

Canonbury Home Learning

Year 6 Maths

Developing activity

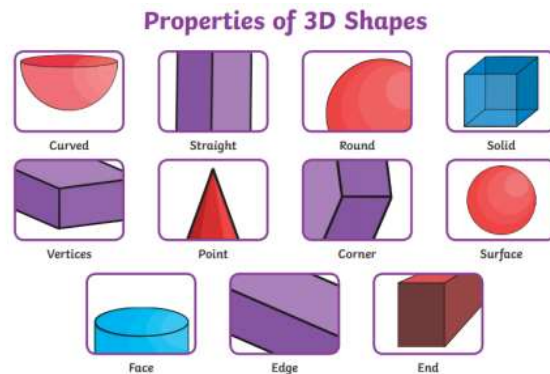
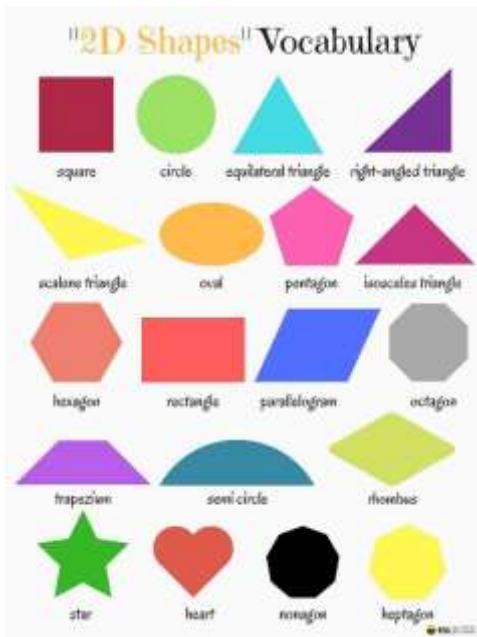
Lesson 5

LO: TBAT describe 3D shapes.

Success Criteria:

- | |
|--|
| 1. Recap shape vocabulary. |
| 2. Name and describe each shape. |
| 3. Describe the 2D faces of each 3D shape. |

Model



Now you try...

Name and describe each 3D shape. Say how many faces, vertices and edges it has. Then describe the 2D faces of each shape.

a, b, c, d, e, f, g, h, i

THINK Here is the net of a cube. Draw the net of a square-based pyramid.

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Expected/ Greater depth activity

Lesson 1

LO: TBAT solve problems including 3D shapes.

Task:













You are going apply your knowledge to solve several problems including 3D shapes.

Success Criteria:




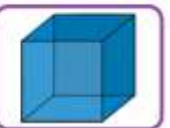
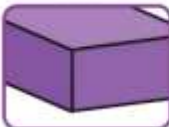



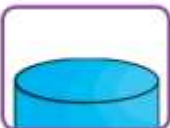


1. Revise your 3D shape knowledge.
2. Use shape properties to answer questions.
3. Apply your knowledge of nets to answer questions.

Recap:

3D Shape Properties

 Cube	6 faces 8 vertices 12 edges	 Tetrahedron	4 faces 4 vertices 6 edges	 Square-based Pyramid	5 faces 5 vertices 8 edges
 Cylinder	3 faces 0 vertices 2 edges	 Hexagonal Prism	8 faces 12 vertices 18 edges	 Sphere	1 face 0 vertices 0 edges
 Cone	2 faces 0 vertices 1 edge	 Octahedron	8 faces 6 vertices 12 edges	 Octagonal Prism	10 faces 16 vertices 24 edges
 Triangular Prism	5 faces 6 vertices 9 edges	 Cuboid	6 faces 8 vertices 12 edges	 Pentagonal Prism	7 faces 10 vertices 15 edges

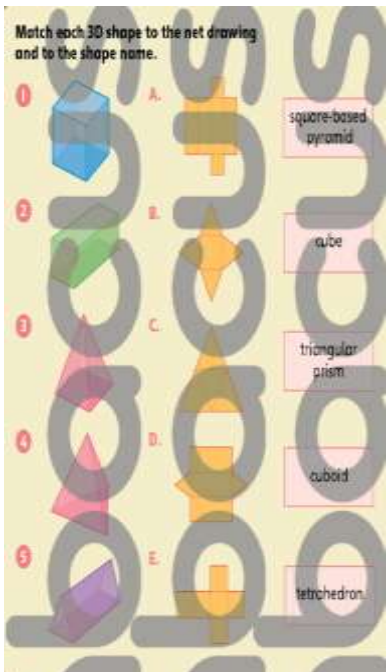
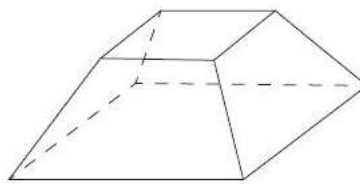

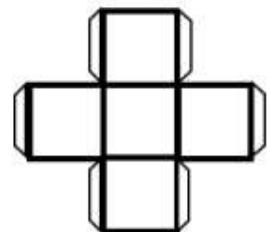

Properties of 3D Shapes

			
Curved	Straight	Round	Solid
			
Vertices	Point	Corner	Surface
			
Face	Edge	End	

Year 6 Maths

Main activity

Complete at least 2 columns, more if you can!

Task 1	Task 2	Task 3	Task 4						
<p>Practice Match each shape to its net and name.</p> 	<p>Arithmetic</p> <p>8 $873 + 64 - 102 =$</p> <hr/> <p>9 $12 \times 5 \times 2 =$</p> <hr/> <p>10 $\frac{1}{7}$ of 21 =</p> <hr/> <p>11 $8013 - 394 =$</p> <p>12 $0.06 \times 100 =$</p> <hr/> <p>13 $\frac{1}{3} = \frac{?}{15}$</p> <hr/> <p>14 $4818 \div 5 =$</p>	<p>Problem Solving Task 1 Here is a drawing of a 3-D shape.</p>  <p>Complete the table.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Number of faces</th> <th>Number of vertices</th> <th>Number of edges</th> </tr> </thead> <tbody> <tr> <td style="height: 30px;"></td> <td></td> <td></td> </tr> </tbody> </table> <p>Task 2 Mina thinks of a 3-D shape. She says, <i>'It has 5 faces. Two opposite faces are triangles. The other faces are rectangles.'</i></p>  <p>What is the name of the 3-D shape?</p>	Number of faces	Number of vertices	Number of edges				<p>Reasoning Task 1 Dora thinks that this net will fold to create a cube.</p>  <p>Do you agree with Dora? Explain your answer.</p> <p>Task 2 Use Polydron to investigate how many different nets can be made for a cube.  Is there a rule you need to follow? Can you spot an arrangement that won't work before you build it? How do you know why it will or won't work? Can you record your investigation systematically?</p>
Number of faces	Number of vertices	Number of edges							

Task 3

I'm thinking of a 3-D shape.
It has a square base.
It has 4 other faces, which are triangles.



What is the name of the 3-D shape?

Task 4

These nets will fold to make 3-D shapes.
Match each net to the name of its shape.
One has been done for you.

	square – based pyramid
	triangular prism
	cube
	square
	tetrahedron
	cuboid

Task 3

Here is an open box.



Which of the nets will fold together to make the box?

The grey squares show the base.

A	B	C