

3D shapes – naming and sorting

WHAT THIS LESSON TEACHES

A 3D shape you can hold takes up space and is not flat. We name solids like cube, cuboid, sphere, cylinder and cone by looking at their faces and how they roll or slide.

- A dice is a cube with flat square faces.
- A football is a sphere that rolls every way.

MODEL THIS ON THE BOARD

NAMING A SOLID

- 1 Look at the solid and count its faces.
- 2 A dice has six flat square faces so it is a **cube**.
- 3 A tin has two flat circles and a curved side so it is a **cylinder**.

DISCUSSION STARTER

REFLECT Which 3D shapes roll and which slide — how can you tell before you try?

ANSWER KEY

- a) All flat faces / Cannot roll
- b) All flat faces / Cannot roll
- c) Curved surface / Can roll

Q1: cube

Q2: cuboid

Q3: sphere

Q4: tin rolls; cone slides

- a) Always — Every cube has six square faces.
- b) Never — A sphere rolls every way, never just one direction.
- c) Always — A cylinder has two flat circular ends.
- d) Always — A cuboid is always a box shape.

EXTENSION SHEET · STRETCH ANSWERS

S1: a square-based pyramid

S2: a tetrahedron

S3: a cuboid

Investigation: Build and count — open-ended; scan pupils' working for valid solution paths rather than a single answer.