**SEED STARTING BASICS**

**STARTING SEEDS INDOORS AND TRANSPLANTING OUTDOORS**

**SOIL**

The ideal soil for starting seeds is light, well-drained and will hold enough moisture, air and nutrients to both physically and nutritionally support the growing plant. Ideally use a soil mix that is labeled ‘for seed starting’. Ideally moisten the soil in a large bucket before adding it to your seed starting containers.

**CONTAINERS**

Most people start their seeds in plastic pots or plastic trays which have been designed for seed starting purposes. These come with small holes in the bottom to allow for drainage of excess water. Milk cartons, yogourt containers, Styrofoam cups or any pot or container could do but whatever you use be sure your containers drain well by punching holes in the bottom. Set your pots or containers inside a larger waterproof tray to keep any soil or water messes contained. Setting your pots inside a larger, waterproof container also allows you to water your seedlings from the bottom (by adding water to the tray) where the soil and roots will wick up water where it’s needed.

**CREATE LABELS**

It’s essential to label each container with the name of the variety or species you are growing. Use a permanent marker to label either the container itself or a plastic or wooden garden marker. It’s a good idea to make a separate map of where you put each variety so that if the markers fall out, or curious little gardeners switch the labels around, you will be able to replace them and know where each variety is.

**PLANT YOUR SEEDS!**
Moisten your seed-starting mix before you plant your seeds. If you water after you plant the seeds, small seeds can float to the top and spill out of the container. Plant at least two seeds per container to allow for potential seed loss. Seed packets usually tell you how deep to plant, but a good rule of thumb is two times as deep as each seed’s width. Once the seeds have germinated and grown at least one set of true leaves you can pull out any extras so that there is one plant per pot.

**WATERING**

Seeds can’t germinate without moisture. Soil should be watered and kept slightly damp to the touch, never soggy and never bone dry. Soil should feel like a wrung-out sponge. The best way to consistently water is to set up a classroom schedule and ensure that students know how much to water plants. Individual classroom conditions vary widely so you will need to determine water requirements for your class. Having a dedicated watering container with markings on it will help but a certain degree of observation and intuition also help, for example if the seedlings are sitting in a window sill and there are several bright sunny days in a row they will need more water than usual. Continue watering from the bottom of the containers so that the soil is directed at the roots. This will help develop a strong root system for the seedlings and will help prevent the development of mould on the soil surface which can kill the plants.

**LIGHT**

Once your seeds have germinated they will need a good source of light. If you don’t have special lights, don’t worry, you can still have some success by planting near a sunny window and under normal classroom fluorescent lights. When seedlings don’t get enough light, they grow long, weak stems so if you see this happening you may wish to add an extra light source. Seedlings in a classroom would do best under standard fluorescent lights positioned 2 to 3inches above the leaves. You don’t need expensive ‘grow lights’, simply use cool white fluoresecent bulbs or tubes. Use a timer to keep fluorescent lights on for 12 to 16 hours a day

**HEAT**

Most seeds germinate best in warm, humid environments. If you can help them by providing a bit of extra heat they will appreciate it but will also do fine in normal room temperatures, just keep them away from drafts or cool air. Some plants like tomatoes are used to germinating and growing in 30 degrees Celsius so they don’t mind heat. Others like peas and lettuce can germinate in much cooler temperatures. Most garden seeds will do very well in normal indoor classroom temperatures.

**TOUGHEN THEM UP!**

Plants that start growing inside get used to the cozy, comfortable life you have provided for them. Your seedlings need to be big and strong by the time you move them from their posh indoor surroundings to the harsh realities of the outside world including direct UV exposure, wind and more variable temperatures. Once your plants have grown a couple of sets of leaves, very gradually expose them to some of these stresses, for example, turn on a fan or open a window and let the breeze blow over them, put them outside for an hour so that they are exposed to harsh UV, let the soil dry out a little bit more than usual before watering. Don’t stress them too much too quickly or they will suffer but gradually introduce them to stress so that when you transplant them outside for good they are toughened up and ready to grow. Start with just a couple of hours each day, work up to a full day, and then leave them outside overnight.

**TRANSPLANTING**

If your plants look like they are growing too big for their pots but it’s still too cold to transplant them outside, you may need to move them to a bigger pot with more soil. Most garden seedlings will be ready for transplanting outside after all danger of frost has passed. In most of Canada this happens at the end of May/beginning of June.

When you finally transplant the seedlings outside to the garden, be careful not to disturb their roots. Squeeze the sides of the containers all around, turn them upside down, and the plant, roots and soil should slide out of their containers. Place the soil and roots into a pre-dug hole a bit larger than the transplant and place it in the ground. Fill in the soil around it and gently press it in to the soil. Water deeply. Relax and wait for the plant to grow!