

Minibeast Lesson Plan.

Topic introduction:

Set the scene by talking about the huge number of different species of animals that live in the world alongside us. Ask the class to name some of their favourite animals. Most likely children will name vertebrate animals and usually mammals.

Tell the class that scientists split animals into 2 groups depending on whether or not they have a backbone. See if anyone is able to name these groups (vertebrate = with backbone, invertebrate = without). Ask the class which group they think is bigger (in terms of number of species) and which one is more important (can be an interesting debate, and this can be followed up at the end of the topic, once they have discovered some of the roles played by invertebrates).

Invertebrates are often called minibeasts, because they are often small. But it is not always the case. Giant Spider Crabs, Giant Clams and the Colossal Squid are all invertebrates! But many of the invertebrates that live around us are very small, and so we will call them mini beasts today.

Ask the class if they are able to name any minibeasts that you might find in your outdoor space, and also if they know any jobs that they do that might make them important.

For example, bees pollinate flowers and fruit, spiders catch flies, earthworms aerate and fertilise the soil.

Indoor Minibeast handling.

Resources required:

- Minibeasts
- Interp sheets (optional)
- Clear Perspex sheets (optional)
- Magnifying glasses (optional)
- Bug pots
- Pencil and paper

If you are able and if you are comfortable, you can collect some minibeasts before class and have them in the class, for the pupils to examine closely. This can be a great exercise for teaching children observational skills, instilling the need to respect living things, and to overcome the “gross” factor that some children may struggle with.

Before starting the activity, remind the children that the minibeasts are living things and need to be looked after. Remind them that they are very much bigger than the minibeasts and can therefore easily hurt them. Remind them about respecting the living creatures, but also respecting their classmates. If someone does not feel comfortable with touching any of the animals that is ok, and they should not be forced into doing so.

Observational drawings are a great way to encourage the children to look very closely at the organisms, and to start thinking about why they look the way they do. We suggest using woodlice, snails and earthworms, and we have interpretation available for these species that you might like to use. These species are all common, so usually easy to find; are fairly robust, so are good for gentle handling, and each show different adaptations for life in their particular microhabitat.

The magnifying glasses and bug pots can be used for close observation of the minibeasts, and snails can be placed on the Perspex sheets, so that children can see how the foot moves as the snail crawls across it.

Outdoor minibeast hunt.

Resources required

- Bug pots
- Plastic spoon
- Magnifying glass
- Recording sheet
- Pencil

The great things about minibeasts is that they are everywhere. Every playground will have some sort of minibeast somewhere, and it can be a great exercise in observation and patience for children to find them. The types of minibeast that you are likely to find will depend on what features you have in the playground, but you should be able to fairly easily find woodlice, spiders, snails and worms. If you have any areas of flowers or trees, then you are likely to find a much broader diversity of species, including beetles, butterflies, flies and bees.

Split children into groups. It is a good idea to pair children who are not confident about handling the minibeasts with those who are more comfortable with it. Give each group a magnifying glass, bug pot, spoon and recording sheets. Set the rules about the areas they are allowed to search in.

Before they go on their hunt, remind them to respect the minibeasts as living creatures. Remind them not to touch stinging insects, to carefully use the spoon to pick things up, and to replace them where they found them after they have finished looking at them.

Further learning:

Use the children's existing knowledge of minibeasts to start thinking about food chains and webs (e.g. caterpillars eat plants, ladybirds eat aphids, spiders eat flies). Encourage the children to do some research to extend this knowledge. Can they build a food chain that contains at least one minibeast (e.g. oak tree, caterpillar, blue tit, sparrowhawk)? Can they build a more complicated food chain that has minibeasts at multiple levels (e.g. dead leaves, woodlouse, ground beetle, wolf spider)?

Use the recording sheet to look at which minibeasts were found in different microhabitats. For example, woodlice found under a dead log, compared to caterpillars found on leaves. What can the class infer from this information? Can they make a link between where things are found and what they eat? Do they notice any adaptations related to where they live? For example, the woodlice under the log are protected from predatory birds. The caterpillar on the leaf is not, but its colour might help it camouflage.

Think about different roles carried out by minibeasts. Did you see any flies or bees on flowers? What were they doing? Why is it important? What about the woodlice, what role do they play in the ecosystem? Could our ecosystem function successfully without minibeasts?