

EDUCATOR NOTES:

Soil – more than just dirt!

Learning and Engagement Approach

This activity is designed to engage young learners aged from 7 – 13 years.

The activity is intended to:

- facilitate an observation of soil samples
- help children understand how the qualities of soil can affect plant growth
- identify the characteristics of different types of soil.

Safety Considerations

- Check the weather before conducting any outdoors activity. If there is going to be extreme temperatures, storms or high wind, postpone the activity.
- Ensure that everyone is wearing closed shoes, hats and sunscreen and has a water bottle handy.
- Keep any allergy plan information at hand and any associated allergy medication.
- The leaf litter can be home to animals such as spiders and centipedes; make sure children know not to handle animals.
- Always check that there are no buried services underground if you are going to dig to collect your soil sample.
- Ensure that everyone washes their hands after finishing this activity.

Materials and References

Sourcing magnifiers

Magnifiers can be bought from discount stores and other similar shops, however most devices have a camera that zooms in on a subject quite well. There are also apps that transform a device's camera into a macro-lens, which will help you to zoom in on the structure of the soil.

Reference materials

[Exploring Soils A Hidden World Underground](#) by Samantha Grover and Camille Heisler is a delightfully illustrated children's introduction to the world of soil from CSIRO.

Site Suggestions

Choosing a location for your samples

There will likely be different soil types close by. You may be able to find some sandy soil close to a sandpit, as the sand will travel and mix in. Heavier clay soils can often be found in low areas and soil containing organic materials can often be found in garden beds.

If children are to collect some of their own soil samples for testing, there are a few things to consider. Outline safe digging practices and the importance of not harming plants, and how to return the soil once you have completed the activity.

Educator Tips

Arranging samples

Large tubs are a great way of presenting soil samples. The children can explore the sample in the tub, reducing the likelihood of mess.

Dirty hands

We suggest having a few buckets of water and old towels handy for children to rinse their hands during this activity. Children often delight in having soil-coated hands and having an easily accessible rinsing station helps with classroom management. Having the buckets for rinsing will also reduce the need for children to want to leave the classroom to wash their hands. Remember to get everyone to wash their hands properly (with soap) after this activity.

Exploring samples

Explore samples by feeling their texture. Through touch, you will be able to feel whether they feel rough (caused by sand particles) or smooth (caused by clay particles). Rolling the samples and studying whether they stay together or fall apart indicates the soil type. For more information, refer to this [Gardening Australia Fact Sheet](#).

Aligning this Activity

- [Investigating the soil food web](#)
- [Installing a no dig garden bed](#)
- [Creating compost](#)

Extension Activities

Extension 1

Does your soil hold a little or a lot of water? How could you test this?

Extension 2

What could you do to improve your soils capacity to grow food?



Community Engagement

Use [The National Landcare Directory](#) to find a community environmental 'care' group near you. Many Landcare groups have experience in understanding soils, their qualities and characteristics, we encourage you to connect with them.

Look to the [Junior Landcare Community Page](#) for organisations to contact to help support your soil investigations.

Use this [Australian City Farms and Community Gardens Network map](#) to find a City Farm or Community Garden near you to get some ideas for this project.

Curriculum and Framework Links

SCIENCE

Year 2: [ACSSU032](#)

Year 3: [ACSSU044](#)

Year 4: [ACSSU073](#), [ACSSU075](#)

Year 5: [ACSSU043](#)

Year 6: [ACSSU094](#)

Year 7: [ACTDEK032](#)

Year 8: [ACTDEK032](#)

Year 9: [ACHGK062](#)

CROSS CURRICULUM PRIORITY

[Sustainability](#)

MY TIME OUR PLACE FRAMEWORK FOR SCHOOL AGE CARE

[Outcome 2 and 4](#)