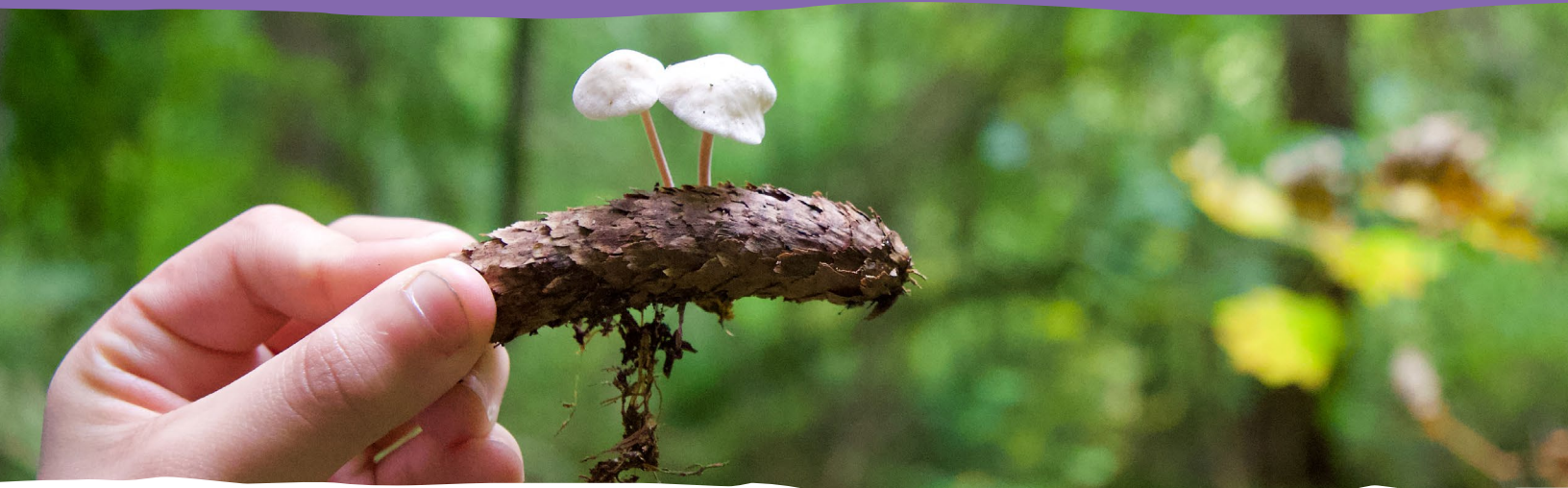




resource room

## Mushrooms are Amazing!



Wild mushrooms are incredibly fascinating and important. If you think they are weird, scary, confusing or wonderfully amazing; read on.

**WRITTEN BY ROSEANNE VAN EE,  
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First off, a primer on mushrooms: they are not plants. **Mushrooms are the “fruiting” spore-bearing, reproductive incubator and dispenser of some fungi species.**

The word mushroom refers to the macrofungi “fruits” that you can see without a microscope. The actual organism that produces the mushrooms is an often huge, unseen fungal network of fine thread-like mycelium which thrives in soil, under bark or in the decomposing organisms or organic waste that it’s consuming.

Plants make their food using the sun’s energy (photosynthesis), while animals eat their food then digest it internally. **Fungi mycelium grows into and around their food source, excretes enzymes that digest their food externally, and then absorbs the nutrients. When the mycelium is mature and environmental conditions are suitable (cool and moist), out pop the mushrooms.** Mushrooms are formed above ground while truffles form in the soil.



More than 500 species of mushrooms are documented in BC and there's way more that haven't been classified yet. BC has an incredible diversity of mushrooms sprouting from old, mossy forests especially those near lakes and rivers, in fertile meadows and moist grasslands. Fungi are very ancient organisms fitting into various environmental niches. BC's amazingly diverse landscape with coastal to interior, and hot, dry south to cold north climates combined with its extremely varied topography has created innumerable microclimates that are perfectly suited to mushroom diversity.



Most wild mushroom neophytes look for the typical mushrooms with caps, gills and stalks. But that's only a few of the mushroom families that are mostly related to the familiar, cultivated agaric button mushrooms from stores. **Wild mushrooms display an amazing array of sizes, shapes, colours, textures and aromas** from spiky, white, pink or yellow Coral Fungus to huge, bright orange Lobsters, jelly-like blob gel fungi, round puffballs, straps, conks and so many others that it's hard to believe. Mushroom families are identified by their characteristics; are they capped with gills, teeth or spongy underneath? Do they have a stalk with or without a ring? Or are they other shapes or textures, etc?

Mushrooms are often mistaken for fallen leaves at first glance. They really are camouflaged. If you want to while away a warm fall day with a real challenge, get a mushroom field guide and learn to identify them. The simplest way to learn about wild mushrooms is by starting to identify the ones that may grow in your yard or neighbourhood using a good, locally reliable mushroom field guide. My favorite guide for BC is "*All That The Rain Promises*" by David Arora. It's pocket-size, simple to use and fun to read.

## So what are mushrooms doing in the forests?

Ecologists and microbiologists are discovering the vital roles fungi play in our forests. Fungi function as ecological components in BC's forests by:

- Breaking down and recycling nutrients from dead and decaying matter (saprophytic).
- Thinning out living organisms (parasitic).
- Coexisting in a vital mycorrhizal relationship with trees by breaking down organic matter and helping them to absorb nutrients through their roots (symbiotic).
- Providing important food sources for many animals from worms, to rodents and squirrels, people and more.
- Providing sources of inspiration, education and a renewable economic resource.

Head on out into a forest on a nice fall day for fresh air and mentally relaxing exercise to enjoy mushrooms. The good news is you don't have to eat mushrooms to enjoy them! They make great photos with a digital camera or phone. And that helps identify them. Enjoy!



## Neat Mushroom Facts:

Mycore Restoration is used to break down and digest toxic waste. Paul Stamets 2005 book *"Mycelium Running: How Mushrooms Can Help Save the World"* explains this new science.

- 85% of BC's Red Squirrel's diet is mushrooms!
- Edible wild mushrooms are great food sources:
  - Low in calories.
  - Contain protein, fibre, B vitamins, selenium, rare trace minerals and vitamin D.
  - Helps digestion.
  - Boosts the immune system.
- The Chinese revere many wild mushrooms for their health and medicinal benefits.
- Toadstools commonly refer to poisonous mushrooms.
- Historically the Irish believed mushrooms served as umbrellas for leprechauns.

## Neat Mushroom Activities:

- Kids can take great mushroom photos with a digital camera or phone.
- Try growing safe, edible mushrooms. It's easy and fun to watch; just mist and keep cool. Paul Stamet's *Fungi Perfecti* is the best source for prespawnd mushroom kits.
- Take students on a pre-Thanksgiving field trip into a forest to start classifying mushroom families. What a great way to celebrate the well-being of our forests!



## Mushroom Study

### Learning Outcomes and Big Ideas:

- Observations
- Use of senses
- Plants and animals
- Seasonal cycles
- Diversity
- Lifecycles
- Environmental stewardship
- Sustainability
- Classifying
- Habitats
- Food chains
- Ecosystems
- Mushroom uses
- Weather and climate
- Resources
- Forests
- First Nations
- And more