



Counting outdoors

The outdoors can be a valuable place to increase real-world mathematical understanding. The more nature in your outdoor space, the more repeated patterns, shapes and counting opportunities there are. This activity can be used throughout your Nature Park journey to record changes in numbers of plants, animals and natural patterns, encouraging learners to look closely and observe the world around them.

Teaching time

15–20 minutes

Learning outcomes

- increase understanding of number in real world contexts
- observe patterns in nature
- use their knowledge of number to collect data on their outdoor space

Step by step

Ensure all learners have a recording sheet for the living things or natural patterns you want to observe. You could begin by facilitating a quick decision, asking learners to name each of the things on the sheet. Have they seen them before? Have they seen them on their learning site? Where do they think they might find them?

Sitting in a space outdoors, set a 3-minute timer and ask learners to observe an area, ticking on their recording sheet when they spot one of the things listed.

Some spaces, seasons and weather conditions will be better suited to spotting different creatures, so groups of learners could sit and observe different areas outdoors.

Here are some suggestions of animals learners could record:

- **insects and bugs:** butterflies, bees, ants, ladybirds, caterpillars, worms
- **animals:** birds, squirrels
- **aquatic life:** frogs, snails, tadpoles
- **plants and trees** (these could be counted by walking around and exploring an area): flowers, trees, mushrooms, leaves (on a tree or on the ground), grass patches or clumps

Learners could also search for repeated patterns – these could be documented by taking a photograph, or creating a rubbing with a crayon and piece of paper.

- **plant and leaf patterns:** leaf arrangements (e.g., alternating or opposite on a stem), veins in leaves (branching patterns), petal shapes and numbers (like daisies with repeating petals), flower colours in a garden (red-yellow-red-yellow), tree bark textures (striped, scaly, etc.)
- **animal and insect patterns:** butterfly or moth wings (symmetrical designs), stripes on animals (bees, some caterpillars), spots on ladybirds or certain birds, repeating movements (like a squirrel hopping or a bird pecking)

Green Skills



Suitable for

Early Years

Location

Outdoors

Season

Spring
Summer
Autumn

What you'll need

Recording sheets
Clipboards
Pencils
Timer or stopwatch
Optional: tarpaulin, sheets or kneeling mats to sit on
Optional: wax crayons and paper, to create rubbings of patterns

Key vocabulary

Repeated patterns
Numbers 1-10
Names of living things and plants

Support and extension opportunities

Why not make these observations a part of your daily routine, and dedicate three minutes each morning to observing different things? Once learners are settled in the routine, you could try increasing the time.

The data that learners collect can be displayed in your [Nature Park Corner](#).



Reflection

If carrying out this activity near the beginning of your Nature Park journey, learners may not spot as many living things as they would like – discuss why this might be, and how you could make changes to see more of these things?

Carrying out this activity after making changes to your site will help children to quantify the impact they have made. Compare your observations from before and after your changes – what was different, what was the same?



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