

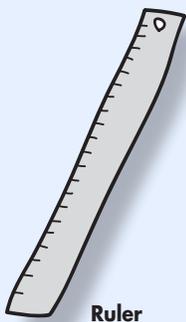
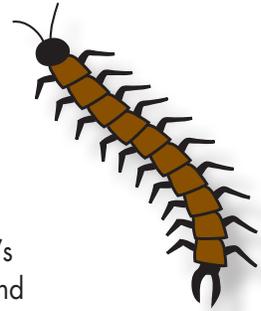


Backyard Detective

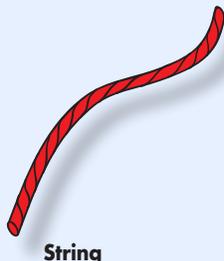


Find What You Need..

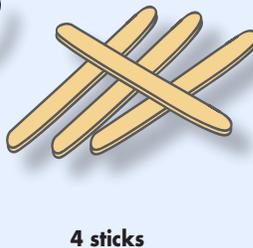
- Ruler
- String
- 4 sticks – popsicle sticks work well
- A fork
- Tweezers
- An outside space where it's OK to dig into the ground
- A magnifying glass



Ruler



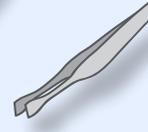
String



4 sticks



A fork



Tweezers



Magnifying glass

What's living in your yard or park?

When you're playing in the grass, did you ever think about what life forms you might be stepping on? If you take a close look at the dirt, you may find evidence of a surprising number of organisms. You might find insect *exoskeletons* (thin shells) or other bits that bugs left behind. You might find *worm castings*, or the undigested material that comes out of a worm. (Yes, it's worm poop, but it's not stinky and it's great fertilizer!) You'll probably find roots and stems of plants that live in this soil. You may see leaves, seeds, or other parts from other plants that live nearby. Who knows what else you will find on your patch of dirt? Take a look and see!

Tip: Worm castings look like this. You'll have to look closely to find these little lumps in the dirt.

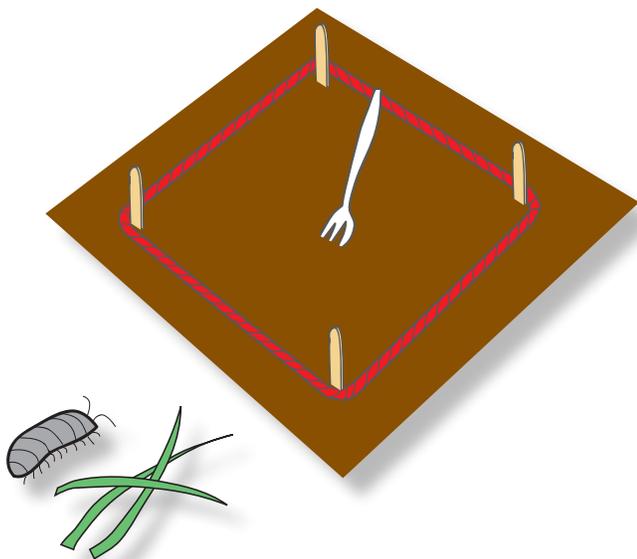


Fact:

There are about 1,000,000 known species of insects on Earth, though some scientists think there may be many more. Insects are found in almost all land ecosystems.

Activity Instructions

1. Measure and cut 4 feet of string. Tie it into a loop.
2. Ask an adult to help you find a safe outdoor spot to explore. Make your loop into a square and lay it over the ground – you will have a square that measures 1-foot on each side. Push your sticks into the ground at the corners of the square to hold it in place.
3. Gently begin to dig into the ground with your fork, scraping through the grass or ground cover. Dig slowly, because different things may be found at different layers – and you will only go down an inch or two in total.



4. When you find evidence of an organism – a blade of grass, a seed, an exoskeleton – set it aside for later study.



5. Go down about 2 inches, or until you have found about 30 specimens, whichever comes first.
6. Count how many different organisms you found evidence of. Study each one with a magnifying glass and see what you can observe. Can you identify any of the organisms? It may be a challenge to figure out what some things are. For example, a decaying moth wing could look a lot like part of an old leaf. A grasshopper leg could be mistaken for a tiny twig.

Tip: For help in identifying the organisms, go online or to the library and research common species for your area.

7. Clean up your digging site so it looks about the same as when you started. And wash your hands!
8. **A fun Challenge:** Try this activity again in a different environment – if you dug in a park the first time, for example, try a lawn. Compare the number and type of organisms you found.

Brain Blaster:

Organisms that live in an area interact with one another - some eat others, for example, and some fertilize the ground for plants to grow.

Those interactions create an ecosystem.

What role do you think the species you found play in your local ecosystem?

Conclusions

Were you surprised by either the number or type of organisms you found? Why? Did you find more whole organisms or parts? Why do you think this is true? What would you expect to find more of, plants or animals (flora or fauna)? How do you think each of these organisms got there in the first place? Did they crawl, tunnel or get blown in?

We call this activity “Backyard Detective” because you have to use all your powers of observation, just like a detective!



Kids' Science Challenge
Science Projects
are presented by
the award-winning
radio series,
Pulse of the Planet



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