

General Education Certificate

2026 GEC Train the Trainers Subject Breakaway Session Integrated Projects and assessment of the 21st century skills Reporting Template

13-17 April 2026



Integrated project and assessment of the 21st Century Skills Subject Breakaway Reporting Template

Subject: MATHEMATICS

Worksheet	Discussion/Focus	Administration/Notes to Teacher
Worksheet 1B	Topic: Statistics and Probability - Analyse a 5-year table of burglary or fire incidents - Find highest/lowest year, calculate range, mean & median - Calculate % decrease (2023–2024) and predict 2025 using 9% increase - Draw tree diagram from vandalism survey table - Calculate probabilities and compare vandalism risk - Draw a double bar graph Critical Thinking: Data analysis Metacognition: Explain what mean shows about trends + justify higher risk group	- Link to Technology scenario - Guide data interpretation and calculations - Support drawing of tree diagram & bar graph



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Worksheet 6B	Topic: Area and Perimeter • Design open-top rectangular packaging (15 cm × 15 cm base, 8 cm height) • Draw circular handle openings on 15 cm × 8 cm faces • Complete net with all missing dimensions • Draw circles using scale 1 cm : 5 cm • Calculate: diagonal, radius, area of circles, bottom face & total surface area (in mm²) Critical Thinking: Apply design constraints Communication: Group collaboration Metacognition: Plan and check accuracy	• Facilitate group work • Guide use of scale and measurements • Support calculations (area, radius, surface area)



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Worksheet 9B	Topic: Linear Graphs and Proportionality - Analyse V-I graph from Worksheet 9A - Determine direct/indirect proportion + justify - Calculate gradient and write equation ($y = mx + c$) - Express V in terms of I - Rearrange Ohm's Law ($V = IR$) to make R the subject - Solve 3 circuit problems + explain effect of doubling voltage Critical Thinking: ability to link content from Natural Science Communication: ability to integrate Mathematics and Natural Science Metacognition: Reflect on variable changes	- Individual work - Learners must have their Worksheet 9A graph - Guide gradient & equation formation - Support formula manipulation and substitution



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Worksheet	Discussion/Focus	Administration/Notes to Teacher
Worksheet 10	Topic: Financial Mathematics - Complete quote table: calculate missing unit prices, quantities & amounts (15% VAT included) - Find total cost and total VAT paid - Compare R2000 loan repayment: Option 1: Simple interest at 12% p.a. for 2 years Option 2: Compound interest at 12% p.a. for 2 years - Justify which option is cheaper Critical Thinking: Choose best option Communication: Justify decisions Metacognition: Reflect on financial outcomes	Guide table completion Support VAT & cost calculations Facilitate comparison of interest options

