



Scouts Australia Environment Program



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MINI WORM FARM

Aim

The aim of this activity is to help youth understand how the process of composting works, and to encourage them to take up composting at home.

Educational objectives

Understand how worms compost organic material.

Age range

6-15

Summary

In this activity youth will make a mini worm farm in order to demonstrate how worms compost organic material

Equipment

Large plastic bottle (eg: 2L softdrink bottle), soil, sand, dead leaves/organic material, water, earthworms, cling wrap, dark paper, pencil, sticky tape, scissors/knife

Preparation

Collect the materials needed. Earthworms can be purchased at hardware stores or collected from a garden/compost bin. If you want to do this activity in one session, prepare a worm farm about two weeks in advance so that the youth can see the end result and the processes involved in a worm farm can be explained.



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Duration

1 hour

Setting

Any setting can be used for this activity, though if there is a veggie patch handy this would be a good setting, as the use for compost can then be demonstrated.

Background

Composting is a great way to return nutrients to soils to increase productivity in your veggie patch, and also helps to reduce the emission of greenhouse gases that occurs when waste is put into landfill or incinerated.

The fancy word for composting is vermicomposting, where vermi-refers to the worms that do all of the hard work. This work involves eating up to 50% of their body weight in food each day, and digesting it to produce worm castings, otherwise known as worm poo.

Worm castings are in high demand by farmers as they provide a natural fertilizer that can lead to a 126% higher growth rate than chemical fertilizers. This means that the food produced is organic, which is in increasing demand due to its green and health credentials.

Some foods make great compost, while others shouldn't be fed to worms. Good foods include:

- Anything green (especially leafy greens)
- Fruits
- Vegetables
- Coffee grounds and filters
- Tea bags
- Newspaper
- Crushed egg shells

Foods that shouldn't be fed to worms include:

- Citrus fruits
- Fats and oils
- Breads and cereals
- Salt
- Meat
- Sugar

Step by step guide to activity

Cut the top off of a large plastic bottle, and then fill the bottle with layers of soil and sand. Add 4 teaspoons of water to the soil and put dead leaves or other organic material at the top of the soil.

Add 2 or 3 worms to the bottle, before covering the bottle with food wrap and poking some holes in it with a pencil (so that the worms can breathe). Tape dark paper around the sides of the bottle and put the bottle in a shaded location.

Add 2 teaspoons of water each day to keep the soil damp and after 2 weeks, take the dark paper off. You should see that the worms have mixed up the soil and made tunnels. If you want to complete this activity in one session, use your prepared mini worm farm for the discussion.

Evaluation

After two weeks, when (hopefully) the worms have made some compost, it can be explained to the youth how composting works, and how it can be used on a bigger scale at home. Youth can also engage in a discussion around the benefits of composting, and what foods should and shouldn't be fed to worms.

Further activities

There are plenty of Scouts Australia activities about the environment; please speak to your local environment team member or take a look on Scout Central or your state website.

For more information on how composting works, you can visit the following websites:

- <http://home.howstuffworks.com/vermicomposting.htm>
- <http://en.wikipedia.org/wiki/Vermicompost>

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