

Caldecott Park

Bug Hunt



Teachers' notes





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How to hunt...

Equipment needed

- Plastic beakers two pots per pair of children one labeled dry, one labeled wet
- Paint brushes
- Two small litter trays or Tupperware boxes, one marked wet, one marked dry
- Magnifying glass
- Identification keys
- Pens and pencils
- Insect tweezers
- Drawing paper
- Labels

Step 1

The first thing to do is to set boundaries. Kids can get carried away and wander off on the hunt for bugs.

Step 2

Group together the kids and talk about what a mini beast is. Try to get the information from them. Inform the children not to put their hands into holes or places where they can't see. You never know what might be hiding!

Step 3

Working in pairs and ensuring each pair has a two pots (one for dry insects and one for wet insects), brush, insect tweezers and a magnify glass. Pairs are to look for insects within the boundary and GENTLY brush dry bugs into the dry pot and wet bugs into the wet pot. Teachers should go round and ask children where they think they will find bugs e.g. under logs, stones, wet leaves etc.

Note: There should be no more than three bugs per pot.

Step 4

After 10 to 15 minutes gather the children around the two trays and get them to put their bugs in the correct wet or dry tray i.e. worms are a wet bug and spiders are dry bugs. Once there are a selection of bugs ask the children to use the identification keys to see if they can name them.

Step 5

Ask the children to draw a minibeast using the worksheet provided, and get them to think about number of legs and eyes etc. Conduct a survey using the worksheet provided. You can either just tick or record the number of minibeasts seen.





When the bugs have been collected ask the children questions such as:

- Where did you find it?
- What season is it?
- Were there any other bugs around? (Similar or different ones?)
- What colour is it?
- Does it have any distinctive features?
- How many legs does it have?
- Does it have wings?
- How many eyes does it have?

Step 6

At the end of the bug hunt emphasise the importance of returning them to their habitat 'back into nature'.





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Introduction

Animals include many different kinds of creatures including insects (minibeasts). Insects are invertebrates, which lack backbones. Ninety-five percent of all animals are invertebrates. Some, like worms, have soft bodies with no bones at all. Others, like snails, have soft bodies, but carry a hard shell for protection.

Soft-bodied invertebrates that live in water or on land are grouped as mollusks.

Invertebrates that have tough coatings on the outside of their bodies (exoskeletons), jointed legs, and a segmented body are called arthropods. Insects, spiders (arachnids), centipedes/millipedes, sow 'bugs' (land crustaceans) are all arthropods.

There are over 900,000 species of insects, which makes them the biggest group of arthropods. Insects have distinctive features, which include: three body parts (head, thorax, and abdomen), eyes, mouth, antennae, six legs, and most of the adults have wings. The young do not look like the parents.

Note: for the purposes of this activity it is termed "bug hunt" but as you will see not everything you catch is a bug or insect.

All insects are found under the Insecta class, which includes over a million species that have been cataloged and more being discovered on a regular basis. Bugs are part of the Insecta class and found under the order name of hemiptera and the suborder name of heteroptera. "Bugs" are a specific order of insect and set apart from other orders of insect by two distinctive features: their mouths and their wings.

Identification

"True bugs" have a mouth that is shaped like a straw or needle, which is called a stylet or rostrum. They also have a very specific membranous wing, which is thick and darkly colored where it connects to the body, but becomes thin and almost transparent toward its end. Insects that do not have a rostrum mouth or membranous wings, such as ants, termites, butterflies, mosquitoes, fleas and lice (just to name a few) would not be considered "true bugs" as they do not have one or both of these features.

Remember:

- **Insects** - 6 legs, 3 segments (eg: beetles)
- **Arachnids** - 8 legs (eg: spiders and harvestmen)
- **Gastropods** - 0 legs (eg: slugs)
- **Myriapods** - many legs (eg: millipedes)
- **Annelida** (eg: worms)
- **Crustaceans** (eg: woodlouse)





Bugs are essential for life and play a vital role in keeping our ecosystem going: Pollinating flowers and crops, aerating and nourishing the soil, providing food for other wildlife and generally maintaining the balance of nature.

Predators vs pollinators

Many bugs can be divided into two categories, either predators or pollinators. Predators are beneficial insects as they help keep down numbers of other bugs who can hurt the eco-system.

Pollinators help flowers to reproduce. Many species of bee, wasp, moth and butterfly are pollinators, feeding on the nectar of brightly-coloured flowers. As they travel along they transfer pollen from one plant to another, helping them to reproduce.

Bugs are top garden pest control agents.

-Ladybirds eat about 5,000 aphids in a lifetime.

-Ground beetles like nothing better than munching on juicy slugs

Woodlice, worms and millipedes aerate the soil and break down organic matter to nourish the earth so we can grow strong plants and juicy fruit and vegetables.

Ask the children if they can find pollinators and predators during their bug hunt. What kinds of predators do they see, and what is their role in the insect – and the human – world?

Camouflaged Bugs

Many insects are able to camouflage themselves in order to make themselves less visible to predators. A praying mantis and stick insect are just two examples of this. See how good your eyes are by looking for camouflaged insects during your bug hunt.

Where to look?

- The best places to look for bugs are in small cracks, under objects like pots, logs and rocks and in leaves. Remember, some bugs move fast
- Caterpillars are usually found under leaves and are sometimes hard to spot!
- Now you see it, now you don't. Be sure to really study the area you are searching. Some bugs have excellent camouflage which means they blend in very well. Spending extra time looking at an area may reveal bugs you didn't even realise were there.
- Up, Down, All Around! Remember bugs don't just live on the ground. Look on tree branches, under leaves on trees, on the eaves of houses and even in the sky around you.





Draw your minibeast

Draw your minibeast in the space below:

My minibeast is a and lives

My minibeast has legs and eyes. My minibeast has wings: Yes / No

Circle the words that best describes your animal:

- | | | | |
|----------|-----------|-----------|-------|
| slithers | wiggles | crawls | swims |
| walks | flies | predator | prey |
| omnivore | carnivore | herbivore | |





Which creatures did you find?

Put a tick in the right box as you find each creature :

Name	Seen
<i>Minibeasts</i>	
Spider	
Harvestman	
Woodlouse	
Centipede	
Millipede	
Slug	
Snail	
Worm	
<i>Flies</i>	
Cranefly	
Hoverfly	
Bluebottle	
Bee	
Wasp	
Butterfly	
Moth	
<i>Beetles</i>	
Ladybird	
Weevil	
Ground Beetle	
Soldier Beetle	
<i>Bugs</i>	
froghopper	
Aphid	
Shield bug	
Plant bug	
Grasshopper	
Ant	
Insect young, grubs or caterpillars	
Earwig	

