

Seed Starting

Maine Learning Results: Math:M1, B1; Science:B1, J1

Purpose: To start seeds for your garden! You only need to start seeds of plants that need a very long growing season, that is challenging for us to get here in Maine. You can refer to the planting chart, but the most common plants to start inside in March are tomatoes, peppers, basil, and eggplant. These plants need a long season! You will put them outside the very end of May, after danger of a frost has passed. Other popular seeds to start in March are cabbages, broccoli, brussel sprouts and cauliflower. These plants need a long growing season, but they are more cold hardy and you can put them outside by mid-April or as soon as they are big enough to transplant. You can also start cucumbers, squash, watermelon and pumpkins indoors, but they should be started in April, closer to when they go outside, because they grow quickly and will get unhealthy in the seed trays if left too long.

Key Concepts:

- Plants have lifespans, and some of them need more time to grow than our summer here. This can lead into investigations of where those plants are from originally, and what kind of climate they evolved in.
- We can trick plants into thinking that it is summer by starting them inside, as long as we provide the things that they need to sprout: soil, water and sun.
- Every kind of plant has different needs and some grow right away and other take their time. Some need to be planted deeply, and others need to be near the surface. In order to be gardeners we need to know our plants and be able to give them what they need to thrive.
- In order to be gardeners we must be observant and dependable and water the seeds every day and not let them get too dry.

Activity: Explain why some seeds need to be started indoors, and go over briefly how you will be doing that (with trays in the window and regular watering.)

Break students up into groups and show them how to fill up their seed trays. Their should be cups for them to pour dirt from the potting soil bags into the trays. Students should NOT pack the dirt down. The soil needs to be loose in order for the plant to germinate. Show them how to brush the extra off the top without pressing the dirt down.

Once the trays are filled with dirt, you can get ready to put the seeds in. This requires a demonstration as well and adult supervision is helpful. A good visual aid to start this off is a bean seed that you ave soaked overnight. The bean will start to germinate and you can split it open and see where the sprout will be. All the rest of the mass of that bean is the endosperm, or the food that that bean sprout will need in order to grow big enough to put out green leaves and start making it's own food. Each seed is like a little package with only enough food to make it to the top and put out leaves. The size of the seed determines how deeply you can plant it. A bean is pretty big for a seed, so it can be planted deeper and still reach the top and put out leaves. But a carrot seed for example is very small, and will never germinate unless it is right near the surface. You can

use the size of the seed as a guide for how deeply to plant it. You can also refer to the planting guide for approximate depths. Have students poke holes for the seeds with their fingers. Then they can put the seeds in, and very lightly cover them with dirt. Do NOT pack the dirt down.

Now it's time to label. Labeling is REALLY important because all trays look the same until the plants come up and even then they are very hard to tell apart. Use popsicle sticks or some other sturdy label, and write the name of the plants in the tray on them in waterproof marker.

Now it's time to water. It's really good to use a sprinkling spout watering container. Anything that pours water down into the trays will be too strong for the little seeds and seedlings and could knock them over or uproot them. Once the trays are planted they must never be allowed to completely dry out. It's good to have a watering chore chart so that someone is responsible every day for the plants.

Time: 1 hour or less

Follow Up:

- **Once the seedlings are planted they must be gently watered every day and never allowed to completely dry out!!**
- If you keep track of how many seeds went into each tray, and then compare that with the number that actually germinated you can figure out the germination rate for each seed. It will be different for different plants.
- You can also keep track of the amount of time each plant needs before it sprouts, and compare those as well.

Materials:

- Plastic Seed Trays (available at most hardware stores)
- Potting Soil
- Labels and waterproof pens
- Seeds, of course
- A watering can with a sprinkling spout that allows water to come out gently
- It is also really handy to have clear plastic covers that go over the seed trays. These help hold in moisture, and are available at hardware stores etc. where trays are sold.

Watering core chart to fill out with your class