

Nets and construction of 3-D solids

MODULE 7 · 2D SHAPE, 3D SHAPE AND ANGLES REVIEW

A **net** is a flat shape that folds up into a 3-D solid. The faces of the net match the faces of the solid.

→ A cube's net has **6 squares**; a closed cuboid has 6 rectangles.

HOW TO ANSWER TODAY

- **Name a 3D shape.** Count faces (flat surfaces), edges (where two faces meet), vertices (corners). Match to the shape.

5 faces, 9 edges, 6 vertices → triangular prism

WARM-UP

- For Seachtain na Gaeilge, 5th class are wrapping a box in green paper to put on the class door. Niamh notices the box has **6** faces, **12** edges and **8** vertices, and that all the faces are rectangles but not all are squares. What 3D shape is the box?
A 3D shape has these properties: 6 faces, 12 edges, 8 vertices; all faces are rectangles, not all squares. What shape is it?
- Saoirse is sorting 3D shape blocks from the maths box for a display in 5th class. She picks up one block and writes down its properties: **2** faces, **1** edge, **1** vertex; **1** circular base and **1** apex. What shape is it?
A 3D shape has these properties: 2 faces, 1 edge, 1 vertex; 1 circular base and 1 apex. What shape is it?

PRACTICE

- Eoin is helping the caretaker carry a wooden equipment box out to the school field before soccer training. He notices the box has **6** faces, **12** edges and **8** vertices, and that all the faces are rectangles but not all are squares. What 3D shape is the equipment box?
A 3D shape has these properties: 6 faces, 12 edges, 8 vertices; all faces are rectangles, not all squares. What shape is it?
- Cian is helping the caretaker stack PE equipment into the storeroom in St Brigid's NS. He picks up a sturdy box that has **6** faces, **12** edges and **8** vertices, and he notices that every face is a rectangle but not all of them are squares. What 3D shape is the box?
A 3D shape has these properties: 6 faces, 12 edges, 8 vertices; all faces are rectangles, not all squares. What shape is it?

CHALLENGE

- Cian and his friends are building a den in the school orchard. They prop four triangular branches against a square wooden pallet so the tips meet at a single point above. The finished frame has **5** faces, **8** edges and **5** vertices, with **1** square base and **4** triangular faces meeting at one apex. What 3D shape have they made?
A 3D shape has these properties: 5 faces, 8 edges, 5 vertices; 1 square base and 4 triangular faces meeting at one apex. What shape is it?
- Oisín is sorting parts for the 5th class robotics build. He picks up a plastic piece with **2** faces, **1** edge and **1** vertex, with **1** circular base and **1** apex. What 3D shape is the piece?
A 3D shape has these properties: 2 faces, 1 edge, 1 vertex; 1 circular base and 1 apex. What shape is it?