

Form 3/4 Botany Supply List

Lesson 1

- Masking tape
- Marker
- 6 small flower pots or yogurt cups with holes in the bottom
- Saucers (to put under the pots) or a baking dish (to set them in)
- Seed starting mix
- 4 seeds of each - bean, pea, corn, pumpkin, sunflower, buckwheat
- Plastic wrap

Lesson 3

- Quart size wide mouth mason jar
- Cardstock
- Option 1: Peat moss or sawdust
- Option 2: Paper towels
- 6 small bowls
- Water
- Several of each seed - bean, pea, corn, pumpkin, sunflower, buckwheat
- Scissors
- Knife, optional
- Blunt wire, such as straightened coat hanger
- Plastic wrap

Lesson 4

- 6 Small bowls
- Water
- Several of each seed - bean, pea, corn, pumpkin, sunflower, buckwheat
- Knife, optional

Lesson 5

- Seeds in the mason jar (from lesson 3)
- Seedlings planted in lesson 1
- Fine tipped permanent marker
- Ruler

Lesson 6

- Seeds in the mason jar (from lesson 3)
- Seedlings planted in lesson 1
- Fine tipped permanent marker

Lesson 9 (WINTER LESSON)

- Pushpin
- Sharp Knife
- A tree shoot (branch) two or three feet long

Lesson 10 (WINTER LESSON)

- Locate a mature hardwood shrub or tree that you have permission to take cuttings from (see suggestions in guide)
- Pruning shears
- Sharp knife
- Rooting compound (liquid or powder)
- Flowerpot or a sandy garden plot
- Sand
- Peat moss

Lesson 12

- A medium size *organic potato that has begun sprouting
- Toothpicks
- Jar, a bit larger than the diameter of the potato
- Water
- Zipper bag or plastic bags
- Masking tape
- Marker
- 8 small flower pots or yogurt cups with holes in the bottom
- Saucers (to put under the pots) or baking dish (to set them in)
- Seed starting mix
- 4 seeds of each - bean, pumpkin, sunflower, buckwheat
- 4 boxes which a growing seedling can fit into or 1 large box that 4 pots of growing seedlings can fit into

Lesson 13

- Corms, such as crocuses, gladioli, or cyclamens
- Bulbs, such as daffodils, tulips, or irises

Lesson 14

- The seedlings that were planted in lesson 12
- Carefully dug up various plants with their root systems for observation
- Poison Ivy, optional **Be careful not to touch and to set it on a disposable surface, such as tin foil

Lesson 15

- Several varieties of leaves gathered
- Seedlings that you planted in lesson 12

Lesson 16

- Seedlings that you planted in lesson 12
- 5 small bowls
- Water (room temperature, cold, warm, and boiling)
- Rubbing alcohol
- Beets
- Salt
- Knife
- Plastic bag or zipper bag

Lesson 17

- Dialysis tubing
- String, dental floss, or the rubber bands that come with dialysis tubing
- Pipette
- Small jar or beaker, 250 mL
- Large jar or beaker, 600 mL
- Sugar
- Water
- Kitchen scale
- Needle

Optional for Part 2

- Compound microscope
- Fresh beet leaf, without many holes or blemishes

- Plain glass microscope slide
- Slide cover slip
- Sharp knife or razor blade
- Water

Lesson 18

- Rhubarb, called pie plant in this section OR a piece of celery
- Knife or scissors
- 2 small bowls
- Water
- Salt
- Dandelion stalks
- Soft wood, such as popsicle stick
- stapler

Lesson 19

- Plants started in lesson 12

Optional for Part 2

- Fully grown balsam plants started in lesson 7 or a similar plant with a long thick stem
- Glass or vinyl tubing, several feet long and about the same diameter as that of the stem of the plant to be used
- A short piece of rubber tubing that can slip over the end of the glass tube
- Wrapping cord
- Water
- Tall stake, such as 3' bamboo stake
- Sharp knife

Lesson 20

- Thistle tube
- Large jar or beaker, 600 mL
- Dialysis tubing
- String dental floss (or the rubber bands that come with dialysis tubing)
- Water
- Molasses or sugar solution

Optional for Part 2

- cork borer
- potato
- sugar

Lesson 21

- 2 large glass bowls
- Handful or fresh leaves or several leafy shoots from plants
- Paper towel
- Optional: potted plant
- Optional: Bell jar or mason jar that will fit over the potted plant
- Rubber gloves
- Safety glasses
- Cobalt chloride test paper (If you intend to make your test paper, you will need cobalt chloride, water, filter paper, and an oven set to 200 degrees Fahrenheit or a hair dryer)
- Potted plant
- Bell jar or mason jar that will fit over the potted plant
- Plastic wrap
- Popsicle stick

Lesson 22

- Seedlings from lesson 12
- Fresh leaves from other plants
- Cobalt chloride paper from last lesson
- 2 panes of glass (example: remove glass from 4x6 picture frames)
- Dry but fresh leaf

Lesson 23

- Celery stalks
- White carnation
- Cut a shoot from any other plants you have on hand
- Red food coloring
- Water
- Vase

Lesson 24

- Iodine solution
- Corn starch
- 2 test tubes
- Test tube clamp
- Cup of water
- Pipette
- Lighter

- Potato
- Knife
- White plate
- 2 plants, one must be placed in dark and one placed on a windowsill for past 25 hours
- Small jar or beaker, 250 mL
- Saucepan on stove
- Ethyl alcohol
- Forceps or tweezers
- Wax paper or a shallow dish

Lesson 26

- 8-10 sprigs of an aquatic plant (ex: Elodea, E.densa, E.canadensis, or Chara)
- Large clear jar or beaker, 600 mL
- Clear container, large enough to fit the funnel inside
- 1 g. Sodium Bicarbonate
- Stirring rod
- Funnel, glass, 90 mm diameter
- Test tube
- 20-W Fluorescent light source
- Distilled water
- Test tube stopper
- Matches
- Wood barbecue skewer
- Safety glasses

Lesson 27

- 1 cup of pea seeds
- Water
- 3 large jars or beakers, 600 mL
- Plastic wrap
- Matches
- Wood barbecue skewer
- Rubber gloves
- Safety glasses
- 1 teaspoon calcium hydroxide $\text{Ca}(\text{OH})_2$
- 2 quart glass jar with lid
- 4 cups of distilled water
- Limewater, prepared in part 2 of this lesson
- Germinating seeds prepared in part 1 of this lesson
- 3 small jars or beakers, 250 mL
- Drinking straw

Lesson 28

- Masking tape
- Marker
- 8 small flower pots or yogurt cup with holes in the bottom
- Saucers to put under the pots or a baking dish to set them all in
- Seed- starting mix
- 4 seeds each of bean, pumpkin, sunflower, buckwheat
- 4 boxes which a pot of growing seedling can fit into, or 1 large box that 4 pots of growing seedling can fit into

Lesson 31

- Buttercups or other flowers, specimens at various stages (or watch it over time)
- Pumpkin or squash flowers, both a specimen that has a round enlargement on the flower stalk and one that does not
- Sunflower, purchased from a florist
- Teasel flowers, if you find some growing near you

Lesson 32

- Seedlings started in lesson 28
- 1 box, large enough to fit a seedling pot inside
- Scissors