

# My Garden in Fall and Winter

Students will learn how to care for their school garden in autumn to support over-wintering pollinators that will give them a good start next spring and summer. They will discuss the value of different activities that impact the health of the plants in the garden and play a game to reinforce what activities are suitable for the fall season.

## LEARNING OBJECTIVES

- Understand how to care for our gardens during fall
- Understand how to help plants through the winter

## ACTIVITY

1. The teacher can use the PowerPoint slideshow to introduce different sections of the lesson.

2. The students will play a game, “Fall Garden Project” in which they identify which activity is best suited in fall to help prepare our garden for winter and create habitat for overwintering pollinators. The game is to be played in a large space such as a gym or outside in the yard.

3. The teacher will designate two spots – True and False far from each other. The teacher will write out some questions on small sheets, cut them up and place them in a basket. Each student will walk up to the basket and pick a question for the teacher to read. After the question is read, the students will decide if the activity is appropriate for the fall season by running to the designated spots created.

4. Once inside the classroom, the students will make a pledge for their garden. They will list three things they can do to support plants and one thing they will not do as it harms plants.



### CONTENT AREAS:

- Environmental Education
- Science

### MATERIALS:

- PowerPoint slideshow
- Art supplies
- Paper
- Basket

### IN ADVANCE:

- Review and set up the PowerPoint slideshow
- Have writing materials available
- Identify a large space for the game

### SAFETY:

- No specific issues

## DISCUSSION

1. Why should we care for our school garden in the fall?
2. How can we get our gardens winter-ready?
3. What are some of the fall-blooming plants that support pollinators?

## EXTENSIONS

1. Schedule a class visit to your garden, and take stock of some garden tasks for the fall season.

## VARIATIONS

1. In small groups, design a "Fall and Winter Garden" reflecting on some of the garden activities in this lesson plan.



## GLOSSARY WORDS

**Annual:** Plant that completes its whole life cycle within a growing season and then dies.

**Bulbs:** Modified stem with overlapping leaves. Some plants need a long period of dormancy to develop underground to stimulate an early bloom next spring.

**Compost:** A product created from the breakdown of organic matter. Composting occurs in the natural world, but it is also a garden practice where kitchen scraps and garden waste are used to create compost for use as a soil amendment.

**Fertilizer:** Substance added to soil to supply nutrients to growing plants.

**Full sun:** An area that receives about six hours or more of direct sun.

**Mulch:** Material spread over the soil to shield it from temperature changes, water loss, erosion, and weed growth. Examples of organic mulches include wood chips, straw, compost and leaves.

**Perennial:** Plant with a life span greater than two years.

**Pollinators:** Animals that transport pollen--mainly insects, bats, birds, and even some mammals. In Canada, our pollinators are: bees, moths, hummingbirds, wasps, butterflies, beetles and flies.

**Roots:** Grows in a downward direction into the ground. Roots uptake water and nutrients.

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## BACKGROUND

It is good to be back from the summer break! How has your school garden evolved? You can find out by scheduling a class visit to your garden, reflect on how it cared for pollinators over the summer months and take stock of some garden tasks for the fall season.

In fall, gardeners look to prepare their garden for winter and next spring. This is the season for composting, gathering dead or withering leaves and stems, preparing your garden beds, collecting seeds and planting certain plants like garlic.



Before we get into how to prepare our gardens for the colder months, your students may want to reflect on some of the plant categories below.

### Annuals vs Perennials

Annuals are plants that live through one warm season but will not survive the harsh winter. Pollinators are attracted to some species of annual flowering plants and the burst of colour is so beautiful. Come fall it is time to gather healthy seeds and remove the plant as it is withering leaves as well as annual flowers won't make it through the winter. If the plant was healthy, it can be composted. But do not put any unhealthy plants into your composter or you could be cultivating diseases in your composted soil.

Perennials, on the other hand, persist from season to season and with the right care can be a joy for years to come. Do not gather the foliage for composting. Leave the healthy plants for winter, so their stems and foliage can provide shelter and seeds for your winter bird population. In the springtime, divide fall-blooming perennials to share or beautify another section of your garden, while autumn is a good time to divide spring and summer-flowering plants.

To give your garden autumn blooms as well as support wildlife, consider growing native goldenrods and asters. Note that while some species of goldenrod do spread quickly, some do not and are lovely additions even to small gardens. Research suggests that none are responsible for hay fever as its pollen is too heavy to travel far unlike the less noticeable ragweed which is wind pollinated and blooms at the same time!

### Early to Mid-fall Activities

How we care for our gardens this fall can create shelter for overwintering pollinators – moths, butterflies and bees. In our next lesson plan, we will discuss how some pollinators overwinter in Canada in their various developmental stages. Before then, here are a few tasks that could apply to your school garden early to mid-fall:

Plant early blooming spring-flowering bulbs including those with large root balls. Why plant for next spring this fall? Some plants need a long period of cool temperature – dormancy – to stimulate an early bloom next spring. Planting spring bulbs such as daffodils, crocuses and hyacinths can provide nectar and pollen to our insect pollinators such as – bees, butterflies, flies that are among the first to be active in the spring. Other perks for planting in the fall are that the air is cooler, and the soil is wet and warm enough to support the roots of plants before the weather freezes.

So, schedule a class visit to your garden to plant some spring bulbs a few inches under the soil with the pointy ends up and water them. Depending on what you have in your garden, here are more activity ideas for the autumn:

- Prepare your garden beds for next spring by adding on compost and mulch
- Empty and cover your rain barrels before the temperature drops below freezing
- If your school garden has trees and shrubs, let the leaves remain on the ground below the tree and rake back any leaves that spread too far, so they are raked back to be under the tree's canopy rather than far and wide all over the lawn. Water the leaves down a bit to help it stay in place

### Late Fall into Winter

- Compost leaf and yard waste that is disease-free
- If you've dug in new plants this autumn, mark their spot to help remember where not to dig in the spring
- Collect seeds from your plants for planting in the spring
- Conduct a soil test to see what's needed in your garden
- Clean your garden tools and store them for the next season

Sometimes winter conditions are just right for plants. The fast freeze happens after the insulating snow has covered your plants. But you cannot always rely on a mild winter season or sufficient snow fall. It is best to protect your plants before the harsh conditions. Here are some suggestions to help your plants through the winter.

A. Potted plants need special care. You can over-winter them inside. Or you can remove the plants from their pots and bury them in soil in your garden. They benefit from being close to your school for protection from the chilling wind. Or select a more protected spot on your property.

B. Some trees and bushes benefit from being wrapped in burlap. Just like wearing a snowsuit, the burlap will protect their delicate branches, buds and needles against the harmful winds, snow, ice and driving sleet.

C. For perennial plants that are susceptible to the cold, you can build up insulating soil around their base to protect their roots.

D. Once the ground is frozen, you can also take some mulch and place it around your plants about 15 to 20 centimeters deep.

E. You can mulch around trees as well but be sure to keep it away from the trunks as the mulch can cause the area to be too moist and disease can start in that area. The mulch around your trees can also provide shelter for some pollinators and small creatures.

F. If you have an excess of leaves that you are unable to rake under your tree (typically as far out as the branches go), you can chop them up with your lawn mower and leave the finely chopped pieces on your lawn for a natural fertilizer. You can also keep some to layer in your composter over the winter and following year.

G. Tuck away any plant debris into your composter so that nutritional compost will be ready to dress your plants the following year.

H. Remember to support your winter bird population by providing them with feeders with high oil content untreated seeds free of neonic. This winter, as you plan new additions to your garden for next year, keep in mind plants that will provide a natural source of food, such as berries, seeds, or nuts year round.

## Pledge to My Garden

I will

- a)
- b)
- c)

I will not

- a)
- b)
- c)

## How Did I Do?

Instructions: Circle how you feel about participating in the "Fall Garden Project" Game and Pledge

How I played the game.



I learned some ideas about how to help plants in my garden.



I will follow through on my pledges.



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Grade 3 - Ontario Science: Growth, and Changes in Plants

- assess the impact of different human activities on plants, and list personal actions they can engage in to minimize harmful effects and enhance good effects

## Questions for the Activity

Two Spoiler points - not good for the health of plants in my garden

1. Planting early blooming spring bulbs such as daffodils, crocuses and hyacinths provide nectar and pollen to our insect pollinators early in the spring
2. Remove annual and perennial plants from your garden this fall
3. Compost the foliage and stems of any diseased plants in your garden (Spoiler)
4. Leave potted plants outside
5. On a warm day, drain and smoothly coil your hoses and then take them inside
6. Prepare your garden beds for next spring by adding on compost and mulch
7. Spread some leaves as a protective mulch around your trees and shrubs and water them
8. Leave your leaves on the lawn
9. Save some leftover leaves, annual flowers and vegetable plants for your compost bin
10. For plants that are susceptible to the cold, you can build up insulating soil around their base to protect their roots
11. Pick all the flowers from your plants to make a bouquet of flowers for inside your home
12. Spray pesticides in your garden to get all the insects away (Spoiler)
13. Add some mulch around your plants when the ground has frozen to protect them from temperature fluctuations
14. Protect the roots of your tender plants with some dirt
15. Collect healthy seeds and save them for next spring
16. Empty and cover your rain barrels before the temperatures drop below freezing
17. Name some hardy perennials that still blooms in the fall. (Goldenrods and New England asters)
18. You can support other wildlife by putting a bird feeder out in your garden
19. Conduct soil test in your garden
20. Grow seeds indoors in the winter