Starting Plants from Seed Indoors – The Basics
Jennifer S. Thompson & Amy A. Fluet (3/14)

What do you need?
- Viable seed (not too old, still alive)
- Growing medium (seed starting mix, etc.)
  that is hopefully disease free & no fungus gnats
- Containers with drainage holes to hold the soil
- Tray to put the containers in that will catch water
- Good source of light (artificial or natural)
- Reasonable temps – room temp, little warmer
- Reasonable air circulation
- Water (and way to keep moisture in until seeds germinate)
- Stuff for keeping track of what you planted (labels, tape, Sharpie)

Check out your seed info
- Buy seed if needed – be aware of “days to maturity” info on packet or in catalog/Internet listing; fewer days to maturity is better for our short growing season.
- Read seed packets – see how many weeks before last frost to start them (store cool & dry until ready to plant).
- Group according to time needed, say 8-10 weeks, 6 weeks, 4 weeks, etc.
- Start planting the first set of seeds when time arrives.

Begin
- Get all your stuff together somewhere where you can be messy (put down newspapers on floor or table if you want).
  - Seed starting “Soil” mix (which is really soil-less mix and often consists of peat moss, vermiculite, perlite and maybe some fertilizer)
  - Containers
  - Seeds
  - Labeling supplies

Plant your seeds
- Put your soil mix into your container. Leave enough room for seeds and more soil.
- Tamp the soil down softly to compact it slightly.
- Sprinkle seed on top of soil mix. (Number of seeds depends on how many plants you want in there and how big seeds are. Remember, a few may not germinate but most should.)
- Cover with a bit of soil mix. (Some plants, like lettuce, need some light to germinate so cover those very thinly. Check the seed packet for this information.)

Label!
- By some form or fashion (on actual labels with name of variety written in pencil or black Sharpie, written on side of container, on masking tape attached to water-catching tray, etc.)

Next
- Water with warm water. Many people bottom water. Let soak in. Repeat until all the soil is damp.
- Cover with something that keeps moisture in.
Transplanting

- Plastic cover, plastic bag, etc. (usually want some light to get in also)
- Place in comfortably warm spot and with some light (usually) but not direct sunlight or the seeds may “cook”.
- Monitor containers for signs of growth.
- When you see plants start to break the soil surface, move them to a place with good light.
- After germination starts, remove cover.
- If plants are grown under fluorescent lights, keep plants close to lights (a couple of inches away) and keep lights on for 12 to 16 hr/day. You can use regular “shop lights” with regular cool tubes (some people use one cool and one warm fluorescent bulb in a single fixture)
- Monitor moisture of soil – it should be damp but not soggy.
- After germination, try to grow plants in coolish temperatures and brightish light.
- Raise lights up or lower plants away from the lights as plants get taller. You want stocky, healthy plants that aren’t “reaching” toward the light. They shouldn’t “flop” easily.

Seedling’s enemies
- “Damping off” – caused by a variety of fungi, using “soil-less” mixes helps avoid this. Keep things clean (pots, etc.); throw out affected plants or it will spread.
- Unfavorable growing conditions
  - Too cold, too hot
  - Not enough air, which encourages disease and weak growth
  - Not enough water or way too much
  - Not enough light or exposure to light that is too strong without hardening off (see below)

Transplanting
- Transplant when plants are big enough – need at least two “true” leaves (not first “seed” leaves); can also wait until bigger if want (more “true” leaves).
- Move transplants into larger containers or into ground.
- Handle seedlings gently; don’t break their stems or they’re doomed.
- A variety of soil mixes will work for larger containers. Remember to label containers and make sure they drain well.
- Consider including a very weak fertilizer when watering as plants mature.

Hardening off
- Gradually get plants used to outdoor conditions (bright light, cooler temps, wind, etc.).
- If transplanted into pots, put them in a sheltered area and gradually move into more exposed location. Move inside (house, garage, etc.) if frost is possible.
- If transplanted directly into the ground (which is often the case with many cool crop veggies, etc.), try to protect the plants from the elements for a while until they adjust.