

Build an Aztec Temple-Pyramid

National Curriculum Aims:

History: To study a non-European society that provides a contrast with British history. To explore how Aztecs built their temples.

Maths: To recognise and use square numbers and the notation for x^2 . To solve problems involving square numbers.

The Aztecs were master builders. Temple-pyramids were tall structures with four main platforms and stairways running up one side. The staircase often faced west as this was where the Aztecs believed the sun descended into the underworld.

This activity explores how a temple-pyramid was made with a construction task and an investigation into square numbers.



What you need:

- A square base (a piece of strong cardboard measuring about 30cm x 30cm, or even a tray).
- Cubes (you could use any kind of cube or building block).

What to do:

1. The Aztecs used a layer of clay and wood as a base for their temple-pyramids. You need a flat firm base. You could use a flat surface or table top but a piece of strong card, measuring around 30cm x 30cm, means you can move your structure.
2. Aztec temple-pyramids had a series of platforms, starting wide at the base and gradually getting narrower. Start your temple-pyramid so that it almost fills your cardboard base. A layer measuring 10cm x 10cm would be a good start. You can always have a larger layer as you practise constructing. Alternatively, experiment with smaller bases first.
3. For the next layer, start one block in so that you create a 'step'. This layer would measure 9cm x 9cm blocks. Each layer you add, will get smaller until you reach the top.
4. Add a staircase on one side of your temple-pyramid. Use a long strip of strong cardboard and cut it to the size of one side of your structure.
5. The Aztecs were skilled craftsmen and decorated the stones of the temple-pyramids with intricate carvings, showing animals such as jaguars and snakes and geometric patterns. Add details to your staircase in the same style.



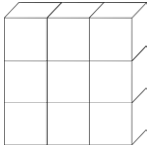
Cross Curricular Link: Maths

- Try this [existing resource](#) for an investigation into the number of blocks used to make a pyramid.
- Pyramid Problem Solving.

Pyramid Problem Solving

Each layer of the pyramid you built is made up of squares.

To work out the area of each layer you would calculate the length \times width of the square.



This can be written as 3×3 or 3^2 (squared).

A square number is a number multiplied by itself.

Investigate the area of layers in an Aztec temple-pyramid. You can use this grid to help.

Layer	Side (number of units)	Side squared	Area of layer (assuming the building materials are $1\text{cm} \times 1\text{cm}$)
1	1	1^2	1cm^2
2	2	2^2	4cm^2
3	3		
4	4		
5			
6			
7			
8			
9			
10			

Using the information you collect in the table, work out the total area of a pyramid that has the following layers:

Number of Layers	Calculation	Total Area
2	$4\text{ cm}^2 + 1\text{ cm}^2$	5cm^2
3	$9\text{ cm}^2 + 4\text{ cm}^2 + 1\text{ cm}^2$	14cm^2
4		
5		

- What would be the area of a pyramid with 6 layers?
- What would be the area of a pyramid with 10 layers?
- What would be the area of a pyramid with 20 layers?