



Getting Buggy

What are Bugs?

Bug is a common name, like slang, that we have given to **insects**, which are a type of **invertebrate**. 'Invertebrate' translates to something with no spine (or vertebrae). If you feel along your back, you have a long column of bones called a spine, which holds you up - insects don't have bones, or spines, and so they are held together by a shell on the outside of their body called an **exoskeleton**. Insects are the most diverse set of creatures on our planet that we can see with the naked eye. Scientists have already discovered 900,000 different insects, but they estimate that there are at least 2 million species on the planet! They think that there are at least 200 million insects for every 1 human on the planet - we're surrounded! And lucky for us - while some insects may be seen as a pest, more are really important for things like pollinating our flowers, providing a food source for other animals, helping create soil and cleaning our planet!



Here are some of the kinds of bugs you may find in your backyard:



Ants are insects with 6 legs and 2 antennae on their heads. Ants live in colonies, like families. These colonies can range from 10 individuals to up to millions of ants living together! They may be small, but they are mighty!



You may find a lady bug! Lady bugs are a type of beetle which are in the coleoptera insect order. They also have 6 legs and 2 antennae on their heads. Some lady bugs are yellow or orange. Even though they are called lady bugs, some are male and some are female - you can't tell the difference by looking at them.



Dragonflies are just starting to come outside these days. They are also insects with 6 legs, but they also have 4 transparent (see-through) wings! See if you can find a dragonfly and look for the detail lines in its wings.



Butterflies are also just coming out! You may have noticed caterpillars crawling around too! Once they eat enough, caterpillars change into butterflies through a process called **metamorphosis**! Butterflies then use their wings to fly around and drink nectar from flowers. More flowers in your garden, will mean more butterflies!



Keep a look out for bees! Bees also live in groups like ants, but they live in hives. Sometimes they build their own hives, but a lot of times they live in holes in trees, underground or in boxes built by humans. Listen for the "buzz" as you explore.



Keep a look out for flies. Flies are one of the most common flying insects around in the diptera insect order. This is because their eggs only take 1 day to hatch! See if you can zoom in on their big eyes - which are really thousands of little eyes.

EXPERIMENT 1: Bug Hunt

Use your magnifying glass to study bugs in your backyard. A person who studies nature is called a **naturalist**! Find a safe place outside to look at the plants, or the grass and see what is crawling around right under our feet!

You will need:

- A small clear plastic container (like from salsa or hummus)
- Magnifying glass (optional)
- Bug Net (optional)
- Observation Journal

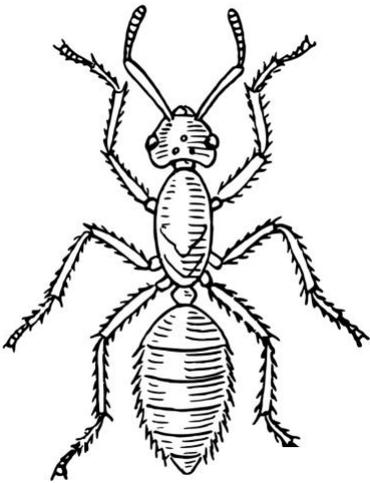
Instructions:

1. Find a small plastic container, like a Tupperware, and head outside.
2. Look under leaves, and in the grass for insects.
3. When you find one, gently pick it up and transfer it into your dish. **Be careful to not squish it.**
4. Place the container on the ground so that the insect can crawl out and away on its own if it can.
5. While the insect is inside the container, begin to observe it. Use a magnifying glass if you have one.
6. In your observation journal (remember you can learn to make one [HERE](#)), make notes on the insect's size, color and shape.
7. When you're done, try draw a quick sketch and write the name of the insect if you know it already!
8. Now get back out there and find a new insect!

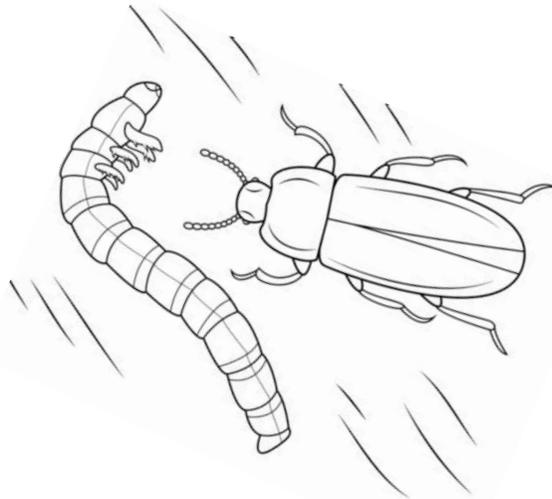


CRAFT 2: Color what you find!

Did you find any of these insects when you were doing your bug hunt? Print this page and try and color them in to look like what you found in nature!



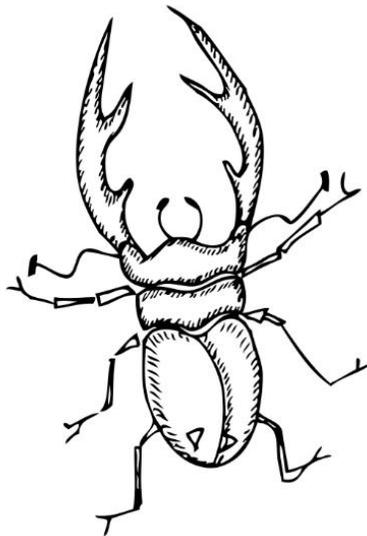
Ant



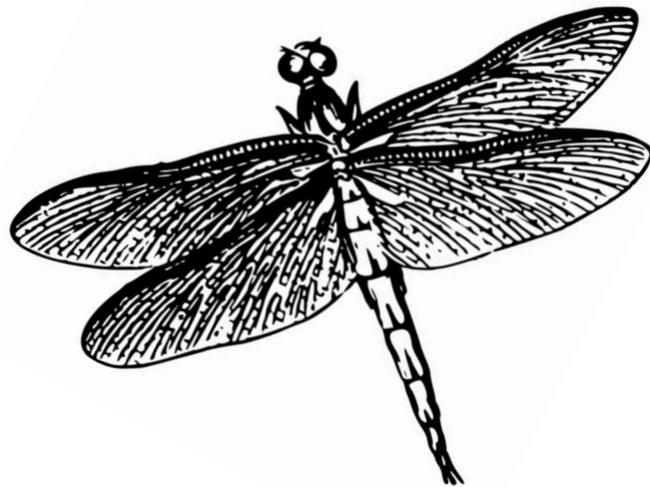
Beetle and
Larvae



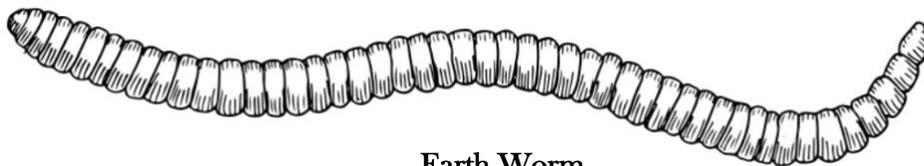
Bee



Beetle



Dragonfly



Earth Worm