

Today's Lesson on Hidden Habitats!

Have you ever noticed that when we talk about habitats, we talk about the obvious animals that we can see easily? Birds, rabbits, people etc... They are cool for sure. But there is a whole world of stuff that we don't see unless we are looking for it.

Nature has no recycling bin, therefore it has to take care of all its trash. Can you imagine if a tree fell down and it just stayed there? Our woods would be filled with all sorts of piled up dead plants, trees, and animals... but its not!

Why? Because of the Forest FBI! No, its not a secret agency of trees... it is Fungus, Bacteria and Insects. They may not be the most glamorous woodland creatures, but they are useful! Today you are going to learn some pretty cool facts about the Forest FBI. So let's go!

Your Challenge: Go out into your backyard, or woods nearby. (You can always go to the Kennebunkport Conservation Trust, there are lots of woods there!) Find a dead stump in the woods and observe it. I mean really observe it, peel away some of the bark, or perhaps there is moss. If you have a magnifying glass use that! Then find another spot and pull up all the wet leaves, get all the way down to the forest floor, and see what you can find. Fill out the papers below and staple them into your notebook, or simply write the answers in your Nature Notebook!

Most important...HAVE FUN!!!

Name: _____

Life and Times of Rotting Logs, Decomposers and other Creatures

Observations of a Rotting Log:

Draw a picture of 1 thing you found:

Observations Under a Pile of Leaves

Is there anything different in the leaf pile than in the log?

List 3 things you found:

- 1)
- 2)
- 3)

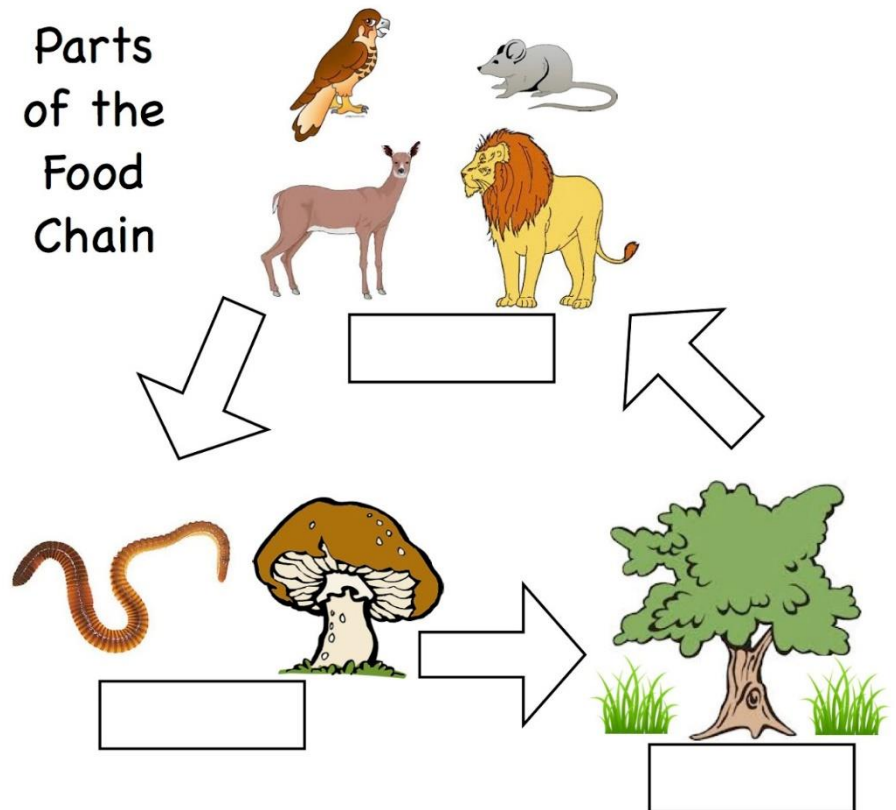
FUN FACTS ABOUT FUNGUS!

- ❖ Fungus can both cause and cure diseases!
- ❖ Fungus has its own kingdom now. It used to be called a plant, but it is more like an animal, but not quite.
- ❖ Athletes foot and ring worm are fungi that humans get
- ❖ The Destroying Angel Mushroom is poisonous enough to kill a person
- ❖ The oldest mushroom found in amber is from 90 million years ago!!! (BUT- scientists recently found a fossil dating back more than 420 million years!!!! It was called **Prototaxites**, it was 3 feet tall laying down, but if it was standing it would have been 30 feet high, it would be the tallest organism on land... and it was a giant fungus!)
- ❖ Some of the oldest living mushroom colonies are fairy rings, growing around Stonehenge ruins in England.
- ❖ The spores of mushrooms are made of **chitin**. The hardest naturally made substance on Earth! Because of this, some scientists believe that spores are capable of space travel!
- ❖ Under the right conditions, Mushroom spores can sit dormant for decades, or even centuries and still grow!
- ❖ Mushrooms are useful not only as food and medicine, but some are being used to absorb and digest dangerous substances like Oils, Pesticides, and industrial waste where they threaten the environment.
- ❖ Yeast = a fungus used to make bread
- ❖ Penicillin= made from blue mold and is a powerful medicine.
- ❖ Fungus is used to make cheese!

Why are Decomposers so Cool??

Because without them, we would be buried in the waste of dead animals and plant substances.

They are nature's recyclers and take waste and make it nutrient rich soil for more plants to grow to feed animals.



Fun Facts about Bacteria!

- ◆ Bacteria are usually only 1 cell, they DO NOT have chlorophyll (which is the green pigment that allows plants to make food from the sun)
- ◆ Other than Viruses they are the smallest living things on earth! (some are so small that if a million of them were laid out in a line, **they would not even measure 5cm**)
- ◆ They are found everywhere: in the air, soil, water, and even inside your body and on your skin!
- ◆ Bacteria break down dead organic matter (plants and animals)
- ◆ Some bacteria are good bacteria that help us. There is bacteria in our digestive systems helping us break down our food.
- ◆ Bacteria is also used to make: Cottage Cheese, Buttermilk, yogurt, vinegar and sauerkraut.
- ◆ Bacteria have been around since the beginning of the earth.

You may have up to 1 million bacteria in your body right now!

The Clean-Up Crew: Scavengers and Decomposers

Not all plants and animals get eaten by consumers. Some are lucky enough to live out their lives and die of old age. Others get sick or suffer an accident that kills them. What is left is the dead plant or animal filled with the energy from the food it ate or made. So, what happens to that energy? **Nothing in nature is wasted and that includes dead stuff.**

When an animal dies, its body begins to break down. In other words, it rots, getting stinky, gross and pretty disgusting. But all that yucky stuff is just another link in the food chain as energy is passed along to others that can use it.

The first members of the clean-up crew are the **scavengers**. A familiar scavenger is the turkey vulture. Scavengers you may have seen include many familiar animals such as coyote, crow, magpie, fox, bald eagle, bears, raven, and even small songbirds such as chickadees.

As the scavengers do their work, the decomposers begin. **Insects** are very important decomposers. Fly maggots, ants, beetles, moths and others continue to break down the dead animal. They eat it, lay their eggs on it (which hatch into larvae that eat it), or chew through it.

Bacteria and fungi continue the process of decomposition until nothing is left, and **all the energy that was once in the animal is used up by other living things**. This all sounds pretty disgusting, but think about a world with no scavengers or decomposers to clean up dead things. Yuck!!

The scavengers and decomposers help move energy through the food chain. **Bacteria and fungi return it to the soil where plants can once again use it**. Consumers use it as they eat the plants or the scavengers and decomposers. Many food chains are created and these food chains become a food web with living things all dependent upon each other for survival.