

CENTRE 2 PACKAGE

Water Habitat Experiment

OUTCOME

4-1-14: Investigate natural and human-caused changes to habitats, and identify resulting effects on plant and animal populations.

MATERIALS

- 2 medium-sized tanks or tubs (preferably transparent), labelled "Habitat 1" and "Habitat 2"
- Bin filled with sand and a scoop
- Bin filled with rocks and a scoop
- 3 cups - each filled with ~10 dirty paintbrushes (1 per group)
- 3 cups - each filled with raisins and labelled "Insects" (1 per group)
- 3 small piles of various types of leaves (1 per group)
- 3 small piles of twigs/bark/stems/pinecones (1 per group)
- A few bars of soap
- 3 small piles of litter (e.g. styrofoam packing bubbles, plastic cutlery, plastic wrap, juice boxes, drink cans, etc.)
- 1 plastic/rubber fish (waterproof) labelled "Freddy"
- Paper towel
- Place to dispose of water (i.e. sink)
- Newspaper to line work areas
- Writing utensils
- Contents of this package

TEACHER INSTRUCTIONS

Print out this package and read through it. Gather the required materials listed below. Follow the directions outlined below to conduct the experiment.

*This centre may require teacher/adult supervision.

IN THIS PACKAGE...

- Experiment instructions sheet for students (page 3)
- Student worksheet (page 4)
- Answer key (page 5)

(continued on page 2)



EXPERIMENT DIRECTIONS:

1. Read and post the "Experiment Instructions" sheet (page 3) at the station for student reference. (You may want this sheet laminated to prevent it from getting wet.)
2. Prepare the materials for the experiment (e.g. photocopy worksheets, lay out the newspaper, set out bins, cups, etc.).
3. Ask the students to fill each of the tubs labeled "Habitat 1" and "Habitat 2" half full of water. (They may require help with this.)
4. Instruct students to follow the directions on the "Experiment Instructions" sheet to complete the experiment.
5. Once the experiment is completed, instruct students to clean up the experiment centre.
6. After cleaning up, students can complete the worksheet individually or with their group. Collect completed worksheets for assessment.



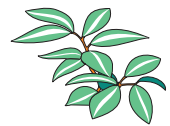
Experiment Instructions

You will be doing this experiment as a group. Everyone will participate. Make sure to follow the instructions carefully and in the correct order shown here. All of the materials that you require are provided at this centre. Once 'Habitat 1' and 'Habitat 2' are half filled with water, you may begin the experiment.



Habitat 1

1. Add 3-5 scoops of sand and allow the sand to settle.
2. Add 2 scoops of rocks.
3. Add one pile of leaves, twigs, and bark or pinecones.
4. Throw in a few 'insects' (raisins).



Habitat 2

1. Roll up your sleeves and dip your hands into the water.
2. Pass the soap around and lather. Make sure that everyone's hands are lathered up.
3. Rinse your hands in the tub of water. Use the paper towel to dry off.
4. Take some dirty paintbrushes and clean them in the soapy water. Use the paper towel to dry them off.
5. Now add one pile of litter into this habitat.



Look at the 2 habitats that you now have. Notice the differences. Put Freddy the Fish into the habitat that you think he would like the best.

Clean up this station. Take the objects out of the water **BEFORE** you empty the tubs. Don't forget to wipe up any spills!

Now, complete the worksheet.













Name: _____

My Habitat Experiment

1. I put Freddy the Fish in Habitat # _____ because _____

_____.

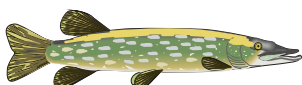
2. Below is a list of things that sometimes end up in streams, rivers, and lakes. In the second column, circle how you think those items get there (nature or humans). In the third column, circle which habitat from your experiment (1 or 2) these items might belong to.

Item	How it gets in lakes and rivers		Habitat it belongs to	
<i>toxic chemicals</i>	 nature	 humans	1	2
<i>plants</i>	 nature	 humans	1	2
<i>logs/branches</i>	 nature	 humans	1	2
<i>trash/waste</i>	 nature	 humans	1	2
<i>rocks</i>	 nature	 humans	1	2



3. What is the difference between the items that you added to Habitat 1 and the items that you added to Habitat 2? _____

4. Which habitat will have healthier fish? Why? _____



My Habitat Experiment - Answer Key

1. I put Freddy the Fish in Habitat # 1 because this habitat has everything a fish needs to survive. There is shelter, food, clean water and space. (Allow for slight variations in answers.).

2. Below is a list of things that sometimes end up in streams, rivers, and lakes. In the first column, fill in how you think those items get there (nature or humans). In the second column, fill in which habitat from your experiment (1 or 2) these items might belong to.

Item	How it gets in lakes and rivers	Habitat it belongs to
<i>toxic chemicals</i>	humans	2
<i>plants</i>	nature	1
<i>logs/branches</i>	nature	1
<i>trash/waste</i>	humans	2
<i>rocks</i>	nature	1



3. What is the difference between the items that you added to Habitat 1 and the items that you added to Habitat 2? The items in Habitat 1 are natural (from

nature) and the items from Habitat 2 are human-made. The human-made items were harmful to the habitat.

4. Which habitat will have healthier fish? 1 Why? Habitat 1 has food,

shelter, space, but no harmful substances like there are in Habitat 2. (Answers may vary.)

