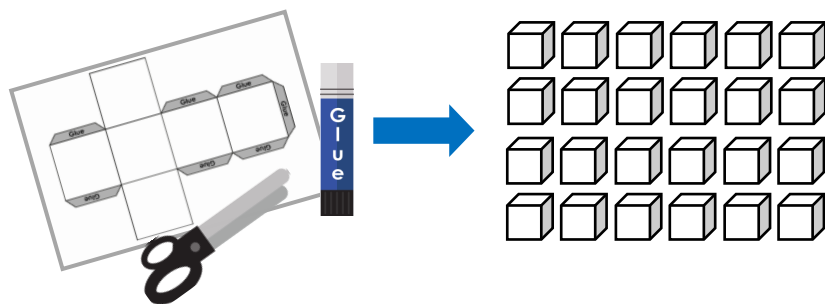




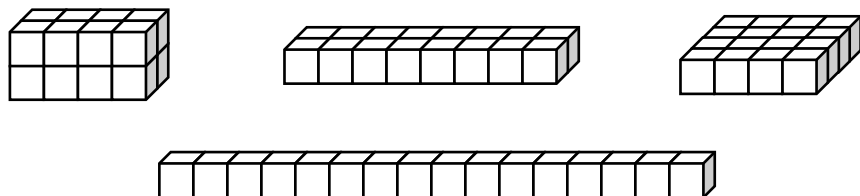
Volume explorer

Before you start this activity, you will need to print the cube templates six times.

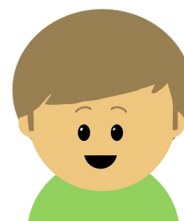
Cut them out (being careful not to cut off the tabs) and stick them together with glue or tape to create 24 cubes.



In year 5, we are just starting to understand volume. It is the amount of space a 3D shape takes up. With the cubes you have, your task is to create different cuboids which all have an equal volume. Here is an example using 16 cubes.

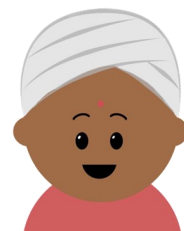
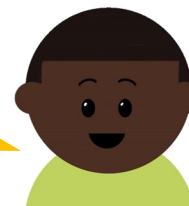


Let's do this!



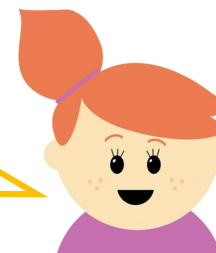
How many different cuboids can you make with a volume of 24 cubes?

Will there be more or less solutions for cuboids with a volume of 12 cubes? Why?



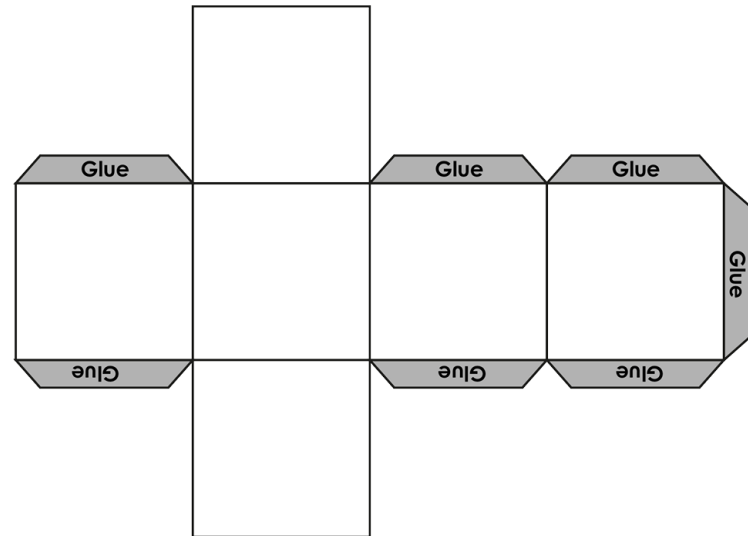
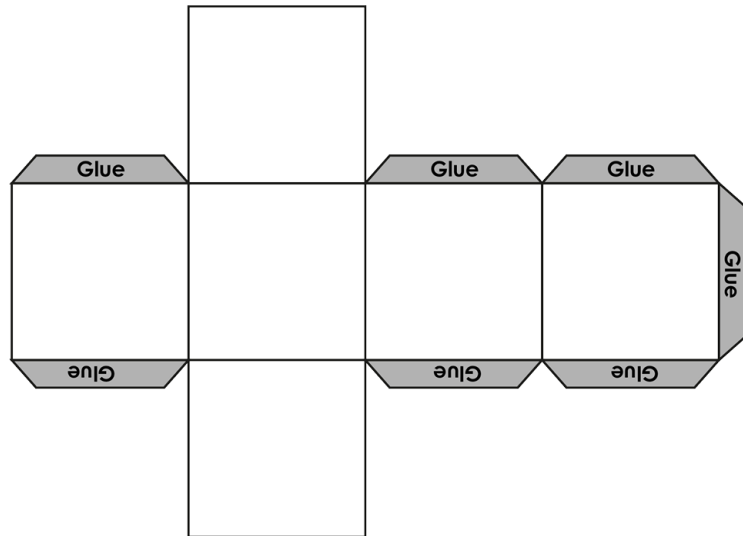
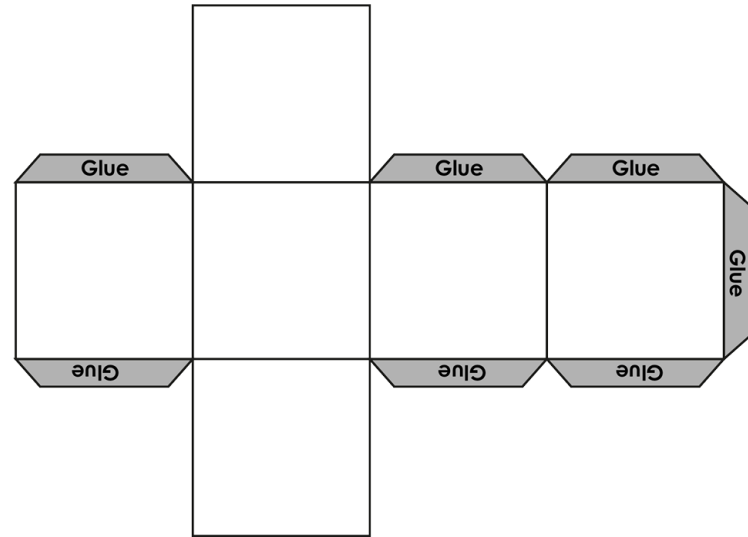
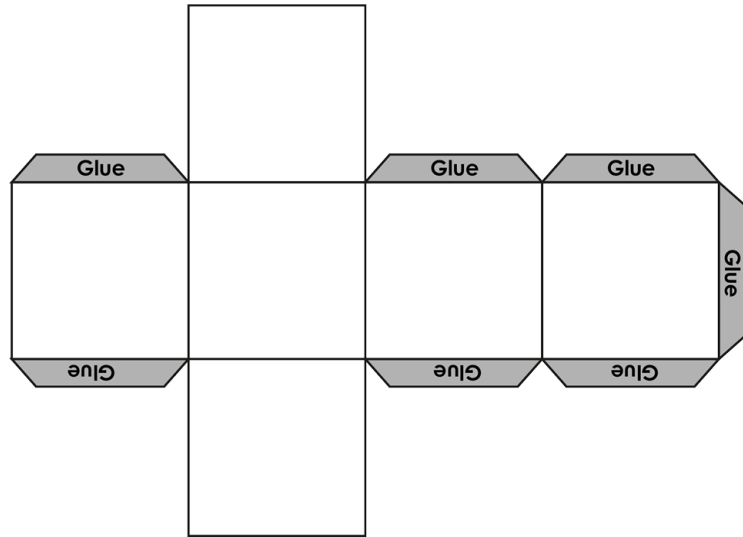
Explore the odd volumes between 3 and 24 cubes. Which have less solutions? Why?

Can you use your cubes to measure the volume (in cubes) of any boxes or containers you have?





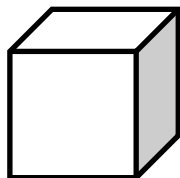
YR5 Home Learning Activities – Maths Set 2





Net or not?

With paper, a pencil, a ruler and scissors, explore how to make cubes using a net.

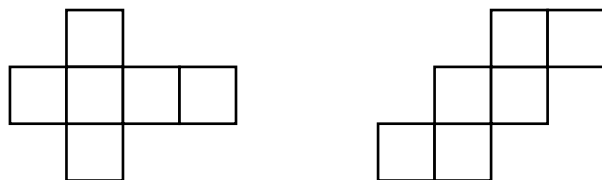


Remember...

A net is what a 3D shape would look like if it were opened out flat.

It is an arrangement of 2D shapes which you can cut and fold into a 3D shape.

Here are some examples of nets for cubes.



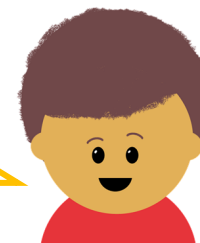
Think imaginatively, can you find any more solutions?

Let's do this!

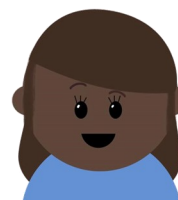


How many 2D shapes are needed to make a cube? What does this link to?

When you have found a solution, how can you tweak it to find another possibility?



Challenge



Can you make a net for any other 3D shapes like a cuboid or a triangular prism?





YR5 Home Learning Activities – Maths Set 2

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