

Wednesday 17th June

WALT: Recognise properties of 3d shapes

Lesson taken from BBC bitesize: [Properties of 3D shapes - Homeschool lessons in Primary Maths Year 2](#)

Today we are going to learn about the properties of 3D shapes.

This lesson includes:

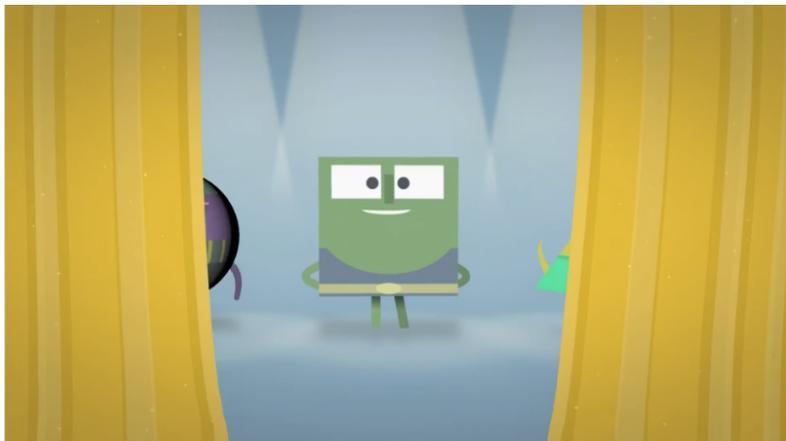
- two videos
- four activities

Learn

Yesterday we looked at 2D shapes. Today we are going to look at 3D shapes!

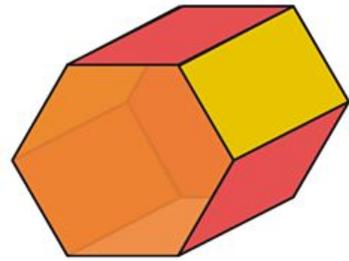
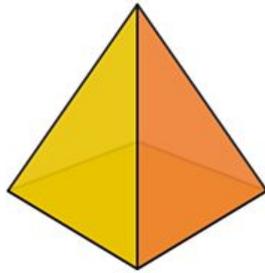
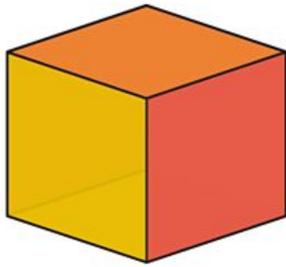
To start today's lesson, watch this video from KS1 Maths that explores the difference between 2D and 3D shapes.

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.



Properties of 3D shapes

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



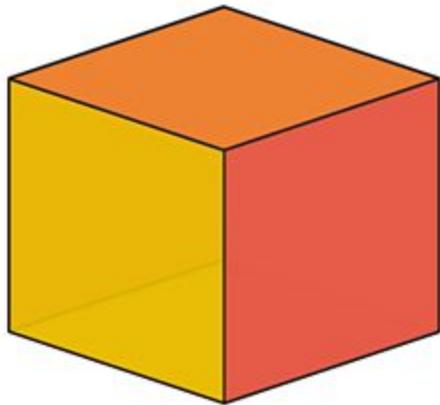
3D shapes have faces, edges and vertices (corners).

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

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.

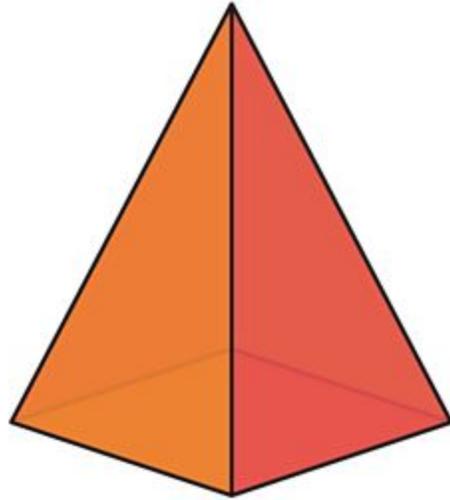
3D shapes have three dimensions - length, width and depth.



This **cube** has **6 faces**, **8 vertices** and **12 edges**.

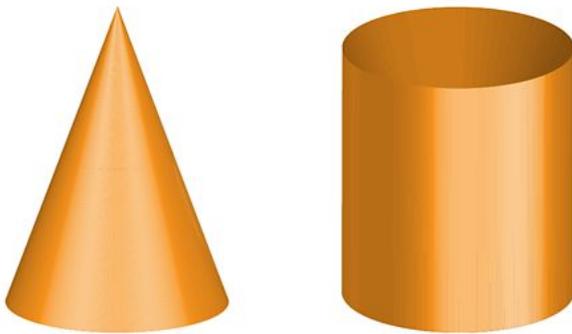
Example:

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

Activity 2

3D shapes challenge

This worksheet from [Collins](#) has three challenges. See if you can complete them all.

Finished? Check here for the [answer sheet](#). Look for the answers for pages 82 - 83.

Activity 3

Count edges on 3D shapes

This worksheet from [Twinkl](#) has three activities on 3D shapes. See if you can complete them all.



Activity 4

Karate Cats

Play the shapes level of Karate Cats Maths - can you collect a cool new costume for your cats?
<https://ichef.bbci.co.uk/images/ic/1280xn/p088k0f8.png>



