Canadian Women in Timber

Forestry Facts

Discover your forest IQ

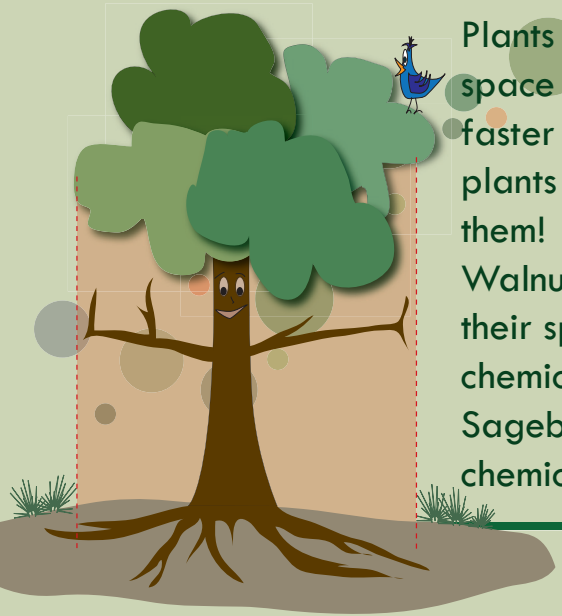
Discover your forest IQ with Splinter

Hello, my name is Splinter. I'm a Pileated Woodpecker. You can easily recognize me because I have a bright red crest on my head.

I live in big trees in the forest. Even if you can't see me, you will know I'm around because my beak makes a loud drumming noise when I look for insects in dead trees.

Let's explore my home together and see how much you know about forests!

Can a tree have an invisible fence around it?



Plants compete with each other for light and space to grow. Some compete by trying to grow faster than their neighbours. Some trees and plants compete by poisoning the soil around them! Biologists call this "**allelopathy**". Black Walnut trees have long been known to protect their space by "poisoning" the soil with a chemical from their roots and rotting leaves. Sagebrush in desert areas also releases chemicals that give the plants space to grow.

Allelopathy

Who are the pioneers of the forest?

Pioneers move into areas where no other people are living, and pioneer trees grow where no other trees are growing. After a major disturbance, like a wildfire, **pioneer trees** begin to grow. These trees require full sunlight and cannot grow under the canopy (shade) of an existing forest. When foresters want to plant and grow these trees they create large open areas that allow sunlight to reach the next generation of pioneers. Common BC pioneers are Douglas-fir and Lodge Pole Pine. Once Douglas-fir trees begin to grow, other trees like hemlock and spruce will happily grow up beneath them.

Pioneer Species

Why are some pine cones glued shut?

Wildfires are a natural part of forest ecosystems. In fact, without fire, some forest types might disappear. Conifer trees produce cones that hold the seeds to grow future forests. Where fires are common, trees like the Lodgepole Pine have **Serotinous** cones that are glued shut. These cones only open to release their seeds when they are heated. This adaptation allows new forests to grow back after a fire. These trees are a pioneer species - they like wide open spaces to grow.

Serotinous Cones

Is your favourite ice cream made with wood?

Can you imagine eating ice cream that had wood in it? What would it taste like? Guess what - most ice cream *does* have wood in it, and it tastes great! A chemical that is extracted from wood, called **hemicellulose,** is used in all commercial ice creams because it keeps the ice cream creamier!! Without hemicellulose, water in the cream would freeze and ice crystals would form in your ice cream, making it crunchy. But don't worry, the wood chemicals have no flavour and are perfectly safe for you to eat!

Hemicellulose

Are there medicines in the forest?

Maintaining **biodiversity** (a wide variety of living things) in our forests is good for your health! Did you know Aspirin first came from the willow tree? The ancient Egyptians first discovered this cure for headaches more than 3,000 years ago. More recently, scientists found a unique chemical called Taxol in the Pacific Yew Tree that can stop cancer tumors from growing. Foresters protect the biodiversity of our natural resources because we never know where the next cure will be discovered.

Biodiversity & Medicine

Who are the caretakers of BC's forests?

BC's forests are cared for by professional foresters and forest technologists. They are trained in the science and management techniques required to sustain our forests forever. That means that we will never run out of trees! There are more than 600 different kinds of jobs you can do in the forest. They include planting trees and helping forests grow, making sure wildlife are healthy, and creating wood products for houses and furniture. Working inside and outside – forestry has a lot to offer!

Forest Professionals

You must be a member of the Association of BC Forest Professionals to practise forestry in BC

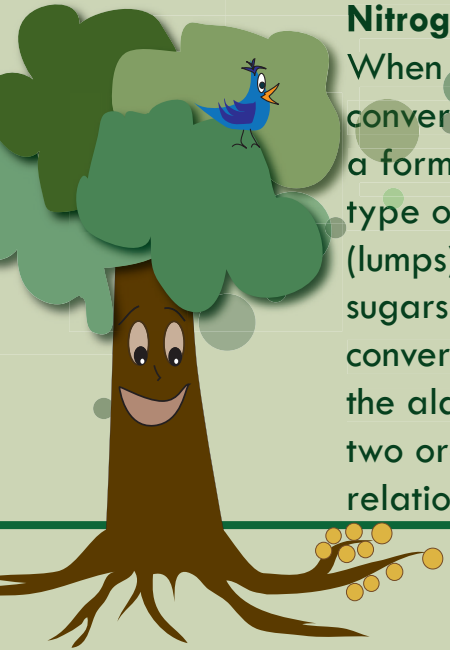
Trees suck!

But only when they drink water.

Trees suck up water, like drinking through a straw - they pull from their leaves all the way down to their roots. On a hot day, some species of trees, such as Red Alder (*Alnus rubra*) are sucking water up so hard that you can actually hear them hiss if you make a small cut in the bark. This process by which trees obtain water from the soil is called **transpiration**.

Transpiration

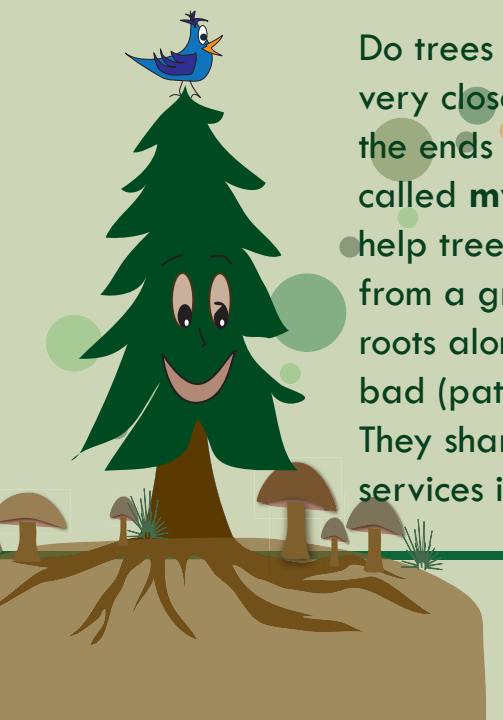
What is teamwork in nature?



Nitrogen is an element that plants need to grow. When nitrogen levels are low, some plants are able to convert nitrogen from the air (air is 79% nitrogen) into a form they can use to grow. Red Alder has a special type of "nitrogen fixing" bacteria that live in nodules (lumps) on their roots. Alder trees feed the bacteria sugars made in photosynthesis. In return, the bacteria convert nitrogen from air pockets in the soil into a form the alder can use to grow. Teamwork in nature (when two organisms cooperate and benefit equally in a relationship) is called **symbiosis**.

Nitrogen & Symbiosis

Can trees have foot fungus?

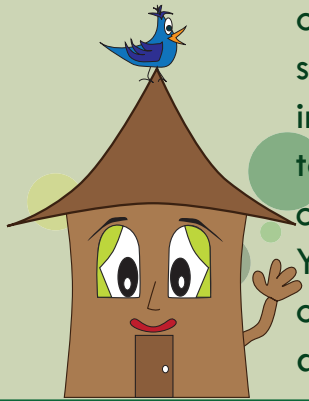


Do trees get foot fungus? If you look at most tree roots very closely or under a microscope you will find that the ends are surrounded by a mass of fungi. These are called **mycorrhizal fungi** (Latin for fungus root). They help trees survive by absorbing water and minerals from a greater distance than the tree can reach with its roots alone. At the same time they protect the tree from bad (pathogenic) fungi. What's in it for the fungi? They share a **symbiotic relationship** trading their services in exchange for sugar provided by the tree.

Mycorrhizal Fungi

Did you know that fungi is another word for mushroom?

Is your wooden house helping to fight climate change?



Trees are helping to combat climate change. They do this by taking carbon dioxide (CO_2), a greenhouse gas, out of the atmosphere and converting it into a long-term storage material that we call wood! Via photosynthesis in leaves, trees turn carbon into sugar, the food they need to grow. When we harvest and build with wood, the carbon stays locked in the wood for a very long time. You probably live in a wood-frame house. The amount of carbon you are storing in your house is equal to the amount of CO_2 produced by driving a car for five years!

Wood & Carbon

How do you know if a forest needs a doctor?

Frogs can show foresters how healthy an ecosystem is and so we call them **indicator species.** Frogs live in water and on land (they are both aquatic and terrestrial) and they can breathe through both internal lungs like we do, and directly through their moist skin in the water. Because their skin provides a poor barrier to toxins in water and air frogs are quickly affected by changes around them and can help foresters determine the health of the ecosystems frogs live in.

Indicator Species

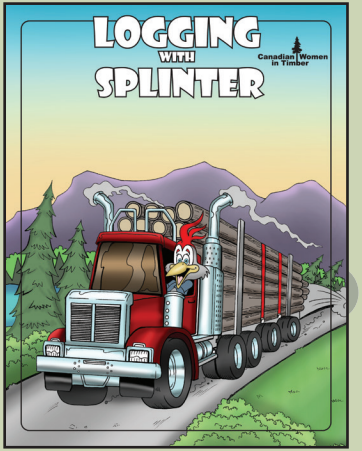
Do trees get cavities?

Dead trees remain standing in the forest for years. Foresters call them **snags** or wildlife trees. Snags provide homes for many forest creatures. Woodpeckers like Splinter use their strong beaks to make big holes or **cavities** in snags. Inside the cavity they lay their eggs and raise their young. In later years, the same hole might be used by small mammals like weasels or racoons. Eventually the tree will fall and new creatures like salamanders and mice will live in the rotting wood.

Snags &Wildlife Cavities

Spend more time with Splinter

Splinter invites you learn more about forests with the "*Fun in the Forest*" and "*Logging with Splinter*" activity books. Check out our website!



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Do you want to learn more about BC's forest sector?

Splinter's Timber Log is filled with a variety of facts and pictures that tell the story of BC's forest sector. You can download it from our website.

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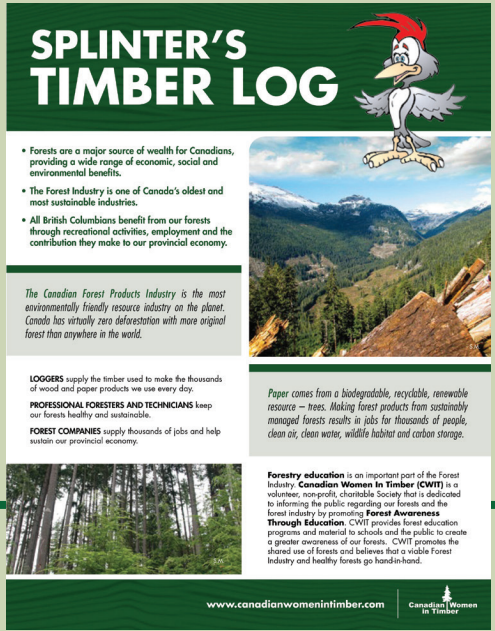

Canadian Women in Timber

Forest Awareness through Education

We are dedicated to informing the public about BC's forests and forest industry by promoting Forest Awareness Through Education.

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WOOD 'N' FROG

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