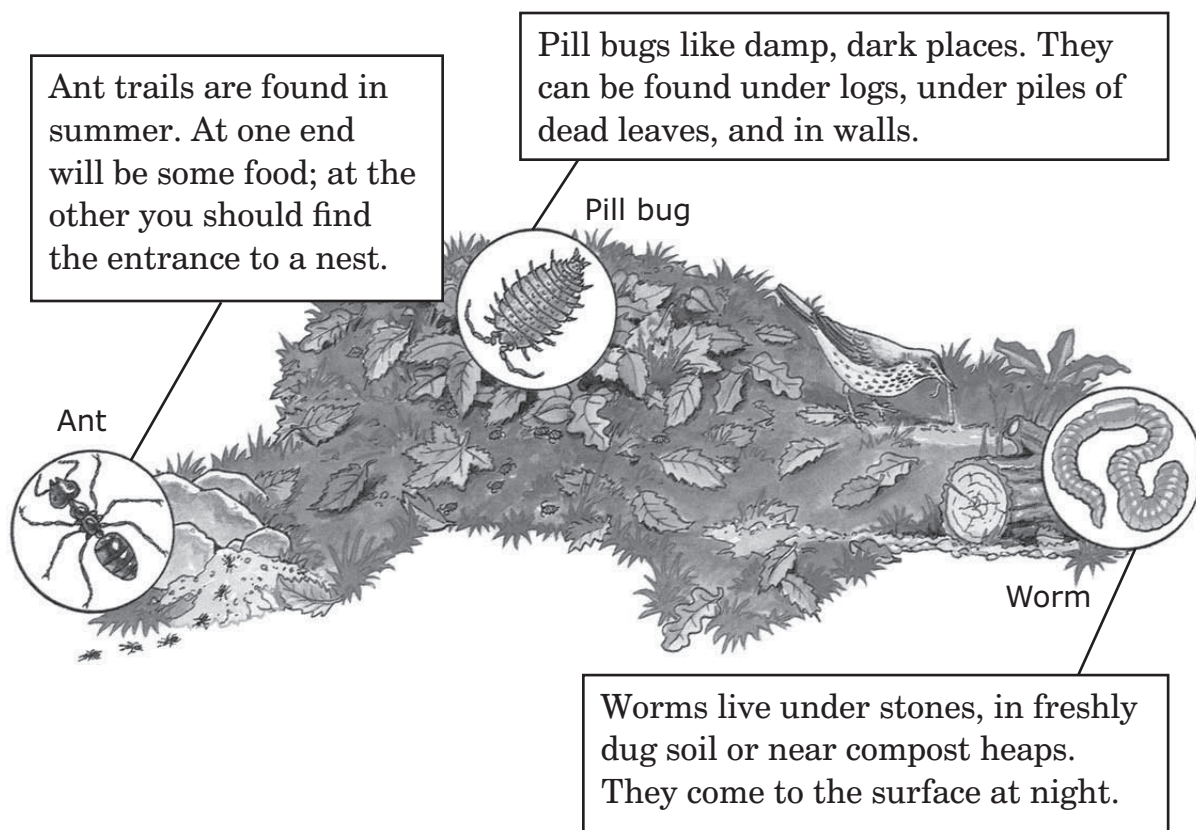


# Searching for Food

Here are three projects about the things small creatures eat and the ways they search for food. First you need to find actual ants, pill bugs, and worms. Treat them carefully and make sure you put them back where you found them after you have finished studying them.

- Follow an Ant Trail
- Study Pill Bugs
- Make a Wormery

## Where to find ants, pill bugs, and worms





## Follow an Ant Trail



Ants live together in nests. When an ant finds some food it makes a trail for others to follow. To do this experiment you will need to find an ants' nest. You will also need the following materials: a sheet of paper, a small piece of apple, a handful of soil.



1. Put the piece of apple on the sheet of paper and lay the paper close to an ants' nest. Wait for some ants to find the apple. They should all follow the same trail.



2. Move the apple. Do the ants go straight to it?



3. Now sprinkle soil on the paper to cover the trail. The ants should scurry around for a while. Do they make a new trail?



### What happens?

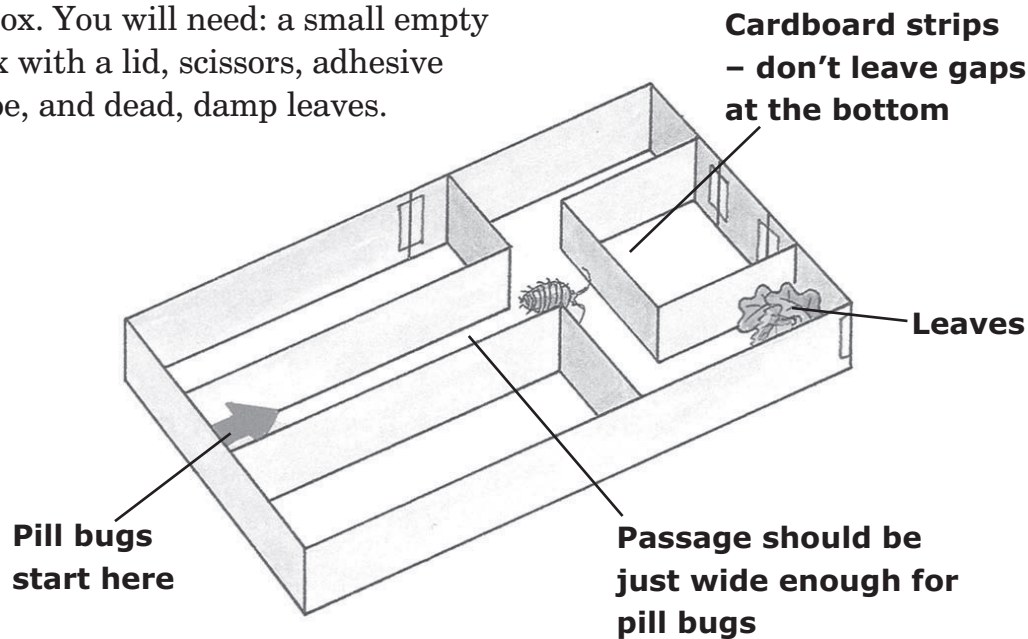
Even after the food has moved, the ants still follow the old trail until a new one is laid.

### Why?

Once an ant has found some food, it produces special chemicals that leave a scent trail. Other ants from the nest use their antennae, or feelers, to sense this scent.

## Study Pill Bugs

Pill bugs have sensitive antennae. Make this box, then collect six pill bugs in a container. Watch how they find their way when you put them in a box. You will need: a small empty box with a lid, scissors, adhesive tape, and dead, damp leaves.



1. Use the lid to make three long strips for making the passages in the picture.
2. Let your pill bugs walk along the passage one at a time. When they reach the end of the passage, some will turn left and some will turn right.
3. Put damp leaves in the right hand side of the box. Now let the pill bugs walk through the box again. Which way do they go?

### What happens?

The pill bugs will turn to the right toward the food.

### Why?

The pill bugs can sense the food with their antennae. They use them to find the leaves.

## Make a Wormery

Worms are hard to study because they don't like the light. As soon as they sense it, they wriggle away, trying to find a dark place again. To see how worms live and feed, make a wormery like the one shown here. Then find two or three worms to put in it. It is important to remember

not to pull on the worms or you may hurt them. They are covered with bristles that grip the soil tightly.

### You will need

- Shoe box
- Adhesive tape
- Pen
- Scissors
- Large plastic bottle
- 1 mug of sand
- 3 mugs of damp, crumbly soil
- Small cubes of onion and potato

1. Tape one side of the shoe box lid to the box, so it opens like a door. Poke holes in the top of the box with the pen to let air and light into the wormery.

2. Cut the top off the bottle. Then fill it with loosely packed layers of soil and sand. Scatter potato and onion on the surface.

3. Gently drop in your worms, then stand the bottle in the box and close the door. Leave it outside in a cool, dry place for four days.

4. After four days, go back and look at the bottle. What is different about the sand and soil?

**Don't forget:** when you've finished with this project, put the worms back where you found them.

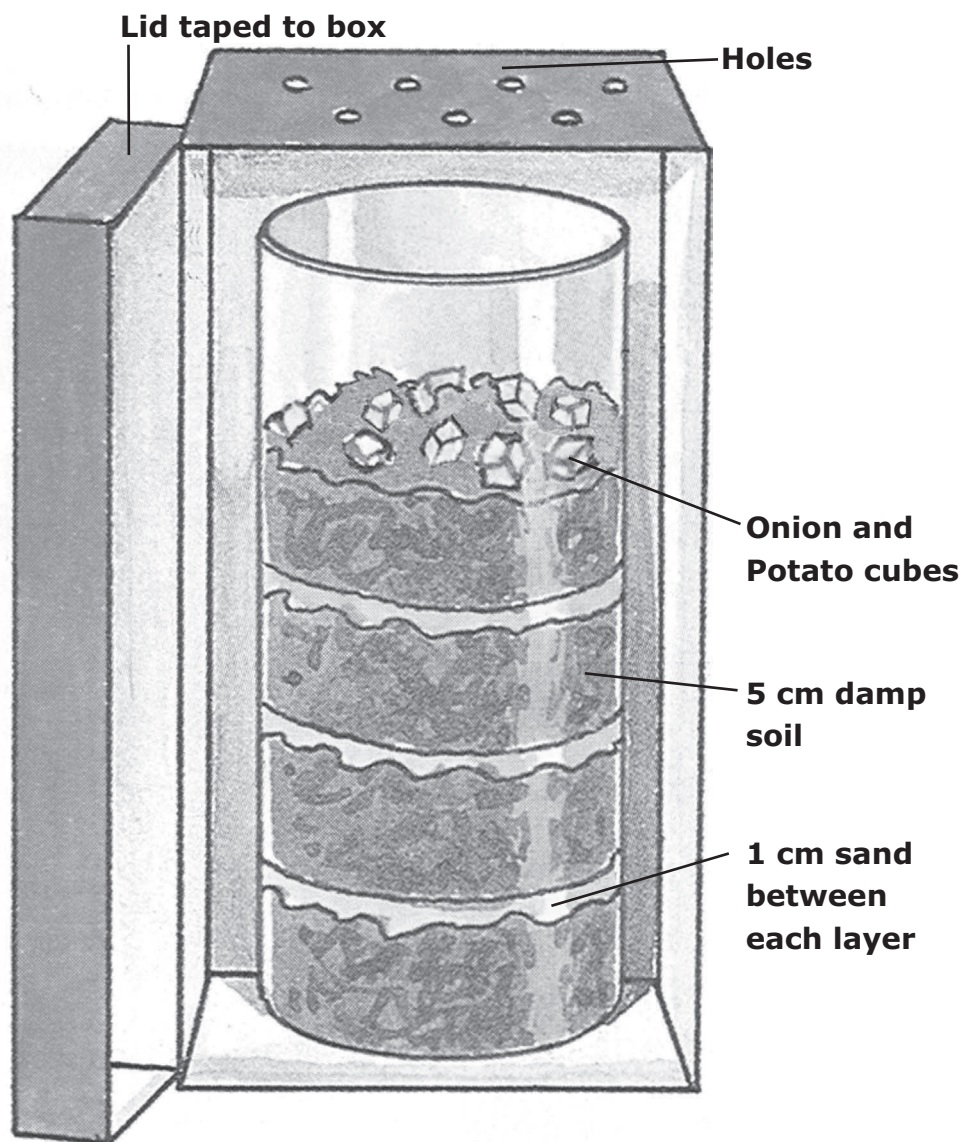


**What happens?**

After four days, the layers of sand and soil will have been mixed together.

**Why?**

The worms mix the sand and soil coming to the surface to eat the food and then tunneling underground to get away from the light.



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