Varied Fluency
Step 8: Recognise and Describe 3D Shapes

National Curriculum Objectives:

Mathematics Year 3: (3G3b) Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them

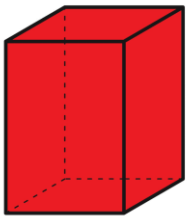
Differentiation:

Developing Questions to support recognising and describing the number of edges, vertices and faces in cubes, cuboids, cylinders, spheres, cones and square based pyramids, as well as describing their faces.
Expected Questions to support recognising and describing the number of edges, vertices and faces in cubes, cuboids, cylinders, spheres, cones, triangular and square based pyramids and triangular prisms, as well as describing their faces.
Greater Depth Questions to support recognising and describing the number of edges, vertices and faces in cubes, cuboids, cylinders, spheres, cones and pyramids and prisms including more complex pyramids and prisms, as well as describing their faces. Some shapes may be presented in different orientations.

More Year 3 Properties of Shapes resources.

Did you like this resource? Don't forget to review it on our website.

1a. True or false?

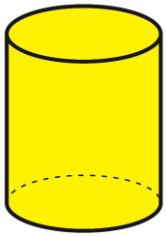


A cuboid has 8 faces.

D VF

Recognise and Describe 3D Shapes

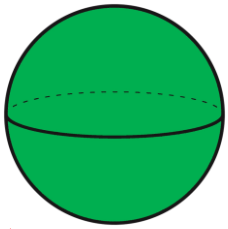
1b. True or false?



A cylinder has 2 vertices.

D VF

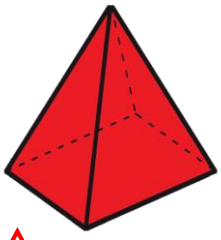
2a. Tick the statements which relate to the shape.



2 surfaces	
1 vertex	
It is a sphere	

D VF

2b. Tick the statements which relate to the shape.



5 vertices	
4 faces	
8 edges	

D VF

3a. Circle the shapes that have a curved surface.

cylinder | cuboid | sphere

D VF

3b. Circle the shapes that have at least one square face.

square based pyramid | cube | cone

D VF

4a. Use >, < or = to complete the statements below.

number of edges on a cube ☐ number of faces on a cylinder

number of vertices on a cone ☐ number of faces on a cube

D VF

4b. Use >, < or = to complete the statements below.

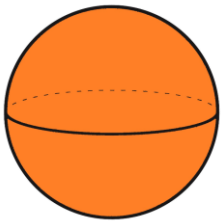
number of edges on a square based pyramid ☐ number of edges on a sphere

number of edges on a cuboid ☐ number of edges on a cube

D VF

Recognise and Describe 3D Shapes

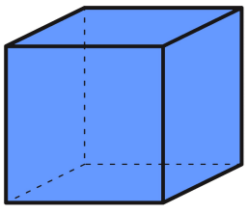
5a. True or false?



A sphere has no edges.

VF

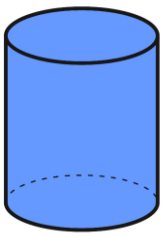
5b. True or false?



A cube has 8 faces.

VF

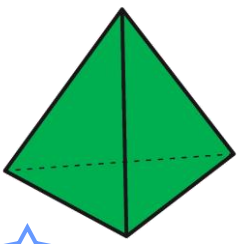
6a. Tick the statements which relate to the shape.



2 edges	
1 surface	
3 faces	

VF

6b. Tick the statements which relate to the shape.



6 edges	
4 faces	
5 vertices	

VF

7a. Circle the shapes that have more than 5 edges.

cuboid | sphere | cube

VF

7b. Circle the shapes that have fewer than 7 vertices.

cube | cone | square based pyramid

VF

8a. Use >, < or = to complete the statements below.

number of vertices on a cube ☐ number of faces on a cube

number of edges on a cylinder ☐ number of vertices on a sphere

VF

8b. Use >, < or = to complete the statements below.

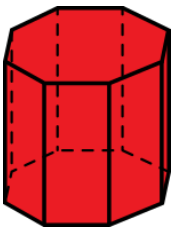
number of vertices on a square based pyramid ☐ number of edges on a cone

number of faces on a cuboid ☐ number of edges on a triangular based pyramid

VF

Recognise and Describe 3D Shapes

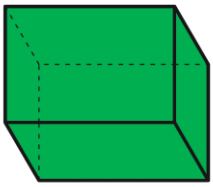
9a. True or false?



An octagonal prism has 24 edges.

GD VF

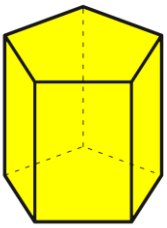
9b. True or false?



A cuboid has 6 vertices.

GD VF

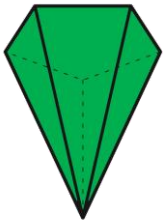
10a. Tick the statements which relate to the shape.



12 vertices	
7 faces	
It is a pentagonal prism	

GD VF

10b. Tick the statements which relate to the shape.



10 edges	
7 vertices	
It is a pentagonal based pyramid	

GD VF

11a. Circle the shapes that have the same number of edges as a cuboid.

triangular prism | tetrahedron | cube

GD VF

11b. Circle the shapes that have between 2 and 7 triangular faces.

hexagonal pyramid | cone | triangular prism

GD VF

12a. Use >, < or = to complete the statements below.

number of faces in three cubes ☐ number of edges in a hexagonal pyramid

number of curved edges in three cylinders ☐ number of faces in a cube

GD VF

12b. Use >, < or = to complete the statements below.

number of edges on a pentagonal prism ☐ number of edges on a cuboid

number of triangular faces on a square based pyramid ☐ number of vertices in six cones

GD VF

Varied Fluency
Recognise and Describe 3D Shapes

Developing
1a. False, a cuboid has 6 faces.
2a. It is a sphere
3a. Cylinder, sphere
4a. > and <

Expected
5a. True
6a. 2 edges, 3 faces
7a. Cuboid, cube
8a. > and >

Greater Depth
9a. True
10a. 7 faces, it is a pentagonal prism
11a. Cube
12a. > and =

Varied Fluency
Recognise and Describe 3D Shapes

Developing
1b. False, a cylinder has no vertices.
2b. 5 vertices, 8 edges
3b. Square based pyramid, cube
4b. > and =

Expected
5b. False, a cube has 6 faces.
6b. 6 edges, 4 faces
7b. Cone, square based pyramid
8b. > and =

Greater Depth
9b. False, a cuboid has 8 vertices.
10b. 10 edges, it is a pentagonal based pyramid.
11b. Hexagonal pyramid
12b. > and <