

Biodiversity bar charts

Learners will record living things they find around their site on cards and then build a bar chart to visualise the biodiversity they've found. For older learners, this is an exploratory way to become more comfortable spending time outdoors and connecting with nature. Key learning points include creating and interpreting bar charts.

Learning outcomes

- be able to present information in a tally, pictogram or bar chart
- be able to draw conclusions or answer questions by interpreting information in a pictogram, block diagram, or bar chart

Key words

Biodiversity - the variety of all living things on earth

Category - a group of things which have something in common

Teaching time 20-30 minutes

Suitable for KS1-2

Green skills



Identification and ecology

Learners will observe and identify features of their site and local biodiversity



Recording data

Learners will use drawings, labelling and charts to make observations about nature



Interpreting data

Learners will use the data they have collected to identify their findings and notice patterns



A completed biodiversity bar chart

Subject area

Maths, Science

What you need

- a selection of colour paper or card – if not available, ask learners to colour a small circle or symbol on their piece of paper to help colour code
- a hole punch
- a small whiteboard or flipchart paper for your key
- treasury tags or string
- pencils
- clipboards, one per person

Teaching tip

Use coloured record cards to colour code your categories and save preparation time

Teaching tip

If it's a windy day, why not display your bar chart using blue tack on a window or back in the classroom on a whiteboard?

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Starter

To prepare, you will need various coloured card cut into A6, with holes punched at the top and bottom to be hung up. Give each colour a different category (for example: Insects, Birds, Plants, Fungi, Mammals). Create a key for your colour categories with your learners and display this for your learners during the activity – this could be on a small whiteboard or flipchart paper.

Step by step

1. Outside, split learners into small groups and assign each group a part of the site to work on – this will help capture data from the whole area! Ask learners to identify how many types of things they can find for each category in that area – each of these will become a card. (For example, in their ‘Plants’ category, learners may have found two different types of tree, two different types of flowering plants and one type of grass – so they will have five cards in the plants category.)
2. Ask learners to draw or write on their piece of card to describe the living thing they are looking at in more detail. Their card could include: a drawing, a name for the living thing, a description of its features (what makes it similar or different from the other things in this category?), location it was found in, or any other interesting observations.
3. Work together to create your bar chart. (This would work best back in the classroom to stop your work from flying away!) Using treasury tags or string, join all cards of the same colour category together to create a long strip. Why not attach or hang the strips on the wall to create a display of your findings? Alternatively, hang the cards randomly to see the biodiversity found on your site.
4. What do children and young people notice? What conclusions can be made about your site from the data collection?

Reflection

Looking at the collected data and the colourful cards, is there anything missing? Is there more of one thing than another? Why might that be? What would we like to change, or have more or less of?

Support and extension opportunities

If writing or fine motor control is a barrier to participation, learners could use animal and leaf stickers, shaped sticky notes, or shaped paper punches to make insect, plant, bird and other shaped tokens to represent the categories.

Older learners could record things in different areas then compare their resulting bar charts. Learners could reflect on whether this is a fair test, and what they could do differently to make it a more fair test.

Teaching tip

Create a “model” of the level of detail you’d like from your learners on their cards – for example, a drawing labelled with five identifying features

Useful links

[Nature-based discovery: a Nature Park guide](#)

[Health & safety: a Nature Park guide](#)

[Three ways to share your findings](#)



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