

## **Adult Guidance with question prompts**

Children will count the faces and surfaces on 3D shapes. It would be helpful if they could handle 3D shapes for this activity, so wherever possible, you could ask them to start by finding everyday objects around your home that are the correct shape. It would be useful if they could mark each face as they count, so they don't count the same face more than once.

**What is the difference between 2D and 3D shapes?**

**How do you know if a shape is 3D?**

**What is a face?**

**Can you point to a flat face?**

**How many faces does the shape have?**

**Can you point to a curved surface?**

**How many curved surfaces does the shape have?**

**What 2D shapes are the flat faces of this shape?**

**How many faces/surfaces are there in total?**

**I'm thinking of a 3D shape with five flat surfaces. What could it be?**

**I'm thinking of a 3D shape that has one curved surface. What could it be?**

**I'm thinking of a 3D shape where all the faces are squares. What is it?**

## Count Faces on 3D Shapes



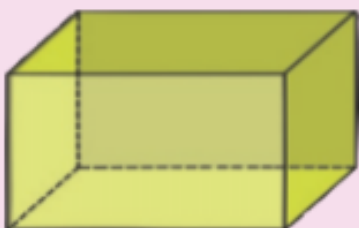
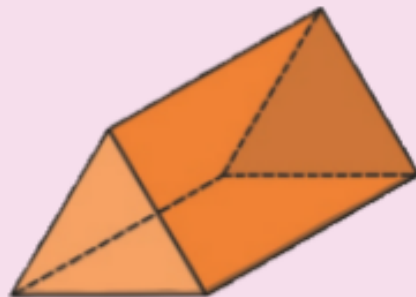
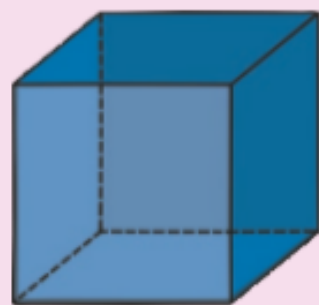
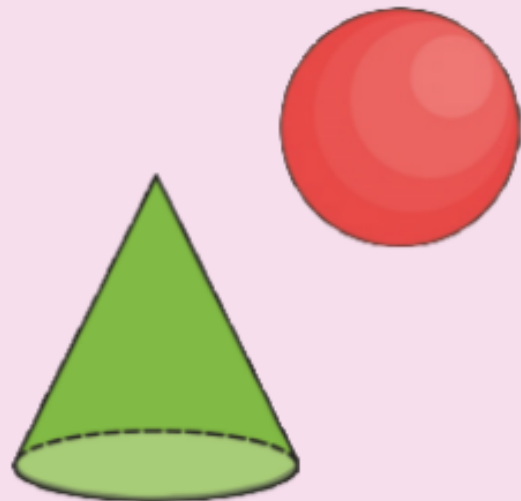
Explore different 3D shapes.

What 2D shapes are the faces?

How many flat faces are there?

What is the name of the shape?

Are there any curved surfaces?



## Adult Guidance with Question Prompts

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Children read clues about a 3D shape and its faces. They use reasoning skills to identify what the shape could be. Children may find it useful to have a selection of 3D shapes to look at.

**Can you read Sarah's clues?**

**What is a face?**

**Can you think of a shape with six faces?**

**Does the shape you are thinking of have flat faces?**

**What shapes are the faces?**

**Do they have four sides?**

**What are the names of the possible shapes Sarah has described?**

**Is Ben right when he says there's just one possible answer?**

**Why not?**

**Can we say for sure which shape Sarah is thinking of?**

**What other clues could she have given to make it clear that she was thinking either of a cube or of a cuboid?**

## Count Faces on 3D Shapes



Sarah described a 3D shape.

It has 6 faces.

The faces are flat.

All the faces have 4 sides.



There's just one shape that fits the clues.

Do you agree with Ben? Explain your answer.

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Children investigate which 3D shapes have faces which are certain 2D shapes. Each 2D shape has more than one possible answer. Children may find it useful to have a selection of 3D shapes to look at.

**What 2D shapes can you see?**

**What 3D shape has a square face?**

**Can you think of more than one 3D shape with a square face?**

**Can you point to the square face on a 3D shape?**

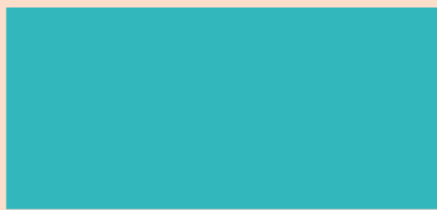
**Does the shape have one square face or more than one?**

**What are the names of the 3D shapes with square faces?**

## Count Faces on 3D Shapes



Ben used the flat faces of 3D shapes to print these 2D shapes.



What 3D shapes could Ben have used to make these prints?

Can you find 7 shapes?