2 Day Emergency Plan Maths Day 1

Learning focus

Learn about the faces, edges and vertices of 3D shapes.

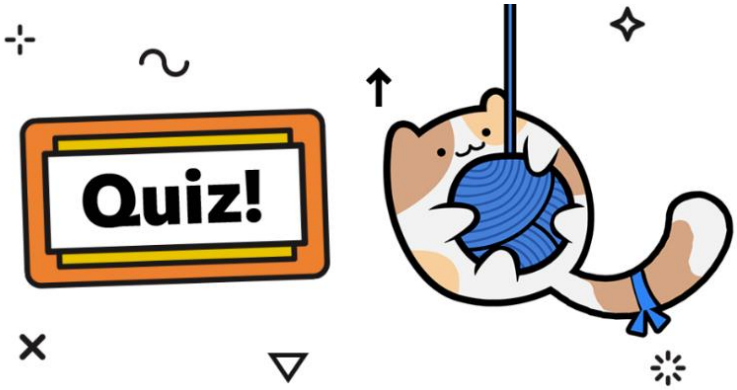
This lesson includes:

- a catch-up quiz
- two videos
- one activity

Quiz

To get started, let's see how well you know this topic already. Take the catch-up quiz below to find out.

https://www.bbc.co.uk/bitesize/articles/zp2tjsg



Learn

To start, watch this video from **KS1 Maths** that explores the difference between 2D and 3D shapes.

https://www.bbc.co.uk/bitesize/articles/zp2tjsg

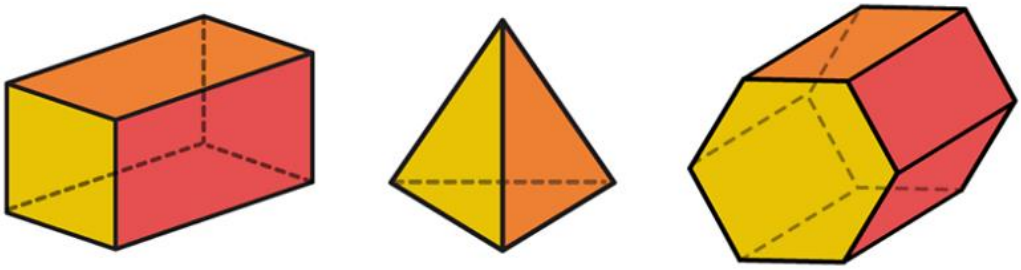
Fin and Snoot look at 2D shapes and 3D objects with the help of a curious machine.

Now we know the difference between a 2D and 3D shape, let's learn about the properties of 3D shapes. Watch this video to find out.

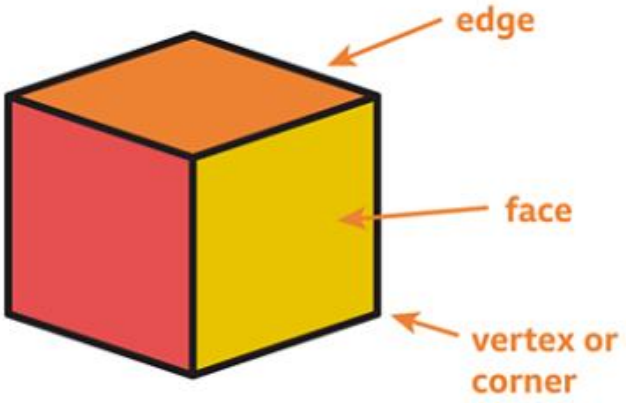
https://www.bbc.co.uk/bitesize/articles/zp2tjsg

Properties of 3D shapes

Here are three 3D shapes. What properties do they have?



3D shapes have faces, edges and vertices (corners)

For 

Faces - A face is a flat surface on a 3D shape. example a cube has 6 faces

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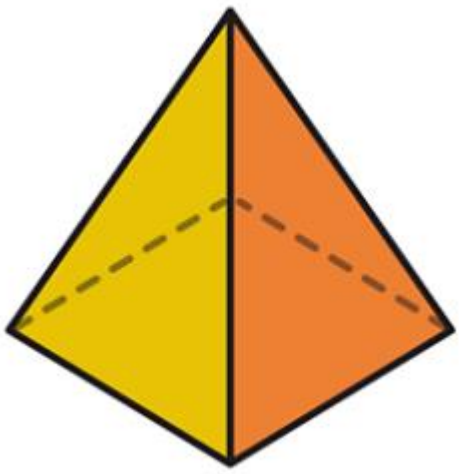
Edges - An edge is where two faces meet. For example a cube has 12 edges.

Vertices - A vertex is a corner where edges meet. The plural is vertices. For example a cube has 8 vertices.

3D shapes have three dimensions - length, width and depth.

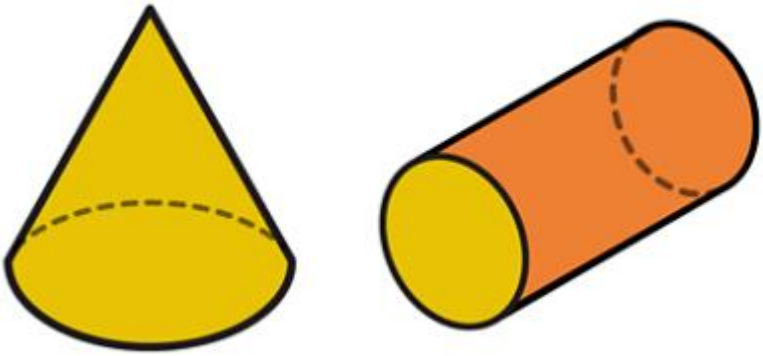
Example

How many faces, edges and vertices are there on this square-based pyramid?



- **Faces** - It has 1 square face (on the bottom) and 4 triangle faces, so the pyramid has 5 faces in total.
- **Edges** - There are 8 edges. 4 round the base and 4 leading to the top of the pyramid.
- **Vertices** - It has 5 vertices. 1 at the top of the pyramid and 4 around the base.

Some 3D shapes have curved surfaces, like this cone and cylinder.



Top tip

You can recognise 3D shapes in many objects around your home. Use some that you can find to help you count the faces, edges and vertices.

Remember

A 3D shape is a solid shape with **faces**, **vertices** and **edges**.

Practise

Activity 1

3D shape hunt

Today we are going to see what **3D shapes** we can find around the house.

You will need a pencil and a piece of paper.

Look around the house for objects that are 3D shapes. Draw them on your piece of paper. Can you draw and label:

- the faces
- the edges
- the vertices