



MAKING A SIMPLE MICROSCOPE WITH A WATER DROP

Name: _____

Date: _____

Experiment #: _____

You can make a simple microscope using just a water drop! The drop acts like a tiny lens that magnifies small objects.



PURPOSE

To build a simple microscope using a water drop and observe small objects up close.



MATERIALS

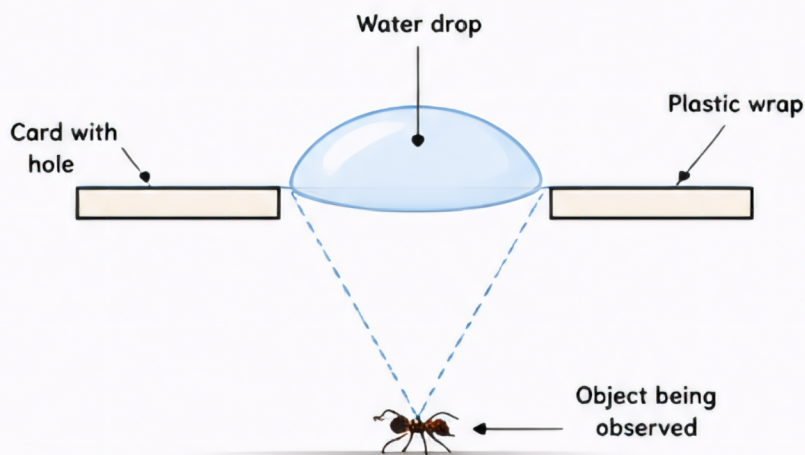
- Cardstock or index card
- Clean plastic wrap
- Water
- Small object to observe (e.g., printed text, ant, plant leaf, fabric, sand, etc.)
- Tape
- Smartphone (optional, for photos)
- Ruler (optional)



PROCEDURE

- 1 Cut a small hole (about 1–1.5 cm wide) in the center of the card.
- 2 Stretch a piece of plastic wrap tightly over the hole and tape it on all sides to keep it tight.
- 3 Place one small water drop in the center of the plastic wrap. The drop should form a dome shape.
- 4 Hold the card over your object. Move it up and down to find the best focus.
- 5 Look through the water drop. What do you see?
- 6 Try different objects and record your observations.
- 7 (Optional) Take a photo through the droplet using your smartphone.

HOW IT WORKS



The water drop bends (refracts) light, making the object below appear larger.

OBSERVATIONS

Draw or describe what you see.

REFLECTION QUESTIONS

1. What objects worked best to look at? Why?

2. How did moving the card change what you saw?

3. What do you think would happen if the water drop was bigger?

4. How is this similar to a real microscope?



SCIENCE TIP: Keep the plastic wrap tight and the water drop rounded for the clearest image.