

PLANNING RESEARCH

CHOOSING A RESEARCH TOPIC

Name _____ Date _____

Are worms and other soil invertebrates needed for decay of leaves in the woods?

Will composting proceed faster if I inoculate it with microbes from the garden store?

If I put leaves in a stream, can I collect invertebrates that will shred them for food?

Do more oil-eating microbes grow in a parking lot than in a grassy field?

Do the dissolved oxygen and CO₂ levels in a pond change from day to night?

Will biodegradable food packages degrade faster in sunlight or in compost?

1. Make a list here of questions that you would be interested in investigating using *Decay and Renewal* protocols.

Example: Does moisture level affect the rate of biodegradation in compost?

2. Of these questions, which seem the most important and interesting? Pick three:

- 1.
- 2.
- 3.

3. For each of the three questions you have chosen, think of how you might design an experiment. Then fill out Table 3.2.

TABLE 3.2
Potential Research Questions

Question	Brief description of research you might do to address this question	What equipment and supplies would you need?	How long would it take to carry out this project?	Would fieldwork or travel to field sites be required?
<i>Example: Does moisture level affect the rate of biodegradation in compost?</i>	<i>Build three bioreactors and fill them with the same ingredients except for the amount of water.</i>	<i>Soda bottles and other bioreactor supplies, grass clippings, and wood shavings.</i>	<i>One period to build the bioreactors, two weeks for composting, then one period to analyze results and clean up.</i>	<i>No, we can bring in grass clippings from home and get other supplies at school.</i>
Question 1:				
Question 2:				
Question 3:				

SECTION 3. INTERACTIVE RESEARCH

4. Looking over Table 3.2, consider whether each project would be feasible for you to carry out. Are the equipment and supplies available? Do you have enough time? Will you be able to do whatever fieldwork is needed? Eliminate any questions that do not seem feasible based on logistics such as these.

	Would this project be feasible?	Why or why not?
<i>Example Project</i>	<u>Yes</u> No	<i>Uses supplies we have available and grass clippings we will bring in from home.</i>
Project 1	Yes No	
Project 2	Yes No	
Project 3	Yes No	

5. Choose a project you have decided is feasible and interesting, then continue on to **Interactive Research Planning Form #1** or **#2**.