Subject	Year	Month	
Mathematics	7	February	**Balcarras** From strength to strength

Topic:

3D SHAPES

3 LESSONS

Content (Intent)

Prior Learning

KEY STAGE 2
- Know the names of common 3D shapes
- Know the meaning of face, edge, vertex
- Understand the principle of a net

Future Learning

Year 7
- Surface area of cuboids
- Volume of cuboids

Year 8
- Plans & Elevations (November)
- Volume of a cylinder (April)

Year 9
- Surface Area of a right-prism & a cylinder (January)

Objectives

- Know the connection between faces, edges and vertices in 3D shapes
- Recognise and use nets of 3D shapes

For teaching purposes

POSSIBLE QUESTIONS

- Always / Sometimes / Never: The number of vertices in a 3D shape is greater than the number of edges

POSSIBLE MISCONCEPTIONS

- A cylinder is not a prism
- Only counting the faces, edges, vertices that you can see

Pedagogical notes (implementation)

A **cube** is a special case of a cuboid

A **prism** must have a polygonal cross-section
➔ a cylinder is not a prism.

Similarly ➔ a cone is not a pyramid.

Use of cut out nets
Use of building cubes

How will understanding be assessed & recorded (Impact)

End of Year Assessment in June/July

How can parents help at home?

MathsWatch clips (Qualification ks3)
G12a, G12b, G12c

Further reading/discussion

Reading / Enrichment	Literacy	Numeracy Links	Careers Links
KM: Euler's formula KM: Visualising 3D shapes KM: Complete the net	Face, Edge, Vertex (Vertices) Cube, Cuboid, Prism, Cylinder, Pyramid, Cone, Sphere		Jewellery Maker/Designer Car designer Astronomer – patterns in the starts Landscape Gardener Plumber