

Date: _____

Worms and Decomposition

Setting Up Decomposition Cups

In this investigation you will make decomposition cups to discover how composting worms affect the remains of plants.

Investigative Question: How do worms affect the decomposition of cucumbers?

Materials:

- Newspaper
- Scissors
- Water and container to soak newspaper
- Two paper lunch bags
- Two plastic cups
- Masking tape (optional)
- Permanent marker
- Plastic knife
- Eight small pieces of chopped cucumber
- Container of perlite
- Worms from the worm bin
- Two pieces of plastic wrap
- Two rubber bands
- Ruler
- A glove for each member of your group (optional)

Procedures:

Prepare the newspaper

If you would like to use gloves, put them on now.

1. Cut and separate thin strips of newspaper, approximately 1 cm ($\frac{1}{3}$ in) wide.
2. Soak the strips in water.
3. Squeeze out any extra water. The paper should be damp, not soggy.

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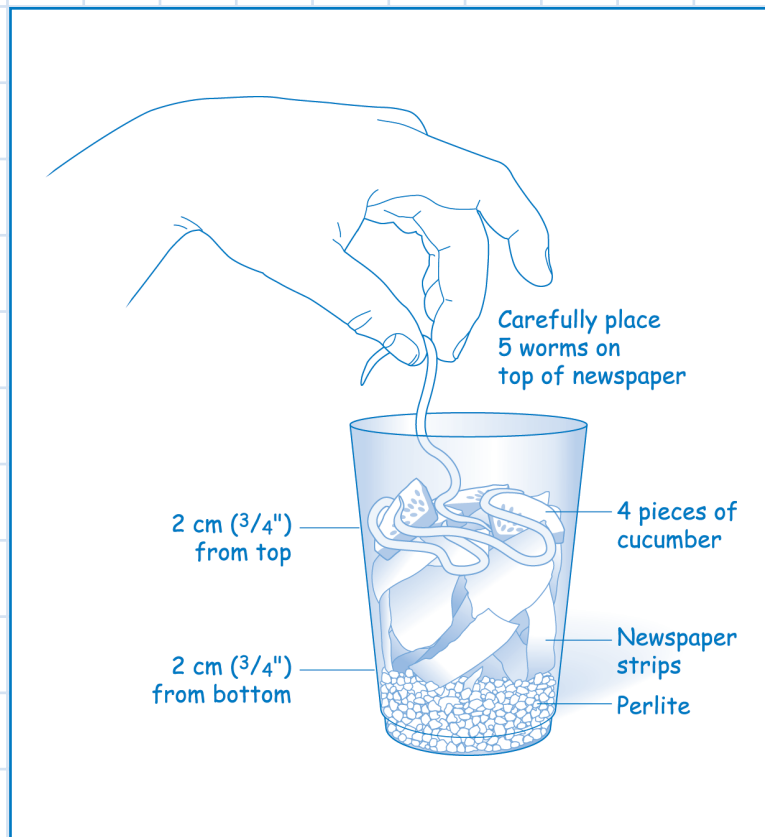
Label your bags and cups

You can use tape as labels or write directly on the cups and bags with a permanent marker.

1. Label one cup and one bag "Worms."
2. Label the other cup and bag "No worms."
3. Label each cup and bag with your group members' names and today's date.

Assemble the cups

1. Fill each cup approximately 2 cm ($\frac{3}{4}$ in) deep with perlite.
2. Loosely put the damp newspaper strips on top of the perlite to about 2 cm ($\frac{3}{4}$ in) from the top of the cup. Do not pack down.
3. Cut the cucumber into four small pieces and place on top of the newspaper.
4. Get five worms from your teacher. Put them on top of the cucumbers in the cup labeled "worms." (Wash your hands if you touch the worms without gloves.)
5. Observe how the worms react to their new environment. Record your observations on the top of page 16.



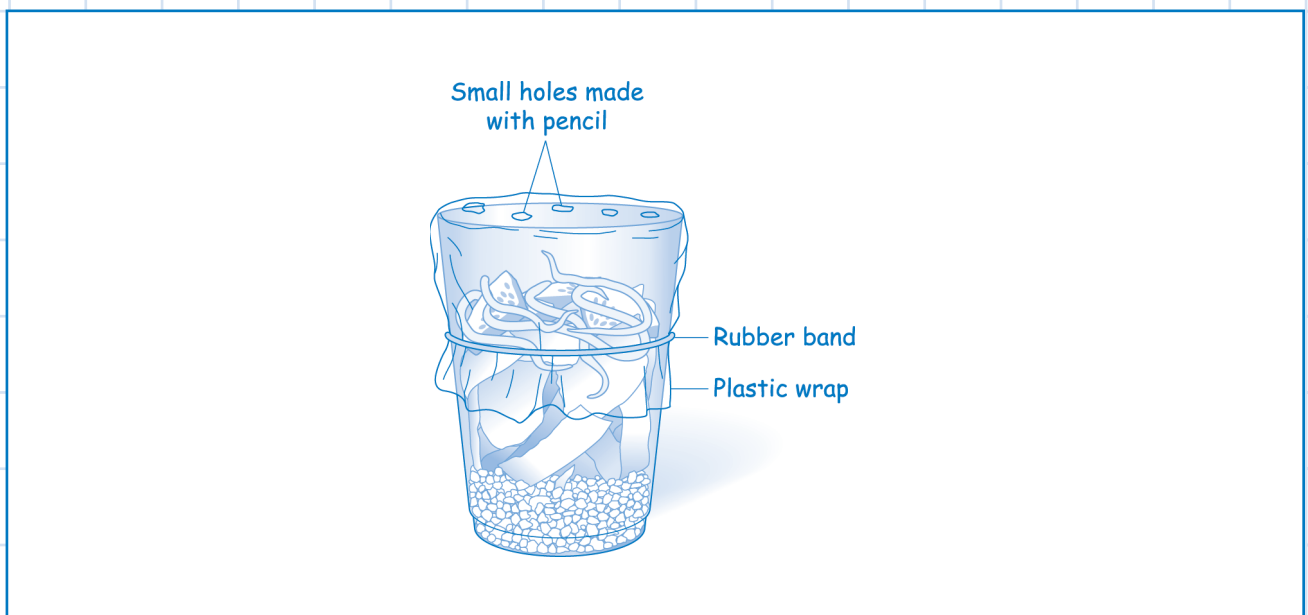
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Store the cups

1. Cover the tops of the cups with plastic wrap. Use a rubber band to keep the plastic wrap in place.
2. Poke five small holes into the wrap on top of each cup with your pencil.



3. Carefully move both cups to the area your teacher has assigned for them.
4. Place a bag upside down over each cup
5. Remember to check your worms regularly. If the materials in the cup are drying out, use a spray bottle and lightly mist the top of the materials.

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Observing and Predicting

First Observation: How are the worms reacting to their new environment?

Prediction: Based on what you already know about composting worms and decomposition, what do you think will happen to the materials in each cup? Why?

I think:

I think this because:

Date: _____

Worms and Decomposition

Examining the Decomposition Cups

Procedure:

1. Cover your desk with newspaper. Place two white paper plates or two white sheets of paper on the newspaper.
2. Remove the paper bag, the rubber band, and the plastic wrap from each of your cups.
3. Look inside each cup.
4. Gently dump out the contents of each cup onto the plate or paper on your desk. Record any other observations you have. Wear a glove, or wash your hands before and after touching the worms.
5. Draw and describe your observations in the data table below.

Observations:

Cup with Worms	Cup without Worms

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Reflecting on the Decomposition Cups

Results: Was there anything new in either of the cups that wasn't there to begin with? Describe the differences between the cups.

Conclusion: How did the worms affect the decomposition of the cucumber?