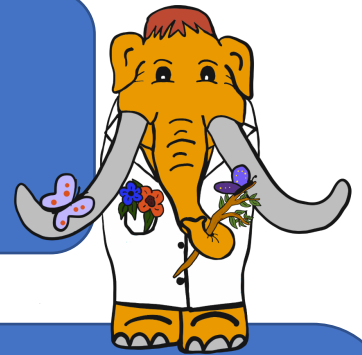


Science Saturday @ Home

What's a Bug?



Gathering Supplies:

What's a Bug? Printable Sheets
Scissors
Colored Pencils
Glue

How To Steps:

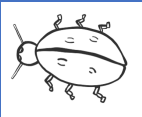
Let's take a look at different types of bugs and discover the difference between Insects and Arachnids! If you don't have access to a printer you can make your own chart on a piece of paper and get creative, drawing your own bugs. Use the Bug Sheet to get information on different insects and arachnids.

1. Print out the bug sheets, single sided. Color in the different bugs.
2. Cut them out and see if you can figure out if they are an insect or an arachnid. Glue them in to the group they belong to.
3. Remember that both insects and arachnids have exoskeletons. This means that they don't have bones inside but instead have a hard covering over their body protecting them from the outside. This makes both of them part of a group of animals called Arthropods.
4. Use the information in the Did You Know section to identify the bug and learn a little bit more about them!

Did You Know?

Scientists sort all living things into groups based on shared similarities in characteristics. This classification system is called taxonomy. Both arachnids and insects are in the same phylum and are called arthropods but are in their own classes, order, family, genus and species based on more specific shared similarities. This is how we get the scientific name for individual species, a honey bee is in the genus *Apis* and the species group *mellifera* so their scientific name is *Apis mellifera*.

Let's find out more about the bugs that we sorted!



Beetles are in the class Insecta and the order Coleoptera. It is the largest of the insect orders with 400,000 different species. The front pair of wings are hardened to form a wing-casing that protects the second pair of wings. Dermestid beetles are used in the museum to clean meat from bones of animals.



Butterflies are in the class Insecta and part of the order Lepidoptera along with moths and skippers. There are 180,000 different species of Lepidoptera. Lepidopterans go through complete metamorphosis, from egg to larva or caterpillar to pupa before becoming an adult. Most of the adult species will have 2 pairs of wings that are covered in small scales. They also have a straw like mouth called a proboscis that is used to drink nectar from flowers for food.



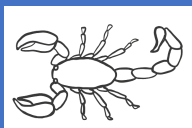
Bees are in the class Insecta and the order Hymenoptera along with wasps, and ants. There are 150,000 different species. Bees are very important for their role in pollination in the growing of flowers and plants, also in the production of honey and bee wax.



There are over 12,000 ant species world wide. One ant can carry over 50 times its own bodyweight and work with other ants to carry larger objects.



Spiders are in **the** class Arachnida and in the order Araneae. There are over 48,000 species of spiders, for a total of 8 to 12 trillion spiders on Earth! There are even fossils of spiders that paleontologists study to find out more about ancient environments. Spiders are known for spinning webs to catch their prey but not all spiders spin webs.



Scorpions are in the class Arachnida and the order Scorpiones. There are over 1,750 different species of scorpions. They are able to live in harsh environments and can slow their metabolism to require little food. Their tail usually curves over their back, ending with a venomous stinger that is used to paralyze their prey along with providing protection.



Ticks are in the class Arachnida and the order Parasitiformes. They are in the same subclass, Acari, as mites. There are over 800 species of ticks. They have one body segment unlike insects that have three. They are small parasites that feed on the blood of animals and can carry diseases that are dangerous to humans.