Subject	Year	Month	
Mathematics	10	March	Balcarras *From strength to strength*

Topic:

Perimeter, area and 3D forms	3 lessons

Content (Intent)

Prior Learning	**Future Learning**
Year 9 Circles, arcs, sectors, surface area of prisms and cylinders January	Year 10 Circles, cylinders, cones and spheres March Year 12 Mech Chapter 9 Constant acceleration

Objectives

- Recall and use the formulae for the area of a triangle, rectangle, trapezium and parallelogram using a variety of metric measures;
- Calculate the area of compound shapes made from triangles, rectangles, trapezia and parallelograms using a variety of metric measures;
- Find the surface area of prisms using the formulae for triangles and rectangles, and other (simple) shapes with and without a diagram;
- Find the perimeter of a rectangle, trapezium and parallelogram using a variety of metric measures;
- Calculate the perimeter of compound shapes made from triangles and rectangles;
- Draw sketches of 3D solids;
- Identify planes of symmetry of 3D solids, and sketch planes of symmetry;
- Sketch and recognise nets of cuboids and prisms;
- Recall and use the formula for the volume of a cuboid or prism made from composite 3D solids using a variety of metric measures;
- Convert between metric volume measures;
- Convert between metric measures of volume and capacity, e.g. 1 ml = 1 cm^3;
- Use volume to solve problems;
- Estimating surface area, perimeter and volume by rounding measurements to 1 significant figure to check reasonableness of answers.

Pedagogical notes (implementation)	**How will understanding be assessed & recorded (Impact)**
Encourage students to draw a sketch where one isn't provided. Use lots of practical examples to ensure that students can distinguish between area, perimeter and volume. Emphasise the functional elements with carpets, tiles for walls, boxes in a larger box, etc. Ensure that examples use different metric units of length, including decimals. Solve problems including examples of solids in everyday use.	**End of half term** no **End of Year** Mocks in April
	How can parents help at home?
	MathsWatch clips (Qualification KS4)

Further reading/discussion

Reading / Enrichment	**Literacy**	**Numeracy Links**	**Careers Links** Product or fashion designer, Carpenter, Builder, Architect.