

Grade 8: Mathematics

Unit 1 - Different Dimensions

Start: Mid-August- Mid November

Duration: 12 weeks

LEARNING EXPERIENCES:

- Types of triangles
- Similar triangles/ratios
- Types of similarities
- Similarity applications
- Pythagorean theorem
- Exponents and powers
- Squares and square roots

- Simplifying surds
- Length, perimeter, units' conversion
- Area formulae (square, rectangle, triangle, trapezium, circle, composite figures)
- Surface areas of solids, cylinders
- Volume of 3D shapes

- Pi (π) area and circumference
- Volume of uniform cross sections
- Prisms, Tapered and Spheres

KEY CONCEPT:	Form
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RELATED CONCEPTS:	Generalization, Measurement
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STATEMENT OF INQUIRY	Generalization of relationships between measurements can help develop principles, processes and solutions.
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INQUIRY QUESTIONS:

Factual:	What is similarity?
Conceptual:	How does using similarity concepts help to find unknowns? How do area and perimeter relate to one another?
Debatable:	Is there more than 3 dimensions?

OBJECTIVES AND ASSESSMENT CRITERIA:

A: Knowing and Understanding	Students will: <ol style="list-style-type: none"> i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations. ii. apply the selected mathematics successfully when solving problems. iii. solve problems correctly in a variety of contexts.
B: Investigating Patterns	Students will: <ol style="list-style-type: none"> i. apply mathematical problem-solving techniques to recognize patterns. ii. describe patterns as relationships or general rules consistent with findings iii. verify whether the pattern works for other examples.
C: Communicating	Students will: <ol style="list-style-type: none"> i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written statements. ii. use appropriate forms of mathematical representation to present information. iii. communicate coherent mathematical lines of reasoning. iv. organize information using a logical structure.
D: Applying mathematics in real-life contexts	Students will: <ol style="list-style-type: none"> i. identify relevant elements of authentic real-life situations. ii. select appropriate mathematical strategies when solving authentic real-life situations. iii. apply the selected mathematical strategies successfully to reach a solution. iv. explain the degree of accuracy. v. describe whether a solution makes sense in the context of the authentic real-life situation.
ATLs	Thinking, Communication, Self-Management

RESOURCES: MS Teams /Laptops/ MyiMaths/Quizizz/Khan Academy/Managebac

SUMMATIVE ASSESSMENT: Criteria A, B, C and D