WHIPSNADE ZOO
a ZSL conservation zoo

Activity—Classifying Invertebrates

Teaching Instructions

Activity 1—Grouping animals

- Ask students to put species pictures into groups based on similarities and differences and discuss as a class—see if pupils can identify the main vertebrate groups—mammals, reptiles, birds & fish
- If needed, prompt with key features such as fur, feathers, scales etc.
- Introduce that all animals can be split into the two most basic groups—those with backbone (vertebrates) and those whithout back bones (invertebrates)

Activity 2—Introducing invertebrates

- Explain the importance of invertebrates to the world, using the fun facts below.
- Ask students to identify four of the invertebrate images—bee, beetle, ant and butterfly
- In groups discuss what features they have the same (6 legs, 3 body parts, antennae) and in what ways they differ (wings, different colours etc.)

Activity 3—Using a classification key

- Ask students to pick out all the other invertebrate pictures and add them to the four already looked at
- Show them the classification key and explain, using an example, how it can help us work out what type of invertebrate something is—to put it into the correct group.
- As a class, go through each invertebrate and put it into the correct group at the front of class.

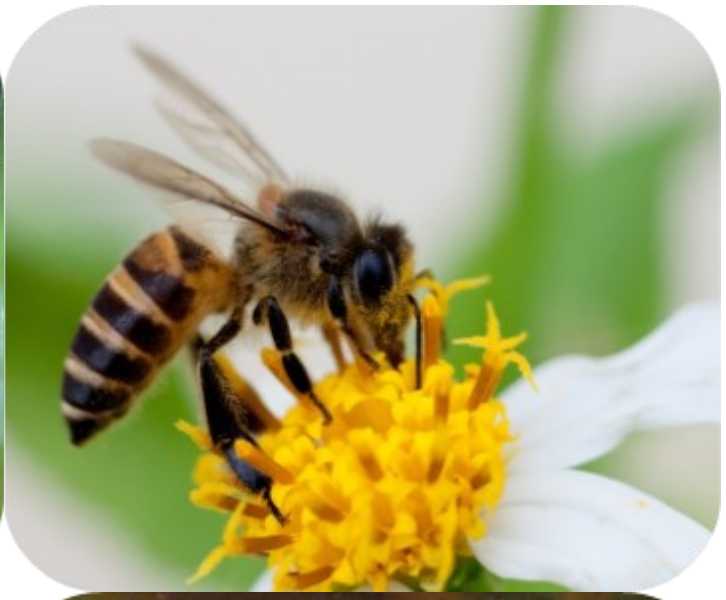
Extension - Get pupils to choose an invertebrate to research and produce a poster detailing it's habitat, microhabitat, diet (herbivore/omnivore/carnivore) and it's adaptations.

Fun facts

- 80% of the world's known species are invertebrates
- They form the basis of numerous food chains: e.g. 80% of plants rely on invertebrates for pollination
- One pipistrelle bat will eat around 8,000 insects in one evening.
- Some look very similar, some look very different. One thing they all have in common is that none of them have a spine/backbone

Key words

Classification—grouping living things into categories based on shared features
Vertebrate—Animal with a backbone
Invertebrate—Animal without a backbone
Mammal– Animals covered in fur or hair that give birth to live young
Reptile—Animals covered in dry scales that lay leathery eggs
Fish—Animals covered in wet scales that lay jelly-like eggs
Bird—Animals covered in feathers that lay hard eggs



Woodland Invertebrates

Classification Key

Does it have legs?

YES ← → **NO**

Does it have 6 legs?

YES ← → **NO**

INSECT

6 legs, antennae, 3 body parts,
some have wings.

Is the body split into many parts?
(you might see lines going across the body)

YES ← → **NO**

ANNELID

No legs,
soft & segmented bodies.

MOLLUSC

No legs, soft bod,
some have shells.

Does it have 8 legs?

YES ← → **NO**

ARACHNID

8 leg,
no antennae
2 body parts
no wings.

Does it have more than 20 legs?

YES ← → **NO**

MYRIAPOD

Lots of legs, lots of
body parts.

CRUSTACEAN

14 legs, body in segments

Invertebrate summary cards

Mollusc

Snails

Soft, slimy body and hard coiled shell

Slugs

Soft, slimy body but does not have a hard coiled shell

Arachnid

Legs: 8

Body divided into two parts– head & abdomen

Harvestmen

Long thin legs

One body part — round or oval

Worms

Earthworm (annelids)

Long thin body divided into segments

Crustacean

Woodlice

Body divided into many segments, 7 pairs of legs, oval body, can roll into a ball

Myriapods

Centipede

Long thin body divided into segments, at least 15 pairs of legs

Millipede

Long thin body with 2 pairs of leg on each segment

Insect larvae

Most insects reproduce by laying eggs. The young that hatch from these eggs are either larvae (looks different from adults) or nymphs (smaller versions of the adult)

Butterfly & Moth

Beetle larva

True fly larva (maggot)

Insects

Bees, wasps and ants

Legs: 6

Long antennae

See-through wings

Most have narrow waist

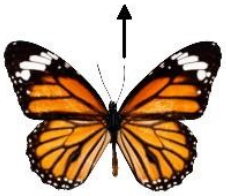
Bees are often hairy, whereas wasps and ants are not hairy.

Ants usually do not have wings

Butterflies and moths

Legs: 6

Long antennae



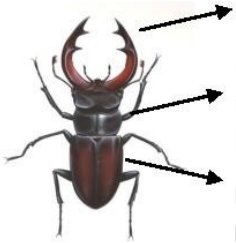
Two wings on each side, usually col-

Butterfly— usually flies during the day, rest with their wings closed

Moth—usually fly at night, feathery antennae, rest with wings open

Beetles

Legs: 6



Pincer– shaped

Wing cases meet in a straight line to make a T shape

Hard forewing cases to protect wings

True bugs

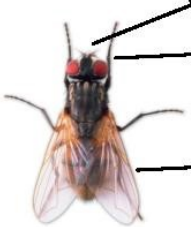
Legs: 6

Wings usually meet in an X– or Y– shape

Not true for aphids

True flies

Legs: 6



Short antennae

Large eyes

One pair of see-through wings

Cricket, grasshoppers, earwigs

Legs: 6

Crickets have long antennae

Grasshoppers have short antennae

Earwigs have a pair of pincer-shaped clasps