Grow Eat Learn
Nourish Nova Scotia

Guide to Greenhouses

Purpose

A greenhouse can protect plants from the elements and, in turn, extend the growing season allowing for more gardening during school months. This resource features considerations for planning a greenhouse as well as tips for maintaining one on school grounds.

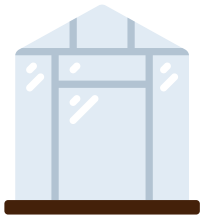
Climate Connections

- Soil Stewardship
- Food Security & Sovereignty
- Water Stewardship

Planning for a greenhouse

Structure

Greenhouses come in all shapes and sizes. The frame is often constructed of wood or metal, while the transparent cover is typically made of glass or plastic sheeting.



Freestanding

Lean-To

Greenhouses can be freestanding structures or a three-sided lean-to attached to an existing structure. Leaning structures are a good option for those with limited space, but remember that one wall will not receive natural sunlight.

There are a few things to consider when it comes to constructing or purchasing a greenhouse:

- Ample height for taller plants and yourself
- Room for heating and ventilation systems, if needed
- Room to maneuver plants and yourself around the greenhouse
- Comfortable flooring with good drainage that will also prevent weeds and pests from coming in

Building considerations

Sunlight

It is important to construct a greenhouse where it will get the most sun. If possible, try to face one of the longest walls in the greenhouse towards the south. This direction allows maximum sun exposure. While all plants thrive under sunlight, they also can dry out and burn from too much exposure. Using controllable shade – such a shading sheet for greenhouses – will increase the odds of survival of both delicate and sturdy plants.

Water source

Greenhouses have different watering needs than outdoor beds, so access to water is an important consideration when planning the location. If access to a hose is possible, choose that site so that a drip tape irrigation system may be installed for the greenhouse.

Air circulation

Use fans or hand-controlled vents to allow air circulation.

Setting up a greenhouse system

1. Organize the greenhouse into areas: a) a potting area with a table or bench; b) a storage area with shelves, hangers or hooks; c) the main plant area; d) a trash area inside or just outside the greenhouse using separate covered bins for compost, recyclables and general waste.
2. Create a list of desired seeds or transplants
3. Invest in containers, such as terracotta or ceramic pots
4. Get sterile soil to prevent pests/diseases
5. Add fertilizer to improve soil health
6. Create a watering schedule based on individual plant needs

What to grow in a greenhouse

Best summer vegetables:

Best late season vegetables:

Avoid these common greenhouse mistakes

Neglecting temperature/humidity control

Check ventilation for air flow, use a shade cloth when too hot, and heat when too cold. Use a hanging thermometer or digital thermometer that includes relative humidity. Ventilate during the hotter part of the day, but close ventilation windows before night or cloud cover. Sometimes a small fan is needed to ventilate properly. Avoid high humidity (indicated by dew forming on leaves) and raise plants away from the ground in winter.

Not considering tree proximity

Trees can drop debris or invade with roots – place further away from trees or consider pruning/removal.

Depleting soil nutrients

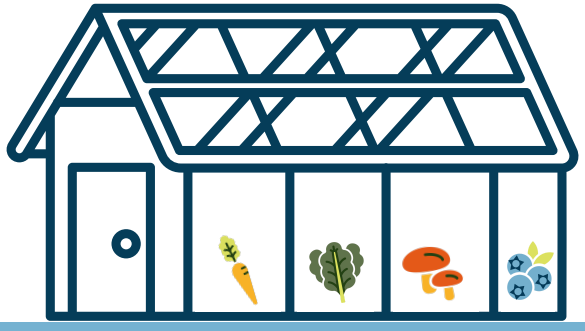
Add compost or fertilizer regularly.

Watering too much or not enough

Water more frequently when plants are young or temperatures are high. Start by watering plants moderately in the morning, and see how dry they are by the end of the day. Adjust your watering schedule accordingly.

Not maintaining and cleaning the greenhouse

As greenhouses turn yellow, get dirty or collect condensation, the amount of light getting to plants is reduced. Keep it clean and replace siding as needed. Removal of crops, disinfecting, preparing, and sanitizing should take place regularly for year-round greenhouses or annually in the fall for a seasonal greenhouse.



Fall greenhouse maintenance checklist

Complete this checklist on a day when the weather is fair.

Clean & sanitize the inside of the greenhouse:

- [ ] Moving all pots, tables, tools, etc. out of the greenhouse to make space for cleaning. Note any disease or pest issues. Take pictures or make sketches as needed to identify.
- [ ] Remove weeds and any plant matter that is diseased or damaged by insects, and dispose of them in the green bin (not in the garden compost bin).
- [ ] Working from top (ceiling) to bottom (floor), remove any dried dirt or debris. Using a broom or shop vac, remove any soil, scattered plant matter or debris from the floor.
- [ ] Still working from top to bottom, clean all remaining surface dirt and grime using soap and water or another detergent-based cleaner. Larger areas can be done with a scrub brush, while detailing can be done with a toothbrush. Rinse well with water and let everything dry.
- [ ] Sanitize walls, floors, tools and equipment with disinfectant (such as oxygen bleach, hydrogen peroxide or isopropyl alcohol).
- [ ] Remove soil from all containers for cleaning. As long as there are no signs of disease present, old soil can be fluffed up and re-used; be sure to replace nutrients by adding fertilizer or compost. Alternatively, old soil can be added to compost pile to be rejuvinated and replaced with new soil.
- [ ] Recycle disposable seed trays or pots. For all other containers, wash in warm soapy water and then let soak in a mixture bleach and water (about 1 part bleach to 9 parts water) for at least 10 minutes. Rinse well in cold water.

Clean the outside of the greenhouse:

- [ ] Remove any debris (such as fallen leaves) that has gathered on top of the greenhouse, and any plant matter or other debris on the outer walls.
- [ ] Working from top to bottom, clean the outside of the greenhouse using soap and water or another detergent-based cleaner. Rinse well with water and let everything dry.