Seed Scarification

Many seeds will germinate better if a portion of the seed coat is removed, mimicking erosion by biotic (passing through an animal's gut) or abiotic (abrasion by the soil, freeze/thaw cycles, etc.) processes.

Materials

- Peat pellets – presoaked.
- Seeds to scarify: lupine, morning glory, nasturtium or milkweed.
- Sandpaper

Procedure:

1. Obtain 2-3 peat pellets and 1-2 of the same type of seed for each pellet.

2. Using a sandpaper square, carefully remove the outer layer of the seed coat until the pale layer is visible. Do not injure the developing embryo.

3. Bury seeds a few cm into peat pellet.

4. Keep pellet moist until seed germinates – can be planted outside after last frost date.

Stem Cuttings

Stem cuttings from actively growing herbaceous plants should root readily in moist soil.

Materials

- Pot (peat or plastic)
- Seed starting mix (pre-moistened)
- Rooting hormone
- Herb to propagate – Lavender Mint
- Clippers/scissors

Procedure:

1. Fill a pot with pre-moistened potting mix.

2. Using clippers, cut 1-2 stems of mint, as close to the bas of the stem as possible.

3. Remove lower leaves.

4. Dip the bottom of the stem in rooting hormone.

5. Place the stem in the soil.

6. Keep the soil moist as the cutting develops roots. Mint can be grown in a pot or in the garden – it may grow aggressively in the garden.

Leaf Propagation

Succulent leaves can be rooted easily and will produce baby plants in a few weeks.

Materials

- Pot (peat or plastic)
- Seed starting mix (pre-moistened)
- Clippers/Scissors
- Succulent to propagate – Jade, ‘Gollum’ Jade, or ‘Hobbit’ Jade

Procedure:

1. Fill a pot with pre-moistened potting mix.

2. Using clippers, remove 1-2 entire leaves from one of the plants. Leaves may be easier to break off by hand.

3. Place the leaf with the base slightly buried in the soil.

4. Keep moderately moist and in a bright location.

5. The leaf will first put out roots, and will then form a baby plant.

‘Gollum’ and ‘Hobbit’ are two cultivars of jade, where spontaneous mutations in one or more leaf morphology genes caused the tubular-leaf appearance. These mutations appear to be unstable – often reverting back the “wild-type” jade appearance. If you are successful in propagating your leaf – send me an email and let me know which plant you propagated and what the new plant looks like! kelsey.galimba@oregonestate.edu

Air Layering Practice

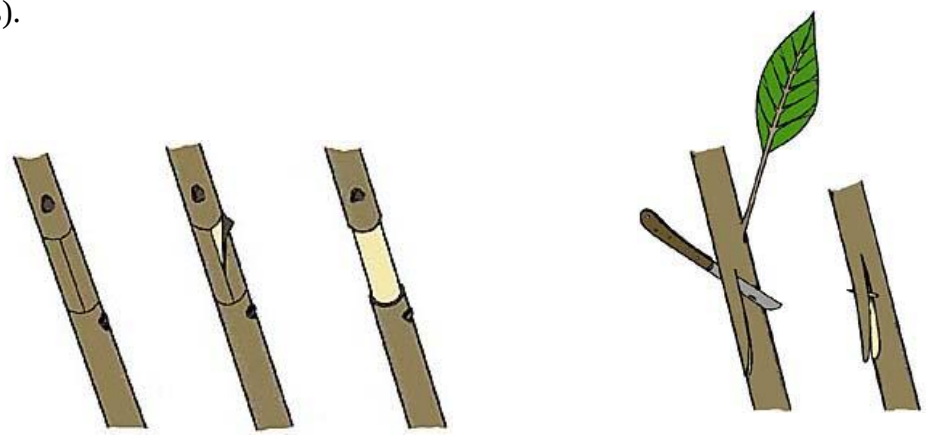
Air layering is a technique designed to stimulate root growth in the middle of a stem, in order to multiply plants, or change the appearance of a plant. This exercise is designed to practice this technique.

Materials

- Branches
- Grafting knife or utility blade
- Sphagnum moss (pre-moistened)
- Toothpick (optional)
- Cling wrap
- Twine

Procedure

1. Cut the branch in the desired location. Either make two parallel cuts and remove the bark in between (better for woody plants), or make an upwards cut and insert a toothpick (better for softer plants).



2. Add a clumped ball of moist sphagnum moss to the completely surround the branch at the cut location.

3. Wrap the moss tightly with cling wrap to hold in the moisture. Secure at both ends with twine.

If this were real:

4. Check for root formation periodically – rooting hormone may speed up root development.

5. When ample roots have formed, cut the new plant away from the mother plant.

Cleft Grafting Practice

Materials

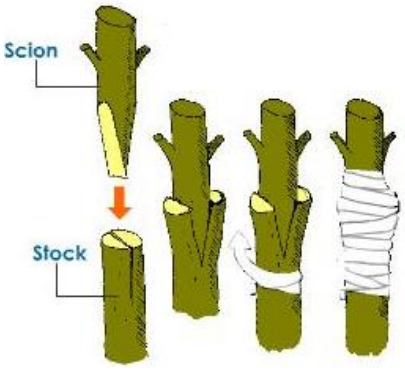
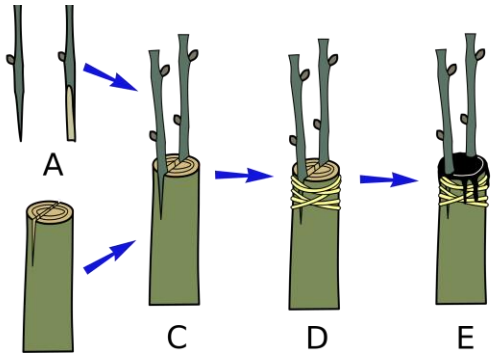
- Branches (hazel or cherry)
- Grafting knife or utility blade
- Rubber strips

Procedure

1. Take two branch segments of similar thickness, or one large segment and 1-2 smaller segments.

2. Cut a cleft into the middle of the larger segment (this is representing the rootstock).

3. Cut the segment (or segments) representing the scion into a wedge shape.

4. Insert the wedged pieces into the cleft – take care to line up the vascular tissue on at least one side.

5. Wrap tightly with a rubber strip.