


Arthropod Pitfall Trapping (for all ages!)



Arthropods are animals that do not have a backbone (called invertebrates), have a protective shell covering their body (called an exoskeleton), and have segmented body parts and jointed limbs. BEMP traps arthropods, like roly polys and ants, in the bosque three times a year to learn about the health of the ecosystem. **This activity will show you how to create your own arthropod trap to see what is in your yard or neighborhood!**

Create your own arthropod pitfall trap:

Materials:

- 1 plastic cup
- Flat piece of wood or cardboard about 6 x 6 inches
- 4 medium rocks about 1.5 inches tall

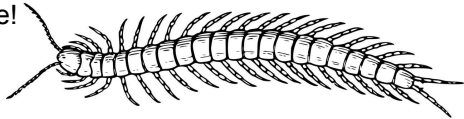


Procedure:

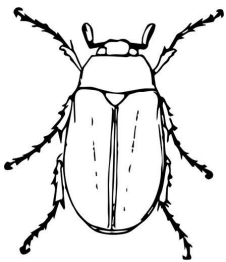
1. Dig a hole deep enough for the cup to be placed in the ground so that it is level with the surface. Check with your family to make sure it's in a spot where no one will trip!
2. Put a rock under each corner of the cardboard or wood, like the legs of a table, to provide shade and cover for arthropods that fall into the trap. If you use a piece of cardboard, make sure to add another rock on top to keep it from blowing away.
3. **Leave the trap open for 48 hours (2 days).** After 48 hours, lift the cover away from you in case there are arthropods that can bite. Take the cup out of the ground, dump the arthropods into a clear container or plastic bag, and fill the hole back up.
4. Use our guide below to help you identify your arthropods. You can record, sketch, or take photos, but remember to release your arthropods outside afterward!

Take it to the next level! You can create an experiment with your pitfall traps to see what type of food items attract different arthropods. For example, set out 3 pitfall traps and place a food item in 2 of the traps. These can be scraps of food like an apple core or a piece of bread. Follow the same procedure as above.

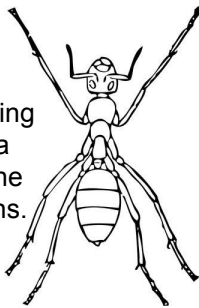
Centipedes (Class: Chilopoda): look a lot like millipedes, but they are flatter with their legs off to the sides. Careful, they bite!



Beetles (Order: Coleoptera): protective wing covers called elytra.

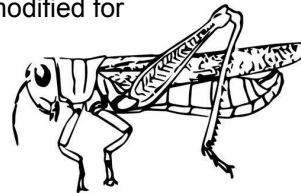


Ants (Order: Hymenoptera): stinging insects, many have a thin waist between the last two body sections.

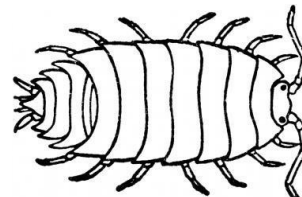


Crickets and grasshoppers

(Order: Orthoptera): large back legs modified for jumping.



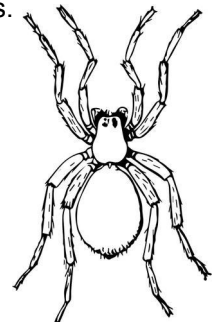
Roly Polies (Order: Isopoda): 14 legs and are land dwelling crustaceans.



Millipedes (Class: Diplopoda): look like drinking straws with *many* many legs.



Spiders (Order: Araneae): eight legs, two main body sections and spinnerets on the end of the last body section used for making webs.



BEMP Backyard Arthropod Guide:

- Insects are arthropods that have 6 legs. *Circle all of the insects.*
- Arachnids have 8 legs. *Put a star next to the arachnid.*
- Myriapods and isopods have more than 8 legs. *Put a triangle next to these arthropods.*