

Creepy Crawly Catalogue – Activity

Subjects: Life Sciences, Adaptations, Insects

Duration: Prep: 10 minutes; Activity: 20 minutes

Skills: Observation, Experimentation, Critical Thinking, Note Taking

Next Generation Science Standards: Variation of Traits, Biodiversity

Objectives: Students will understand how scientists classify animals according to similarities and differences. Students will understand the characteristics of arthropods and insects.

Materials:

Arthropod Photos or Plastic Figurines

Blackboard/Whiteboard or Paper for Lists

Background:

Scientists classify animals into groups based on their similarities and differences. The scientific study of classifying animals is called systematics. Scientists who study insects are called entomologists. Insects are in a group called arthropods, which also include spiders, scorpions, millipedes, centipedes, crabs and lobsters. Arthropods have an exoskeleton (a hard skeleton that surrounds their body), a segmented body plan, jointed body parts (legs, antennae, and mouthparts), and are bilaterally symmetrical (the right side of their body is a mirror image of the left side). Insects have three body segments: the head, thorax, and abdomen. They have compound eyes and antennae on their heads. On the thorax are three pairs of legs and wings. Insects usually have two pairs of wings but some groups have one or none. For example, all flies have just one pair of wings and ants don't usually have any wings (except for the queen).

Preparation:

Become familiar with characteristics of arthropods and insects.

Activity:

Divide students into groups of 4 or 5. Provide each group with arthropod pictures or plastic figurines. Ask students to sort their pictures/figurines based on any shared similarities (e.g. color, shape, size). Ask students what traits they used to put their pictures/figurines into groups. Explain to the students that this is how scientists classify animals. Tell them that all their pictures/figurines are arthropods. Explain the features of arthropods and that insects are the largest group of arthropods. Ask students to sort their pictures/figurines into two groups: insects and other arthropods. Ask students what traits helped them to decide which pictures/figurines were insects. Make a list of the important characteristics of insects.

Extensions:

Describe the other groups of arthropods (Arachnids, Crustaceans, Myriapods (centipedes and millipedes)). Adapt the activity for other groups of organisms, like mammals, birds, reptiles, or amphibians.