

MURRE EGG RELAY



OBJECTIVE:

Students will learn about the nesting habits of murre, the uniqueness of their eggs, and experience the challenges seabirds face in raising their young. The activity consists of two parts - making paper mache eggs, and an active relay game.

BACKGROUND:

The seabirds called murre must be students of daring and physics. Daring, because they each lay their one egg on an open rock ledge (or open ground if their island has no land mammal predators) and build **no nest**. Their egg could roll off the ledge and plunge to the rocks below except for its shape - and physics. Their large **egg is shaped like a pear**, narrow at one end and wide at the other. This causes the egg to roll in a tight circle, making it less likely to roll over the edge.

Murres incubate their egg by holding it on top of their feet and against their belly, under a loose fold of feathers and skin. While one parent feeds offshore, the other sits on the ledge, incubating the egg. Oc-

asionally the parents will switch roles, carefully passing the egg between them.

Murre eggs vary in color from a pale blue-green to dark turquoise with black spots. The color helps to camouflage any unguarded eggs from air-borne predators looking down at the cliffs. The pattern of black splotches varies on each egg and may help adults recognize their own egg.

MATERIALS:

- Items to make paper mache eggs:
 - small water balloons, one for each student
 - newspaper torn in strips
 - flour and water
 - several bowls
 - blue, green and black paint
 - paint brushes
- Goldfish crackers
- Paper plates, one for every two students

PROCEDURE:

This is a two part activity and will extend over several days.

Part 1: Making paper mache murre eggs

1. Blow up small water balloons to approximately the size of a large pear and tie off. Mix flour and water in a bowl to make a paste. Dip newspaper strips in paste. Use fingers to remove excess paste and press strip to balloon. Continue until balloon is completely covered. Apply 2-3 layers of strips. Allow to dry for 2-3 days.

2. When the eggs have dried, paint them. Mix blue and green to obtain a turquoise color for the background. Decorate with black dots. Allow the paint to dry for 1-2 days. While making the eggs, discuss the unique shape and coloration of murre eggs. Have the students try to roll their egg off the edge of the table.

Part 2: Relay game

1. In a gymnasium or other large room, divide the group into pairs. Each pair of "murre" parents will need one egg.

2. Line up the "murres" along one side of the room. This side of the room represents the cliff ledge. Opposite of each pair on the other side of the room place a paper plate with six goldfish crackers on it. There should be one plate for each pair. This represents the ocean offshore where the birds feed.

3. Begin with one member of each pair holding the egg on the top of their feet. Stress that the egg cannot touch the cold floor, so must stay *on top* of the feet, not just between them.

4. At the signal "Go!", the other member of each pair must run to the "feeding area", take one fish from his/her pair's plate and eat it, and return to the cliff.

5. Now the pair switches roles, and must carefully pass the egg from feet of one to the feet of the other, *without using their hands*. Once the egg is securely on the feet of the other partner, the feeding partner now goes to the "ocean" to get a fish. Play continues until the food is all gone.

6. In the next round, play the same as above, except have two players be "rats" (or other predators such as ravens or foxes). The "rats" move around the cliff area and look for unattended eggs. If an egg rolls off the feet of the murre, it can be snatched by a rat. The rats can use their hands to grab the eggs, but they cannot steal the eggs off the feet of the murre. The murres must hold the egg on top of their feet, and not allow it to rest on the cold ground. If a murre pair loses their egg, they are out of the game.

7. Play several more rounds, varying the number of rats.

8. For the final round, show the effects of low-flying aircraft on a bird colony. Have someone pretend to be an airplane, buzzing low over the cliff. As the airplane flies past the birds, it frightens all of the murres and they jump off the cliff and fly out to the ocean, leaving their eggs unguarded on the cliff. The murres must touch the far wall of the room before returning to the cliff ledge. The rats try to gather as many eggs as they can before the murres circle back and land again on the cliff ledge. Did any eggs survive? Discuss what might happen if this occurs over and over again during the nesting season.

EXTENSIONS:

1. Test how well the camouflage of your murre eggs works in the playground. Hide all of the eggs around the playground in plain view. Have the students pretend they are predators such as ravens, rats or foxes. Allow them 3 minutes to collect as many as they can find.

2. Put all of the eggs together on a "ledge" (or on the floor). Have the students try to find their own egg.

3. During a field trip to a seabird colony, observe murres. Look for eggs, or see if you can tell which birds have eggs or chicks. The poster illustrates a murre feeding its chick.