

Mealworm Activities

Meet the mealworm. It's the larva (early stage) of a type of beetle. You're more likely to see this insect in an old box of cereal than in the movies. But mealworms can still do some amazing things. First, get to know your mealworm and its natural behaviours.

ACTIVITY 1: INTRODUCTION

What You Need:

- mealworm
- small clear container (If it has a top, poke holes in it so your mealworm can get air.)
- flat toothpick
- uncooked oatmeal
- slice of potato (It should be about the size of a potato chip. You can also use an apple.)
- lab sheet

Think: What are a mealworm's basic needs?

Your teacher will give you a mealworm in a container.

Observe your mealworm. You can look at it in or out of the container. To lift it out, gently nudge the flat end of a toothpick under its legs. Your mealworm should grab hold. Lift the toothpick and mealworm carefully.

Record these observations on your lab sheet: What does your mealworm look like? What does it do? How many legs does it have? Does it move quickly or slowly?

Next, you'll make your mealworm's habitat. If your mealworm is in the container, gently "pour" it onto a sheet of paper.

Fill the container about half full of oats.

Place a potato slice on top of the oats.

Place your mealworm on top of the oats. What does it do? Can your mealworm crawl up the sides of the container?

Write down any more observations on your lab sheet.

Wrap-up: What basic things does your mealworm need to live? Where is your mealworm's source of water? Based on your observations, do mealworms prefer light areas or dark areas? Did your mealworm have an easier time moving when it was on a smooth surface or in the oats?

Bonus: Keep your mealworm in its habitat and record what it does every day. How does it change over time?

ACTIVITY 2: ACTIONS AND REACTIONS

What You Need:

- your mealworm
- tray or sheet of paper
- flat toothpicks

- watch with a second hand
- cotton swab
- peppermint extract (Or use another strong-smelling liquid, like vanilla or vinegar.)
- flashlight
- paper towel
- water
- book
- straw
- lab sheet

Think: A stimulus (STIM-yoo-luss) is something that can cause an animal to react. What's one stimulus your mealworm has encountered?

Take your mealworm out of its container with the flat end of a toothpick.

Place it on an empty tray or a piece of paper.

Put your mealworm through stimulus tests A-G at right. Record your mealworm's reactions on your lab sheet. If you are unsure of its reaction, try the test again.

Wrap-up: How did your mealworm react to each test? If you tried the same test more than once, did your mealworm react the same way each time? Did each mealworm in the class react the same way?

How do these tests mimic things that could happen to a mealworm in the wild?

Bonus: Can you think of another stimulus that your mealworm might react to?

When you have an idea, check it with your teacher. Then test your mealworm.

Record your results on your lab sheet.

- A) Touch Test:** Use a toothpick to gently touch your mealworm's antennae (the two tiny stubs on its head).
- B) Drop Test:** Carefully pick up your mealworm using a toothpick. (See step 2 on page 11.) Lift the mealworm about 10 cm (4 in.) off the desk. Hold it in the air for 30 seconds, then let it drop.
- C) Light Test:** Shine a flashlight so that only the front half of your mealworm is in the beam.
- D) Edge Test:** Place a book on your desk. Place your mealworm next to the book's spine.
- E) Wind Test:** Aim a straw at your mealworm's head. Blow gently.
- F) Water Test:** Wet a small piece of paper towel. Place a dry piece next to it. Put your mealworm in between the two pieces.
- G) Smell Test:** Dip a cotton swab in peppermint extract and hold it in front of your mealworm.

(Think: Will my mealworm act the same when it grows up and becomes a beetle?)