the minute hand point. (c) Where is the hour hand.
   (a) Half past seven. (b) At 6. (c) Half way between 7 and 8.

Teacher's reflection

What went well:

What I will change next time:

Learners who need follow-up: