Think and learn

1 **Read and match.**

1 A cone	is perfectly round, like a ball.
2 A cube	has two circular ends and curved sides.
3 A cuboid	has six sides, all squares.
4 A cylinder	has six sides, which can be squares or rectangles.
5 A pyramid	has a circular bottom and sides which meet at a point.
6 A sphere	has a square bottom and sides which are shaped like triangles.

2 **Look, read and write. Which shape from Activity 1 are these buildings most like?**

SHAPES ALL AROUND US

We've already looked at the shapes of some buildings in London, but have you ever seen these ones?

1 The Copper Box Arena was built for the 2012 Olympic Games. Handball and fencing events were held there. Its name describes it perfectly, as it's a *cuboid* made from copper.

2 Some buildings even include a shape in their name. This modern art gallery is exactly that – a white _____, with a glass roof and narrow windows.

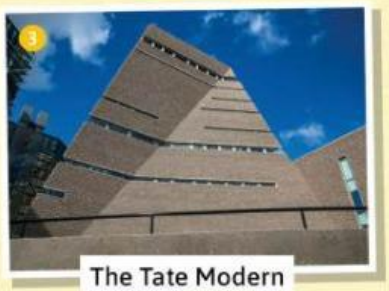
3 Another art gallery with a distinctively shaped building is the Tate Modern. The main building opened in 2000, but in 2016 a new part opened, called the _____ Tower.

4 There aren't many buildings shaped like _____s in London, but there are plans to build one in East London, for concerts and sports events. The ones in the picture are in Cornwall.

5 Construction can happen below the ground as well as above, and we can see 3D shapes there too. This London Underground train runs through a tunnel in the shape of a _____.

The Copper Box Arena

White Cube



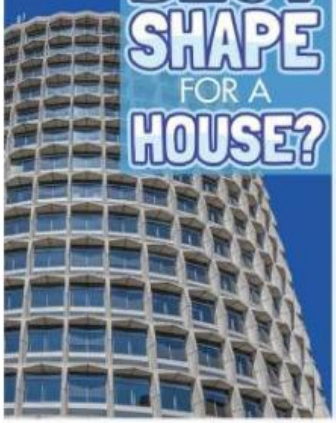
The Tate Modern

The London Underground

The Eden Project

3 **Look at the photos. What is similar about all the houses?**

All the houses _____.



WHAT IS THE BEST SHAPE FOR A HOUSE?

In the past, houses in many cultures were round. Igloos, tepees, yurts and some stone or mud round houses are all based on the shape of a cylinder or sphere. At some point, builders started to build more cuboid houses. Perhaps it was easier to split bigger houses into rooms when they were this shape, or maybe more houses could be packed into a smaller space if they had straight sides. No-one is certain why this change happened. Today, however, many architects think that there are advantages to building houses in the shape of cylinders:

- They take less time to build and use fewer materials.
- They are stronger than a shape with several sides.
- They are warmer because they need less energy to heat them.
- They are very safe in strong winds because the wind blows round them.
- They are quieter because sound also flows round them, rather than crashing into them.

Perhaps this is the future of housing. What do you think?

4 **Read the article in Activity 3 and write *t* (true), *f* (false) or *ds* (doesn't say).**

1 Building round houses is a new idea. f
2 People started building cuboid houses because they were cheaper. _____
3 It is quicker to build a round house than a cuboid house. _____
4 Round houses can blow down easily in a storm. _____
5 It isn't as noisy inside a round house. _____
6 Round houses are more popular than cuboid houses now. _____

5 Project **Choose a shape and find out about a famous building that is built in that shape. Draw it. Answer these questions:**

- What is it called?
- Where is it?
- Who designed it?
- When was it built?
- What is it made from?
- What is it used for?

The Louvre Pyramid, Paris

It was designed by I.M. Pei, a Chinese architect, and built in 1989. The pyramid is made of metal and glass. It is the main entrance to the Louvre Museum.