

# Bug trap

Activity

## The Science

Our gardens have many different types of insects; some are beneficial to the plants, while others are not. One of the most common insects is the garden weevil. Adult garden weevils are brown or black beetles. Adult garden weevils feed on decaying materials and move in the soil, which aerates the soil. However, the larvae stage (white abdomen with red or black head) of garden weevils may feed on and damage plants such as vines. If you don't have plants that are food for the larva, then your garden will get the benefit of the aeration with no damage. Monitoring the garden weevil population is important especially if you have plants that are food for the larvae.

To monitor means to observe something over a certain period of time for a specific purpose. In this activity, we will be monitoring the garden weevil population over three months. To do this, we will set underground traps in our gardens every 14 days, which means six times over three months and record the number of garden weevils caught. Before you begin this activity, please read the method and safety instructions carefully.

## Safety instructions

This activity involves shovels and the handling of live garden weevils. It should be carried out only under the supervision of an adult. Also, ensure gloves are always worn during this activity.

## Materials

- 1 pair of gloves (garden or hygiene gloves will work)
- 3 disposal drinking water cups (clear is best)
- Hand trowel/small shovel
- 1 disposable plate
- 1 pair of tweezers

## Instructions

1. Identify three random spots in the garden to set the traps. The spots should be far apart.
2. At each spot, using a hand trowel, dig a hole the size of your disposable cup
3. Place the disposable cup in the hole, secure it with soil and cover it loosely with a big leaf to prevent small leaves from falling in the cup.
4. After 24 hours, remove each cup and place all insects collected on a disposable plate
5. Using a pair of tweezers, look for garden weevils in the collections, count and record it
6. Afterwards, release all the insects collected, including the garden weevils
7. Repeat the steps above every two weeks over three months
8. After three months, observe the changes in the number of garden weevils

## Things to think about

- Did the population of garden weevils increase or decrease?
- Why did we use underground traps to monitor garden weevils?
- Are there any other methods we could use to monitor the garden weevil population?
- Would your results be different if you ran the experiment during a different season?  
Winter vs Summer? Spring vs Autumn?