25SCHOOLS
FREE LEARNING NOTES FOR ZAMBIA

GRADE 4 · TERM 3

Mathematics

Time and Area

Lesson notes for learners · Competence-Based Curriculum

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In daily life we use time to plan activities and to know how long events last. We use area to know how much space a surface covers, for example how many tiles cover a classroom floor. In this note you will work with time and with area.

AFTER THESE NOTES YOU SHOULD BE ABLE TO

- Find the time that passes between two events
- Relate seconds, minutes, hours and days
- Show area using nonstandard units such as tiles and bottle tops
- Choose a suitable unit for area: mm^2, cm^2 or m^2

KEY WORDS

Elapsed time	The time that passes between two events.
Nonstandard unit	A simple unit such as a tile, a grid square or a bottle top.
Area	How much space a surface covers.

1 Time between events

Time is measured in seconds, minutes, hours and days. To find the time between two events, subtract the earlier time from the later time.

Think of a school day: assembly at 07:30, break at 10:00, lunch at 12:30 and closing at 15:00. From assembly to break is 2 hours 30 minutes.

A bus leaves Monze at 08:15 and arrives in Mazabuka at 11:45. From 08:15 to 11:15 is 3 hours. From 11:15 to 11:45 is 30 minutes. The journey is 3 hours 30 minutes. We can break the time into hours and minutes.

Event	Start	End	Time passed
Bus journey	08:15	11:45	3 hours 30 minutes
Assembly to break	07:30	10:00	2 hours 30 minutes

Figure 1. Time between two events

2 Seconds, minutes, hours and days

Use a stopwatch to time how long it takes to clap 20 times. Write the result in seconds, then change it to minutes. List the activities in your day, such as cleaning the house for 1 hour, sleeping for 8 hours and studying for 2 hours, and say how long each lasts.

3 Area

Area is how much space a surface covers. We measure area by covering a surface. Use tiles, grids or bottle tops. Cover a desk top with paper squares and count them. The size of the unit matters. Bigger squares give a smaller number and smaller squares give a bigger number, but the area stays the same. Always use units of the same size.

Standard units for area are mm^2, cm^2 and m^2. Use mm^2 for a very small surface, cm^2 for a small object such as a mobile phone or an exercise book, and m^2 for a large surface such as a school garden or a classroom floor.

Surface	Suitable unit
Very small space between plants	mm^2
Mobile phone or exercise book	cm^2
School garden or classroom floor	m^2

Figure 2. Choosing a unit for area

TRY THIS

Cover your exercise book with small squares of paper. Count the squares. Then try bigger squares and count again. Tell an adult what you found.

REMEMBER

- Subtract the earlier time from the later time to find time passed
- There are seconds, minutes, hours and days
- Area is how much space a surface covers
- Use units of the same size to measure area
- Use mm^2, cm^2 or m^2 to suit the size of the surface

? Check yourself

1. How do we find the time between two events.
2. What is area.
3. Name three standard units of area.
4. Which unit suits a classroom floor.
5. A bus leaves Monze at 08:15 and arrives in Mazabuka at 11:45. Mulenga's uncle wants to know how long the trip lasted. (a) How many hours from 08:15 to 11:15. (b) How many minutes from 11:15 to 11:45. (c) How long was the journey.
6. Grade 4 learners at a school in Livingstone want to prepare a small vegetable garden behind their classroom with sections for tomatoes, rape and onions. The teacher asks which unit to use. (a) Which unit suits the whole garden. (b) Which unit suits an exercise book. (c) Which unit suits the space be

ANSWERS

1. Subtract the earlier time from the later time.
2. How much space a surface covers.
3. mm^2, cm^2 and m^2.
4. m^2.
5. (a) 3 hours. (b) 30 minutes. (c) 3 hours 30 minutes.
6. (a) m^2. (b) cm^2. (c) mm^2.

Written by 25Schools to follow the Grade 4 Mathematics syllabus of the Zambian competence-based curriculum. Free for learners to read, download and share. More notes and quizzes at 25schools.com.