

Lesson 76 SHAPE & SPACE

3D shapes – faces, edges and vertices

WHAT THIS LESSON TEACHES

A face is a flat surface of a solid shape. An edge is the straight line where two faces meet, and a vertex is a pointy corner where edges meet. A cube has 6 square faces, 12 edges and 8 vertices.

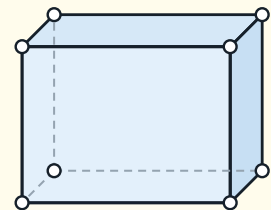
→ A cube has 6 faces, 12 edges and 8 vertices.

→ A square-based pyramid has 5 faces, 8 edges and 5 vertices.

MODEL THIS ON THE BOARD

FACES, EDGES AND VERTICES OF A CUBOID

- 1 A cuboid has a top, bottom, front, back and two ends: that makes **6** faces.
- 2 Where two faces meet there is a straight edge: there are **12** edges.
- 3 Where edges meet there is a pointy corner (vertex): there are **8** vertices.



4 x 3 x 2 cm

DISCUSSION STARTER

REFLECT Which was trickier to count on a solid — faces, edges or vertices — and why?

ANSWER KEY

b) 12

c) 8

Q1: 6

Q2: 8

Q3: 12

a) Always — The lesson directly states these counts for a cube.

b) Always — Both are taught as having 12 edges.

c) Always — The lesson directly states a square-based pyramid has 5 faces.

d) Always — The lesson states these counts for a square-based pyramid.

EXTENSION SHEET · STRETCH ANSWERS

S1: a square-based pyramid

S2: a triangular prism

S3: a cylinder

S4: a cube

S5: a cuboid