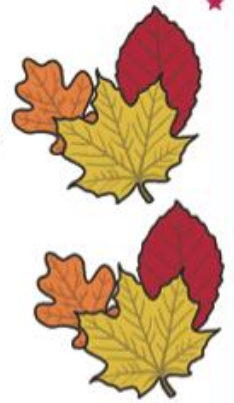


Outdoor Maths Challenge Cards

twinkl

Outdoor Maths

Go on a Maths Nature Hunt around the grounds. Can you find some natural objects that represent a particular number?



Outdoor Maths

Using natural objects, can you make different 2D shapes? Can you use stones to make a circle? Can you make a triangle from twigs?

Which natural objects could you use to make a pentagon?



Outdoor Maths

Place a hoop on the grass and estimate with your partner how many flowers are inside. Count them! Was your estimate correct?

Will there be the same number if you move your hoop somewhere else? How could you record how many flowers are in the hoop?



Outdoor Maths

Find different natural materials and turn them into a natural symmetrical pattern. Can you make both sides look identical?

Could you use different 2D-shapes within your picture? Do you know any patterns that exist in nature that are symmetrical?



Outdoor Maths

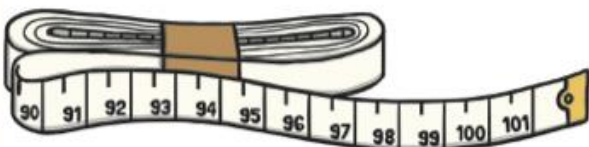
Using different natural materials, create your own pattern. What would come next in your sequence? What would the 10th object be? Or the 20th? Or the 100th? How could you work it out?



Outdoor Maths

Using a tape measure, can you find the length / height of different natural objects? Can you estimate how long / tall they will be?

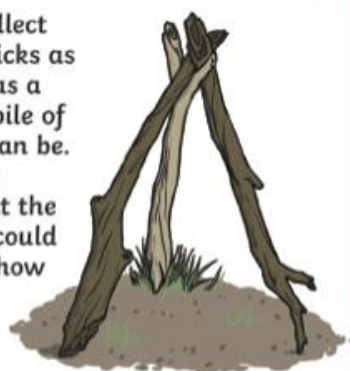
Can you place them in order starting with the smallest?





Outdoor Maths ★★

In a small group, collect together as many sticks as you can find. Work as a team to make your pile of sticks the tallest it can be. Will your pile be the tallest? Can you beat the other teams? What could you use to measure how tall it is?


An illustration of a tall, triangular structure made of several sticks of varying lengths, standing on a small patch of ground. The sticks are arranged in a way that they lean against each other to form a stable, pointed shape.

Outdoor Maths ★★

Find an even amount of leaves. How many different ways can you arrange them? What arrays could you use?

What happens when you have a different number of leaves?


Does it work with an odd amount of leaves? What about if you have 15 leaves? Can you make an array? Why/why not?

An illustration of two green oak leaves with detailed vein patterns, one slightly above and to the right of the other.

Outdoor Maths ★★

Using sticks and string, can you make your own kite?

What could you use to make the bows? Can you decorate your kite design?


An illustration of a colorful kite with four panels in yellow, red, green, and blue. It has a white tail with a red bow and a long, flowing white string.

Outdoor Maths ★★

Go on a hunt to find some natural objects.


Using chalk, can you create a diagram to sort the objects using different criteria?

You could use a Venn diagram or a Carroll diagram. Can you sort them another way?

An illustration of a hand holding a piece of blue chalk, ready to write on a surface.

Outdoor Maths ★★


Find 4 sticks and arrange them in a pattern like this:

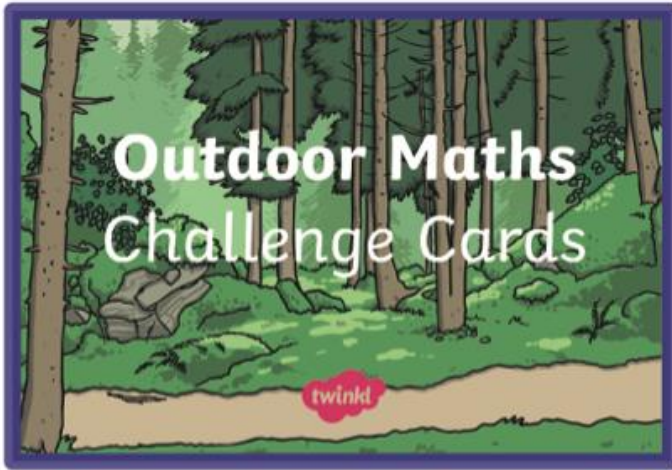
An illustration of four sticks arranged in a 2x2 grid pattern, forming a square shape.

Outdoor Maths ★★

Collect a variety of different natural objects. Using chalk, make a tally chart using the objects that you have found.

Which object did you find the most of? Which object was hardest to find? Could you show your findings in another way?

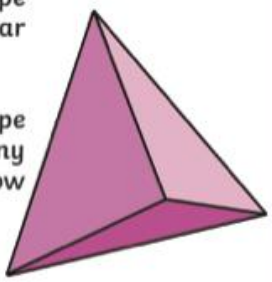
An illustration of a tally chart drawn with green chalk. It consists of four vertical lines on the left, with a diagonal line crossing them to form a square, and two vertical lines on the right.



Outdoor Maths ★★★

Collect a variety of sticks. Using string, tie the sticks together to make a 3D shape e.g. a cube or a triangular prism.

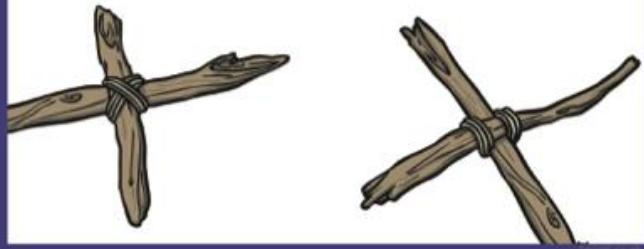
Can you describe your shape to a partner? How many edges does it have? How many vertices?



A 3D illustration of a purple triangular prism, showing its triangular base and rectangular sides.

Outdoor Maths ★★★


Using two sticks and some string, make an angle measurer. Can you find different angles using natural objects? Which angles can you see on a leaf? Do trees have any right angles?



Two illustrations of angle measurers. Each consists of two sticks tied together at a vertex with a piece of string, forming an angle.

Outdoor Maths ★★★

Find a variety of sticks. Break some of them into halves or quarters and turn your sticks into a fraction wall!




An illustration of a pile of various sticks and branches, some broken into smaller pieces.

Outdoor Maths ★★★

Give your partner a magic number (e.g. 100). Estimate how far you will walk to if you walk 100 steps. Count it out and find where you finish. Were you right? Did you go further than you thought you would?


Is it possible to go 100 steps in every direction from where you are standing? Why?



Two red footprints, one larger than the other, pointing towards the bottom right.

Outdoor Maths ★★★


Must a triangle always have straight sides? Investigate using different objects that you have found outside.



An illustration of various natural objects: sticks, stones, leaves, and a small plant, arranged together.

Outdoor Maths ★★★

Using a camera, see how many mathematical photos you can take. Can you explain what you can see to your partner? Can you think of a mathematical question you could ask?




An illustration of a black digital camera with a lens and flash.

Outdoor Maths ★★★

Estimate how many leaves there are in this picture.

How many shapes can you see on the gate?



Two photographs. The left one shows a pile of autumn leaves in shades of orange and brown. The right one shows a wooden gate with a diagonal crossbar.