



#9754

FISH OUT OF WATER

GANGLION FILMS, 2001

Grade Levels: 10-13+

55 minutes

DESCRIPTION

Documentary records Project Puffin, the successful effort to repopulate Seal Island, Maine, with Atlantic puffins and terns. Notes their life, behaviors, and mating during the summer before fall migration. Also remarks on the interdependence of terns and puffins. Biologists comment.

ACADEMIC STANDARDS

Subject Area: Science – Life Sciences

- ★ Standard: Understands relationships among organisms and their physical environment
 - Benchmark: Knows how the interrelationships and interdependencies among organisms generate stable ecosystems that fluctuate around a state of rough equilibrium for hundreds of thousands of years (e.g., growth of a population is held in check by environmental factors such as depletion of food of nesting sites, increased loss due to larger numbers of predators or parasites) (See Instructional Goals #2 and 5.)
 - Benchmark: Knows ways in which humans can alter the equilibrium of ecosystems, causing potentially irreversible effects (e.g., human population growth, technology, and consumption; human destruction of habitats through direct harvesting, pollution, and atmospheric changes) (See Instructional Goals #3 and 4.)

INSTRUCTIONAL GOALS

1. To describe species of birds living on islands in the Gulf of Maine.
2. To describe the social, mating, and nesting habits of puffins and terns.
3. To point out reasons for the extermination of these birds on the islands 100 years ago.
4. To explain the purpose and success of Project Puffin.
5. To describe the predator/prey relationship on the islands.

VOCABULARY

- | | |
|----------------------|-------------------|
| 1. billing | 9. loafing ledges |
| 2. brood patch | 10. mating calls |
| 3. burrow | 11. millinery |
| 4. camouflage | 12. predators |
| 5. colonial breeders | 13. rafts |
| 6. decoy | 14. scrape |
| 7. egg tooth | 15. smelts |
| 8. grubbing | 16. wheeling |

BEFORE SHOWING

1. Locate on a map the islands that are the focus of the video: Seal Island, Eastern Egg Rock, and Matinicus Rock.
2. Display pictures of the birds that are shown in the video: Atlantic puffin, black guillemot, black-backed gull, eider duck, common tern, and Arctic tern
3. Discuss how wildlife projects are set up and funded. List some local projects that are being conducted.

DURING SHOWING

► Discussion Items and Questions

1. View the video more than once, with one showing uninterrupted.
2. Point out the following as they are explained in the video:
 - a. billing
 - b. wheeling
 - c. mating dance/rituals
 - d. decoys
 - e. scrape
 - f. brooding patch
3. Pause at the section showing the torn shirt and hat of the scientist working on the island. Discuss why the birds attack the workers.



AFTER SHOWING

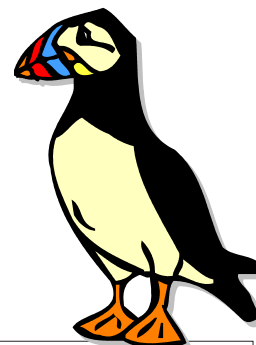
► Discussion Items and Questions

1. What are the names of various birds that inhabit some of the islands off the coast of Maine?
2. Which birds are predators of the puffins?
3. Which birds are allies of the puffins?
4. Why did the number of birds decrease sharply in the 19th century after the arrival of European settlers?
5. What was the purpose of Project Puffin when it was established in 1973?
6. From where did scientists bring puffins to Eastern Egg Rock in an attempt to set up new colonies?
7. Where are the homes of the puffins chicks set up?
8. What are the puffin chicks fed?
9. How old are the puffins when they leave their burrows and head out to sea?
10. How long do they typically stay at sea before returning to land to nest?
11. What are colonial breeders?
12. What is placed on the island to encourage the puffins to stop and nest there?
13. In how many days does a puffin's egg hatch?
14. How is the egg incubated?
15. How do the chicks chip their way out of the eggs?
16. Why do the terns sometimes attack the scientists who are studying them?
17. How long do puffins live?
18. How are adult puffins differentiated from juvenile puffins?
19. Why can't puffins and terns live on the mainland?

20. What advantage do the gulls have over the puffins in regards to food?
21. How many days does it take to bring enough food for the puffin chicks?
22. How does banding the birds help scientists learn about their survival chances?
23. When do the puffins leave the island?
24. The video states that humans need to be "responsible stewards of life on earth." What does this mean?

► **Applications and Activities**

1. Obtain pictures of the birds mentioned in the video from the Internet. Write descriptive paragraphs for each bird.
2. Research and report on the following topics, using illustrations where possible.
 - a. demand of feathers in the fashion industry during the late 1800's
 - b. life of the puffin at sea
 - c. courtship of puffins
 - d. feeding habits of puffins
 - e. growth of puffin chicks
 - f. predators of puffins
 - g. status of Project Puffin today
3. Set up a mock debate session on two issues:
 - a. allowing scientists to create artificial environments to preserve wildlife
 - b. letting nature take its course
4. Keep an imaginary journal or log of a scientist working with the Puffin Project documenting daily tasks as shown in the video.
5. Report on the Lacey Act and its amendments.



RELATED RESOURCES

- [Bill Nye the Science Guy: Birds #3570](#)
- [Where Do Animals Go in Winter? #3323](#)



World Wide Web

The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

• **PROJECT PUFFIN AND THE SEABIRD RESTORATION PROGRAM**

<http://www.projectpuffin.org/>

Contains information about the Puffin Project. Explains about the feeding, chicks, and courtship of puffins. Includes information about other species of birds on the island.

• **MAINE BIRDING**

<http://www.mainebirding.net/>

Includes facts about puffins such as vital statistics, size, feeding habits, and nesting habits. Mentions the Puffin Project.