NATURE KIDS

SCIENCE PROJECTS JUST FOR FUN.

Let's go on a real "Scavenger Hunt"

Most times when we go on a scavenger hunt, WE are the scavengers, hunting for a list of odds and ends we have been given. This is different. On this scavenger hunt, we are hunting FOR scavengers, Nature's scavengers that is. Scavengers are the ones that eat up all the leftovers, the dead leaves and twigs that fall off the trees, egg shells left after a tiny bird hatches, even the bodies of animals that have died. This is a very important job in nature. What if they didn't eat up all that stuff and recycle it - it would be piled high all around us! Who are these heros who keep the world of nature clean? Most are way too small to see, but those we can find are some of our favorite creepy crawlies: earthworms, doodlebugs, ants, termites, etc.

What You Need:

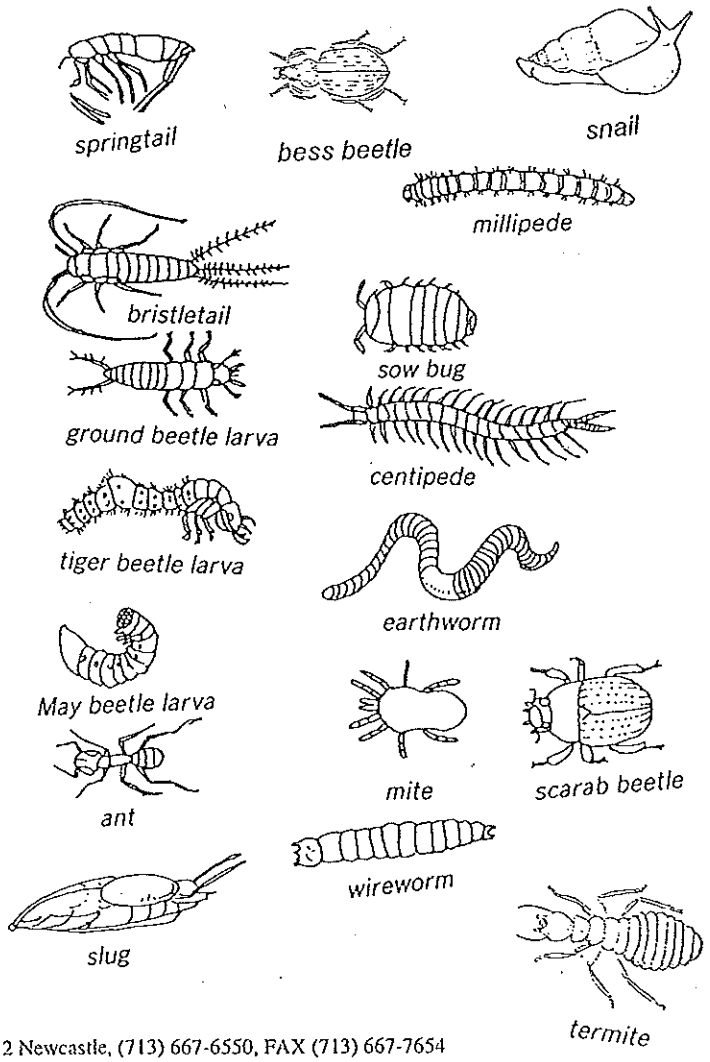
What do you need for this "Scavenger Hunt?" Not much: a garden trowel, a bucket, a big piece of paper or part of an old sheet. Don't forget to wear some old clothes that you can get down on the ground in.

The Plan:

Find a quiet spot. Around the base of a tree or near the edge of a building, a rock, or a log, are all good places to start. Using your fingers or the trowel, scrape away the top layer of leaves or dirt. If you see some movement, scoop up some and dump it in your bucket. If the first spot you try seems dry and quiet, move on. Places that are dark and damp are very popular with scavengers and their buddies, the decomposers. You might look for fungi to clue you in to a good spot.

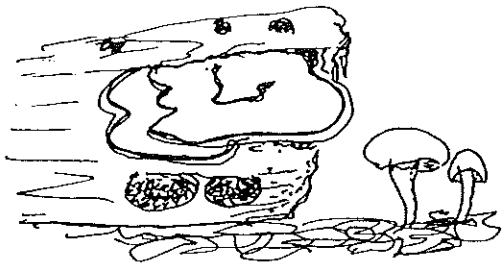
When you have a few scoops of dirt, leaf litter, etc. in your bucket, find a flat spot to spread out your sheet or paper. Then sprinke small amounts of your dirt on the paper and watch what hops out.

What to look for:



TEACHER'S CORNER

by Jenni Malone



Facinating Fungi (or, there's a fungus among us)

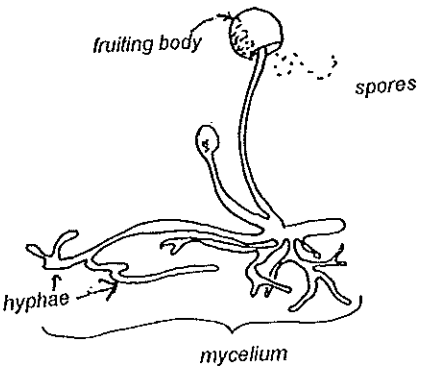
While we rarely have the fall color display typical of the northeast, our autumn rains can bring about our own particular brand of color: fungi. From flat, hard, white shelf fungus on dead logs to orange-capped mushrooms rising out of the leaf litter, fungi decorate our yards, parks, woods, and roadsides. Fungi compose a fascinating group (officially, the kingdom *Myceteae*) in the web of life. Fungi are separate from plants because they do not contain chlorophyll and cannot make their own food through photosynthesis. They get their nutrients by breaking down organic matter or by obtaining it directly from higher plants. Those fungi that attack living plants and animals are *parasites,* those that trade nitrogen and phosphorus with green plants for carbohydrates and moisture are called *mycorrhizal fungi.* The last group are *saprophytes,* sometimes called *decomposers.* These fungi obtain their nutrients from dead leaves and sticks, etc. and are usually the ones which spring into view shortly after a welcome rain.

The part of the fungus that we see is not nearly the whole thing. It is the *fruiting body* which contains the *spores:* cells from which new fungi can grow. The body of the fungus is the *mycelium.* It is a light-colored mass of tiny stringlike cells that are called *hyphae.* This is the part that breaks down the organic matter to provide for the growth and reproduction of the fungus. As the mycelium grows, the hyphae secrete enzymes that help to break down complex organic molecules into simpler ones, which can be absorbed and used by the fungus. Thus, fungi play a vital role in releasing nutrients for higher plants and animals to use. They also return some carbon dioxide to the atmosphere.

After some period of growth, varying among species, the mycelium will produce a characteristic fruiting body, a bracket, shelf, knob or mushroom, which contains the spores to start the next generation going. Each type of fungus produces its own particular fruiting body. A casual stroll a week or so after a rain can reveal a wide variety in even a small area: white, multi-leveled shelf fungus on logs; dark brown fuzzy disks nearby; gray, white, or orange mushrooms popping out of the leaf litter, and more.

These fungal decomposers are part of a team of mostly invisible scavengers and decomposers which live on or under the soil. The primary players are fungi and bacteria, aided by a variety of "litter animals:" earthworms, millipedes, centipedes, doodlebugs, ants, termites, and various insect larvae (most of our favorite "creepy crawlies").

A wonderful way to round out an exploration into food chains is to go on a "scavenger hunt" to look for "scavengers," of course. Check out the *KidsPage* for one approach.



Some reading resources on fungi:

for adults

Metzler, Susan, et.al. Texas Mushrooms - a field guide. Austin: University of Texas Press, 1992.

for children

Heller, Ruth. Plants That Never Ever Bloom. New York: Grosset & Dunlap, 1984.