Attachment 5: Area and Perimeter lesson plan and worksheet

Date: 27 April to 30 April	**Year Level:** Grade 6	**Lesson Duration:** 1 hour

Title of Lesson:

Area and Perimeter

Learning Outcomes and Specific Purpose:

By the end of this lesson students:

- Should know how to find the area and perimeter of squares, rectangles and triangles.
- Should have gained knowledge that prompts them to find the area and perimeter of squares, rectangles and triangles within their environment.
- Should be able to develop a set of steps to follow in order to solve problems.
- Should be able to estimate the length of a side of a square/rectangle, by comparing it to the length of a side that they already know.
- Should be helpful towards peers and work cooperatively in group work.

Links to VELS:

Strand: Physical, Personal and Social Learning
Domain: Interpersonal Development
Dimension: Working in teams

- Students work effectively in different teams and take on a variety of roles to complete tasks of varying length and complexity.
- They work cooperatively to allocate tasks and develop timelines. Students accept responsibility for their role and tasks.
- They explain the benefits of working in a team.
- They provide feedback to others and evaluate their own and the team's performance.

Strand: Physical, Personal and Social Learning
Domain: Personal Learning
Dimension: The individual learner

- Students identify, with support, their preferred learning styles and use strategies that promote learning.
- They monitor and describe progress in their learning and demonstrate learning habits that address their individual needs.
- They seek and respond to teacher feedback to develop their content knowledge and understanding.
- They identify and explain how different perspectives and attitudes can affect learning.
- They negotiate learning improvement goals and justify the choices they make about their own learning.
- Students actively develop, monitor and refine protocols that create a positive learning

environment in the classroom.

Strand: Physical, Personal and Social Learning
Domain: Personal Learning
Dimension: Managing personal learning

- Students develop and implement plans to complete short-term and long-term tasks within timeframes set by the teacher, utilising appropriate resources.
- They undertake some set tasks independently, identifying stages for completion.
- They describe task progress and achievements, suggesting how outcomes may have been improved.
- They persist when experiencing difficulty with learning tasks.
- They seek and use learning support when needed from peers, teachers and other adults.
- They practise positive self talk.
- They demonstrate a positive attitude to learning within and outside the classroom.

Strand: Discipline-Based Learning
Domain: Mathematics
Dimension: Number

- Students explain and use mental and written algorithms for the addition, subtraction, multiplication and division of natural numbers (positive whole numbers).
- They add, subtract, and multiply fractions and decimals (to two decimal places) and apply these operations in practical contexts.
- They use estimates for computations and apply criteria to determine if estimates are reasonable or not.

Strand: Discipline-Based Learning
Domain: Mathematics
Dimension: Space

- Students use the ideas of size, scale, and direction to describe relative location and objects in maps.

Strand: Discipline-Based Learning
Domain: Mathematics
Dimension: Measurement, chance and data

- Students use metric units to estimate and measure length, perimeter, and area.
- They measure as accurately as needed for the purpose of the activity.
- They convert between metric units of length, capacity.

Strand: Discipline-Bases Learning
Domain: Mathematics
Dimension: Working mathematically

- Students recognise and investigate the use of mathematics in real and historical situations.
- They use the mathematical structure of problems to choose strategies for solutions.
- They explain their reasoning and procedures and interpret solutions.
- They engage in investigations involving mathematical modelling.

Strand: Interdisciplinary Learning
Domain: Communication
Dimension: Listening, viewing and responding

- Students ask clarifying questions about ideas and information they listen to and view.
- They develop interpretations of the content and provide reasons for them.
- They explain why peers may develop alternative interpretations.
- They describe the purpose of a range of communication strategies, including non-verbal strategies, and evaluate their effectiveness for different audiences.

Prerequisite knowledge/concept/skills/vocabulary required:
How does it link to previous lessons?

- Finding the area and perimeter of basic shapes

Grouping/s and Physical Space:
The classroom is already grouped into four tables. The children will work at the tables that they are already sitting at. One activity will be placed on each table. The activities will rotate around over four lessons.

Equipment/Resources Required:

- Worksheet (attached)
- Pens/pencils
- Students' workbooks
- Measuring wheels

Lesson Structure:
Students are required to follow the instructions on the worksheet.

Monitoring of Student Learning:

What I will be looking out for during the lesson:

- Were students able to find the area and perimeter of the school?
- Did students develop a set of steps to follow in order to solve problems?
- Were students able to estimate the length of the side(s) of the school that they could not access?
- Were students helpful towards peers and did they work cooperatively in group work?

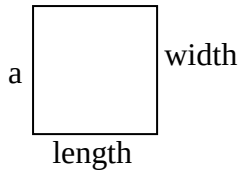
Area and perimeter

Perimeter is the distance around a figure. Perimeter can be measured in mm, cm and m.
Area is the amount of space inside a figure. Area can be measured in mm squared, cm squared and meters squared.

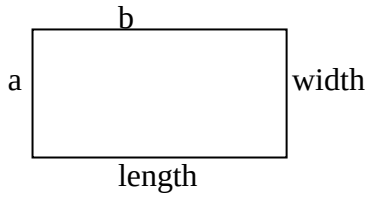
Goal: To measure the area of the school as accurately as possible.

- As a group, discuss how you could measure the area of the school. What steps do you need to take?
- Use the measuring wheels provided.
- Would it benefit if you drew the shape of the school and labelled the length of each side as you measured them?
- You may not be able to measure the length of all sides of the perimeter of the school. What should you do to determine the length of the side(s) you cannot measure?

Perimeter of a square = 4 x a
Area of a square = length x width



Perimeter of a rectangle = **(2 x a) + (2 x b)**
Area of a square / rectangle = **length x width**



Perimeter of a triangle = **a + b + c**
Area of a triangle = ½ **base x height**