

Beaks and Fish

Subject: Science

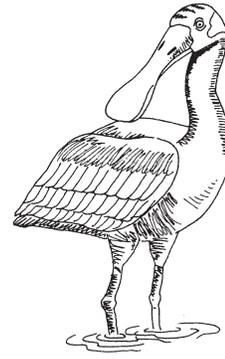
Duration: 15-30 minutes

Location: Indoor / Outdoor

Key Vocabulary: Adaptation, camouflage, competition

Related Activities: All activities in the wildlife section

Florida Sunshine State Standards: Science: 4th: Big Idea 16; SC.4.L.16; 5th: Big Idea 15: SC. 5.L.15; 6th: Big Idea 15: SC.6.L.15



Objectives. By the conclusion of this activity, students will better understand the feeding behavior of three wading birds (the Ibis, Heron and Roseate Spoonbill) and the role of adaptation in feeding success.

Method. Students will attempt to mimic the feeding behavior of several wading birds.

Background. Adaptations are changes in an animal's body or behavior that help it better survive in its habitat. Over time, the beaks of different wading birds have adapted to better accommodate unique hunting and feeding strategies. Some use sharply pointed beaks to stab their prey, while others will use their beaks to grasp a meal. Some will use their wings to shade the water in search of a meal, while others will probe with their feet and beaks.

Suggested Procedure

1. Have students form a circle. Pass out beaks (tell them who they are as you do). Have them hold the beak in one hand and cup the other hand near their stomach (this represents the stomach of the bird).
2. Talk of adaptation, particularly how birds have adapted to feed on certain fishes in certain places. The shape of a bird's beak relates to how it has adapted to feed:

Hérons are patient fisherman who wait and watch until a fish swims into their field of vision and then they quickly snatch the fish.

Ibis are touch feeders. They wade through the shallow, muddy waters bobbing their decurved bill up and down as they feel for food in the mud, holes in the rock, etc.

Roseate Spoonbills are touch feeders also. They have spoon-shaped bills which they leave in the water as they quickly (crazily) go side to side straining for fish and shrimp.

Materials

- Heron "beaks"*
- Ibis "beaks"*
- Spoonbill "beaks"*
- An assortment of "fish"*
- Boundaries (optional)

* See the attached photo for guidance on how to make the beaks and fish for this game. Have the students research each bird and help in making these props.

3. Rules of the game:
Herons can eat whatever color of fish they find.
Ibis and Spoonbill can only eat certain colors of fish (red, pink, white).
4. To start the hunt for fish:
 - a. Have the students turn their backs to the center of the circle.
The leader (ranger/teacher) will widely disperse the fish (wet season).
 - b. On signal, “birds” will turn around and pick-up as many fish with their bills as they can (**Remember, ibis and spoonbills can only eat certain colors).

**Remember: You catch fish with your beak, birds don’t have hands!

**Remember: Beaks are important tools in fishing and survival. When the beaks are broken, the bird dies because it can’t catch enough fish. Take care of your beaks—don’t be careless.
5. Discuss first round: difficulty of finding fish - camouflage, widely-dispersed, etc.
6. Second round hunt: put fish into a smaller, crowded area (dry season).
7. Discuss second round: easier to find fish but more competition.

Extension - Survival of the Birds

Herons, Ibis, and Roseate Spoonbills eat whatever color fish they find. First round (wet season) - students must catch a minimum number of fish to survive (i.e., 3). Those who didn’t make it, take a step away from the circle.

Second round (dry season) - students must catch a higher number to survive and have a successful nesting year (i.e., 5).
