



#CTF Education Habitats at Home

Learn how to create habitats that bring nature into your own backyard!

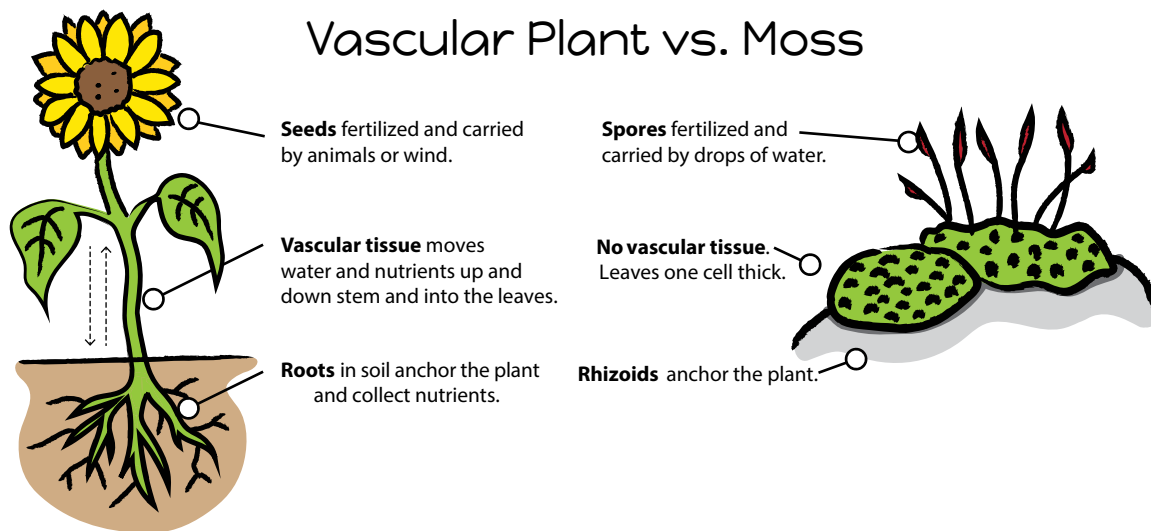
Make.. Moss Gardens



What is Moss?

Mosses are small, flowerless plants. They provide a habitat for tiny animals and microorganisms such as springtails, which in turn are eaten by birds, amphibians, and other animals. They also enrich the environment by protecting soil from erosion, catching and storing nutrients, and acting as a nursery for seedlings.

Mosses have existed on Earth for 450-500 million of years, long before vascular plants. Vascular plants include trees, grasses, and flowering plants. These plants have specialized (vascular) tissues of xylem and phloem that transport nutrients and water throughout the plant. Mosses instead use their leaves to absorb water and nutrients by osmosis from their surroundings.



Moss Facts

- Moss is tough. Different species have adapted to survive in extreme conditions. Studies have shown that the lowest temperature they can photosynthesize (turn energy from sunlight into food) is around -15°C and the highest is around 40°C . Mosses can completely dry up during periods of drought, appearing dead. They can spring back to life when moisture returns.
- Moss reproduces by spores. Spores are produced in and are released from sporophytes, the tall structures rising from the bed of moss. Moss can also grow from a small piece of an existing moss plant that has been separated from the main plant.
- Mosses play a vital role in the development of new ecosystems. They're among the first plant colonizers of disturbed sites, such as when an area is deforested or affected by forest fires. They stabilize the soil surface and retain water, helping new plants to grow.
- Moss is home to tardigrades, also known as *moss piglets*. These microscopic animals can survive extremely harsh conditions, including years of dehydration, massive doses of radiation, and the vacuum of outer space (They have been to the moon!). It's not a problem for tardigrades if their mossy home dries up for part of the year.





Building a Moss Garden

Moss can create beautiful environments with deep shades of green, and lush, pillowy textures. Here are some ways to encourage mossy habitats to thrive. Remember, start small: moss is delicate and tiny. Be patient: moss grows slowly.

1. The best time for planting a moss garden is in spring or fall, when the air is moist.
2. A shady, damp, slightly acidic site is best. If you plan to grow on soil, remove grass and other plants, because moss is not a strong competitor.
3. Option 1: Collect dry moss from a disturbed site and crush it up. Mix with buttermilk, or yogurt and water. Paint the mixture over the surface where you want your moss to grow. Option 2: Collect small pieces (e.g. nickel-sized) of moss from disturbed sites. Dunk them in water. Press into the cleared substrate with space in-between. Space between moss pieces will fill in over time
4. Mist moss regularly to keep it cool and moist.
5. Be patient. Spores and broken leaf tips usually take two years under ideal circumstances to mature enough to be considered "a carpet of moss."
6. Maintain your garden by removing any leaves that settle there, and protecting the moss from trampling.



A Selection of Mosses Found in BC

Shaggy Peat Moss

Sphagnum squarrosum



Step Moss

Hylocomium splendens



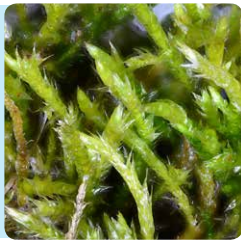
Crane's Bill Moss

Atrichum selwynii



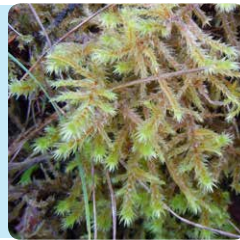
Lawn Moss

Brachythecium albicans



Electrified Cat's-tail Moss

Hylocomiadelphus triquetrus



Plume Moss

Dendroalsia abietina



iNaturalist is a great site to learn more about moss and to find out what mosses are located in your area. Visit:
www.inaturalist.org/taxa/311249-Bryophyta

