

HOW DO WE COUNT BIODIVERSITY?

OBJECTIVES	• Introduce the concept of biodiversity. • Understand the network of relationships that exists within an environment. • Activate knowledge through hands-on practice.
THEME	Biodiversity and its levels
WHERE?	School garden, courtyard, parks, meadows
HOW LONG?	3 hours
TARGET	8-10 years
WHAT DO I NEED?	• 4 pieces of wood • String • Staple gun • Pencil and colouring pencils • Notebook or squared paper

HOW TO DO IT

The aim of the activity is to create a large checkerboard made of 16 squares, place it at random in your meadow, garden or field, and then count biodiversity.

With the teacher's help, build a square frame by joining 4 wooden sticks, each 1 metre long, and tying them together, without nails or a hammer for greater safety. Then build the internal grid by dividing the large square into 16 smaller squares with string: every 25 cm, stretch the string from one side of the square to the opposite side, creating a grid.

Place the square frame at random in the meadow.

Reproduce the square, divided into 16 cells, in your notebook.

Now draw inside the 16 cells what you can see: note which plants and flowers are present, how many there are in each cell of the frame, and mark their position. You can use crosses or dots in different colours for each plant.

USEFUL TIP

If your school does not have a courtyard, or if you cannot organise a visit to a park, you can ask families to help by taking a trip to a city park or somewhere outside town at the weekend. With the help of their parents, students can identify a meadow area of about 1 m x 1 m and draw a square in their notebook, recording what they can see. They can also take photographs and calmly draw the position of the different flowers and plants at home after the outing. Later, in class, you can draw the grid by dividing each side of the square into 4 equal parts, and then proceed as described above. This will allow you to compare results from different environments, based on the places visited by each family.

WHAT SCIENCE SAYS

What you have just done is the application of a method used in botanical and/or wildlife monitoring, which uses sampling points to obtain a qualitative and quantitative picture of the species present in a given area. Sampling through a square grid provides, in particular, information on the number of specimens, percentage cover and species richness index. Point sampling can be carried out by repeating the survey in different places, or at regular intervals from one another; linear transects provide information on the qualitative spatial distribution of species. If repeated over time, both methods provide data on changes in the community.