

Experiment: Which soil is best for healthy plants?

Explain to students that they will now conduct an experiment to see how healthy different soils are by trying to grow plants in them!

Materials required:

- a packet of fast-growing seeds (wheat is a good choice!)
- recycled containers for the seeds to grow in. This might be egg cartons, half a milk carton, or half a soft drink bottle with holes poked in the bottom. You need one of the same container for each soil type,.
- a range of soil samples, at least 4 - these can be collected from different places around the schoolyard or someone's garden
- labels and pens for marking the containers.

Instructions:

1. Gather your selection of soils and explain to students what each soil type is and where it comes from.
2. Share the seeds you have sourced for students to plant. Invite students to read the seed packet closely, paying attention to the seed's requirements to thrive. In particular, pay attention to the soil types the seeds prefer. Pose the questions and record students' predictions:
 - a. do you have any soil types that match the soil required by the seed?
 - b. which soil types do you think the seeds will like best and why?
3. Take your recycled containers and label them with each soil type.
4. Add the relevant soil to each container and plant your seeds.
5. Water them and place them in a sunny place.
6. Set up a roster for watering and observing your plants over the next week or two.

Notes: Students can record their observations of the growing plants. You can adjust the requirements for recording observations according to your students (students could annotate photos that you take, or could create a stop-motion video of the plant growth, or could record observations with their own sketches or written observations).

Once you are satisfied with the time your plants have had to grow (ideally, some will be growing and others will be less successful), you can engage students in a discussion around their observations. For example:

- which soil types do you think grew the healthiest-looking plants? How can you tell? (Refer back to your t-chart!)
- how successful do you think your experiment was? Did you have any challenges or setbacks? How did you overcome them?
- if you were to recommend a soil type for a regenerative garden, which would it be and why?