Soil Chefs (Conduct an Experiment)

Soil Chefs - Lesson 3

For the Classroom

- Group structure - whole group
- Location - on carpet
- Approximate time - 40 minutes

Common Core and Georgia Standards of Excellence

- S3E1c. Students will use observation to compare similarities and differences of texture, particle size, and color in top soils (such as clay, compost, and sand).
- S3L1. Students will investigate the habitats of different organisms and the dependence of organisms on their habitat.
- S3CS8/S4CS8/S5CS8. Students will understand important features of the process of scientific inquiry.

Materials

- Turnip seeds (3 per small group)
- Identical pots with drainage holes, at least 4 in diameter and 4 in deep (1 per small group)
- Different soils: clay, sand, compost

Directions

1. Explain that we are going to conduct an experiment to figure out which group came up with the best soil recipe.
2. Each small group will measure out the parts of their soil recipe (with a total of 10 parts total) and mix it up. The parts can be measured with standard or non-standard measurement units.
3. Students can plant three turnip seeds in a cup with their soil mixture. Then, ask students to recall what plants need to grow and create a plan to account for each:
    a. Nutrients: seeds are planted in soil
    b. Air and Light: pick a location with plenty of light
    c. Water: develop a plan for watering each the same amount each day
4. (Once the turnip seedlings have grown to about 4 in high, they can be thinned to leave only the strongest seedling and remove the weaker seedlings.)

Lesson Created by Jenna Mobley for Georgia Organics