



Grades K-3
Penguin Lesson Plans

I. Lesson (Before Visit)

Objectives:

1. Students will be able to identify penguins as birds by their characteristics.
2. Students will learn how these birds are adapted to be such effective swimmers.

A. Pre-assessment discussion:

1. How many of you have seen penguins at a zoo or aquarium before?
2. Do you think penguins have feathers, scales, or fur?
3. Raise your hand if you think penguins can fly?
4. Are penguins birds?
5. How many of you think penguins lay eggs?

B. Discuss bird characteristics (below), and similarities/differences between birds that fly and penguins.

1. Breathe air
2. Warm blooded
3. Have feathers
4. Lay eggs
5. Have a backbone
6. Most fly - birds that fly have hollow bones - break apart a small chicken bone to demonstrate hollow insides

C. Discuss how penguins are marine birds that spend half of their life in water, how they are well adapted for their aquatic lifestyle, and what makes them such good swimmers.

1. Paddle like wings - bones in wing are fused to form a paddle, similar to a whales flipper
2. Torpedo-like streamlined body
3. Dense bones - not hollow like flying birds
4. Dense feathers
5. Webbed feet
6. Ability to remove salt from the water when it enters the beak
7. Feathers help maintain body temperature in and out of the water.

D. Discuss the importance of feathers.

1. Counter shading
2. Warmth
3. Aid in swimming by coating feathers with oil when preening
4. Molting

II. During visit to the Atlantis Marine World Penguin Pavilion

- A. Observe penguins and their behavior.
- B. Teacher led Q & A
 - 1. What do you see the penguins doing?
 - 2. What things do you notice about the exhibit?
 - 3. How many penguins are there?
 - 4. Why do you think the penguins have bands or bracelets around their wings?
 - 5. Draw your favorite penguin.

III. After visit

- A. Make your own penguin bracelets (identification bracelets)
- B. Make a penguin puppet using a paper bag or a sock
- C. Read a penguin story (many penguin books are available in the Aquarium gift shop)
- D. Build a penguin - Have students cut a piece of black construction paper to fit around a toilet tissue roll or bottle and glue it on. This is the body. Cut flipper wings from black paper and glue them to roll. Cut oval from white paper and glue it to the front of the roll - this is the stomach of the penguin. Draw in neck band and belly spots. Cut circle with webbed feet to fit on bottom, glue to roll. Then cut beak from black paper. Glue on googly eyes. Review each body part.
- E. Class can adopt a penguin or habitat - check the AZA (American Zoos and Aquariums) Web site.

Extensions for grades 1-3

Have students research some of the following topics:

- 1. Students will learn about mating and life cycle of a penguins.
- 2. Students will learn basic penguin anatomy. Activity: Make a penguin book and highlight penguin anatomy according to vocabulary words on each page.
- 3. Students will learn the role that parent penguins play in the rearing of their chicks. Activity: Randomly have students pick partners to be parents for a week while taking care of an egg (hard boiled) Students must make a nest and be sure it doesn't crack for a week. Students will take turns taking the egg home overnight to incubate the egg.