

Purpose Of A Redd

This activity demonstrates how a gravel redd protects salmon eggs from predators.

Materials:

- ⇒ Large basin
- ⇒ Water
- ⇒ Modeling clay
- ⇒ Toothpicks
- ⇒ Rocks 5 to 10 cm (2 - 4 in) in diameter and gravel
- ⇒ Copies of Handout 2.2, "Making a Redd Observation Page," for each student.

Time Required:

One or two lessons

Level of Conceptual Difficulty:

Moderate to advanced

Evidence for Assessment:

Review student discussion and observation pages to ensure they can describe how a redd protects salmon eggs from predators and strong water flow.

INTRODUCTION

- ☞ Discuss with the class how pets and other animals keep newly born babies safe and healthy.

They make a secure nest or den for the babies, bring them food and drink and protect them from intruders.

- ☞ Explain that a redd is like a nest made of gravel on the stream or lake bed, in which spawners lay their eggs.
- ☞ Have the class suggest reasons why spawners create a redd in which to lay their eggs, and write their ideas on Handout 2.2, "Making a Redd Observation Page."

ACTIVITY, PART ONE

- ☞ Have students make small eggs from modeling clay, about one half centimeter in diameter, place them at one end of a basin, and predict what might happen to them in a stream.
- ☞ Tilt the basin at an angle, pour water gently over the model eggs, and have students count the eggs that are washed to the bottom of the basin.
- ☞ Have some students in pairs act as birds, use toothpicks to peck at the eggs, and count and record the eggs they catch in ten seconds.

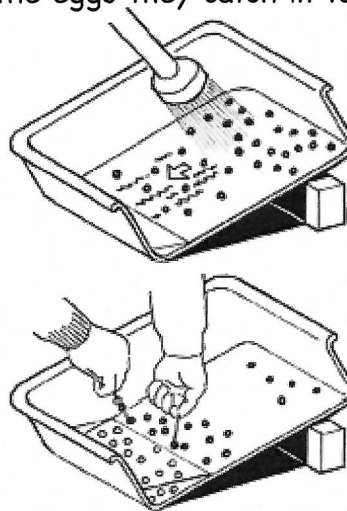
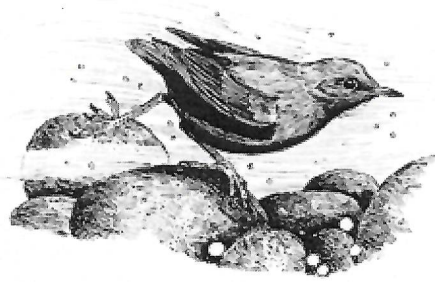


illustration: Donald Gunn

ACTIVITY, PART TWO

illustrations: Donald Gunn

- ☞ Make a model redd using rocks and gravel at one end of the basin. Place the model eggs in the redd and cover them with gravel. Have students predict what might happen to them in a stream.
- ☞ Tilt the basin at the same angle as Part One. Pour water gently over the redd and have students count the eggs that are washed away.
- ☞ Have some students in pairs act as birds, use toothpicks to peck at the eggs, and count and record the eggs they catch in ten seconds.

ACTIVITY, PART THREE

- ☞ With the class, compare the outcomes for Activities, Part One and Part Two. Make a graph to compare the number of eggs that were washed away or caught by birds in Part One and Part Two.

DISCUSSION

- ☞ Discuss with the class what conclusions they can add to Handout 2.2, "Making a Redd Observations Page." If necessary, prompt them with questions such as the following:
 - Were more eggs washed away with the redd or without?
Without.
 - Did the birds catch more eggs with the redd or without?
Without.
 - How was the redd in the basin like a redd in a stream? How was it different?
Similar materials and shape, but smaller, less water flow.
 - How would a redd help protect the eggs in a real stream?
It would hide them from birds, and keep them from washing away. It would also help protect them from other predators, such as fish, so more would survive.

