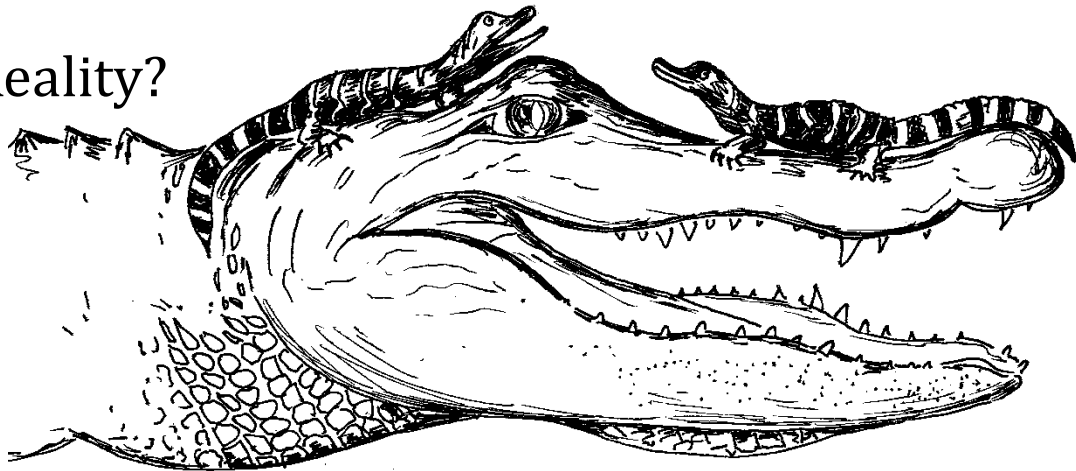




Lesson One

Myth or Reality?



Key Questions

What misconceptions do people have about Florida's wildlife? How can these misconceptions be corrected?

Subjects

Science, Language Arts

Time Estimate

Two 30 minute classes + independent research

Key Vocabulary

Misconception, predator

Sunshine State Standards

Science

SC.7.L.17.1 Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.

Language Arts

LA.7.6.2.2 Assess, organize, and check the validity and reliability of information in text, using a variety of techniques by examining several sources of information, including both primary and secondary sources.

Objectives

In this activity, students will:

1. Brainstorm what they already know (or think they know) about the predators of Florida.
2. Take a quiz as a class to see how much they actually know about predators.
3. Research the quiz material and retake it as a class to see how much new information they found about Florida's predators.
4. Discuss changes in their attitudes towards Florida's predators.

Materials

- A copy of the worksheet for each student.
- One copy of the class answers sheet.

Background

Florida is a state rich in wildlife. In fact, Florida has one of the richest fossil records in the world from the Pleistocene time period. As recently as 12,000 years ago, short-faced bears, saber-toothed cats, glyptodonts, mammoths, mastodons, giant ground sloths, and wolves called Florida home. Since then, these creatures have either gone extinct or been hunted to extinction in the state.

Fortunately, South Florida remains a home to a variety of amazing **predators** today. Predators are animals that hunt other animals to supply at least part of their diet. Unfortunately, there are many **misconceptions** that people tend to have about each of our predators in Florida. This leads to unnecessary fears about our predators and sometimes to inappropriate behavior towards them.

Most wildlife species have a natural fear of humans and only pose a threat when we interfere with them or feed them. Predators like bears and alligators can lose their fear of humans if fed and then become dangerous to us. We can live in harmony with these wildlife species if we respect them and avoid feeding either by leaving out trash and other possible food or by leaving our domestic animals outside without proper enclosures.

Florida Panthers

Florida panthers are one of the most endangered mammals in the world, with an estimated 100-180 remaining in South Florida. These cats used to range throughout the Southeastern United States, but were pushed out of their habitat by development and hunted to near extinction. They are the same species as the Western mountain lion, but are a unique subspecies. All Florida panthers are tan in color and are most active at dawn, dusk and during the night, which is referred to as a crepuscular species. They are carnivores that hunt by silently stalking their prey on the ground until they are close enough to run and pounce on it. They most commonly prey on deer and feral hogs, but can also eat small mammals and even alligators. To survive, an adult panther needs to consume the equivalent of a deer each week. Because panthers are territorial and require large prey, they need plenty of space to roam – 200 square miles for a male and 75 square miles for a female. Panthers are naturally afraid of people and there has never been a documented attack of a Florida panther on a human. Mountain lion attacks

have occurred but are rare – in fact, deer are responsible for far more human deaths each year than Pumas due to vehicular collisions. Panthers will depredate livestock and pets if they are left unprotected outside.

Bobcats

Bobcats are found throughout most of the continent and are widely adaptable to a variety of habitats. They weigh between 15-30 pounds and are most active at dawn, dusk and during the night. On an average night they travel between 2 and 7 miles in search of food. They hunt by sight and most commonly capture small mammals such as squirrels, rabbits, rats, opossums, and raccoons. They will also eat birds that nest on the ground and can hunt adult deer. They will depredate pets and domestic animals if available. Bobcats are fearful of humans and rarely pose a threat.

Coyotes

Coyotes belong to the dog family and weigh between 20-30 pounds. They have long inhabited the Southwestern United States, but recently expanded their range and moved into Florida in the 1970s, though the first documented coyote appeared by 1925 in the state. Coyotes therefore are considered a “naturalized” species in Florida. They are highly adaptable, opportunistic creatures that took advantage of declining predators to populate the Eastern United States. They can live in almost any habitat from suburbs to farmland to forests. Coyotes have a generalist diet that consists of a variety of plant and animal foods such as birds, deer, mice, rabbits, carrion, berries, and insects. They have been known to feed in populated areas on pet food, trash, poultry and livestock, and garden vegetables. Most active at night and dawn and dusk, coyotes usually hunt alone but rarely in a pack. Coyotes are fearful of humans and are not usually a threat.

Florida Black Bears

The Florida black bear is a sub-species of the American black bear used to range throughout Florida. Today, they are only found in fragmented areas across the state where they can find large enough contiguous habitats. They are the largest land mammal in the state, with adult males averaging 250-350 pounds and females 130-180 pounds. Bears are excellent climbers and mother bears send their cubs up trees to avoid dangers. The Florida black bear is a capable predator if provoked, but 80% of its diet is plant material like berries and acorns, 15% is insects like ants and termites, and only 5% of its diet is meat such as carrion or small mammals. They have an extraordinary sense of smell far better than that of a bloodhound and can smell food from miles away. Bears are curious, smart and inquisitive animals, and it is normal for bears to wander into human-inhabited areas and investigate their surroundings. The most dangerous bears to humans are those which we have fed by leaving our food and garbage somewhere accessible to them. Bears can lose their natural fear of humans in these cases and may need to be relocated or euthanized.

American Alligators

The American Alligator ranges throughout the wetlands of the Southeastern United States. In the Southern tip of Florida in saltwater and brackish environments, the American Crocodile also can be found. Florida is the only place in the world where alligators and crocodiles live side-by-side. Alligators are opportunistic carnivores that prey on whatever animals are in the water and are abundant and relatively easy to catch. They can eat fish, snakes, turtles, small mammals, birds, and occasional deer or other larger animals near or in the water. Because they are cold-blooded, alligators have very slow metabolisms and only eat one to a few times a month. They need warm air temperatures to digest their food and won't normally eat when

temperatures drop below 70 degrees F. They cannot breathe underwater, but they can hold their breath and rest beneath the surface for over an hour. Alligators have a natural fear of humans, but can become a danger when they have been fed by us. When an alligator learns to associate people with food, it may become a threat and need to be removed. It is a myth that the best way to escape a charging alligator is to run zigzag. Humans are not suitable prey for alligators and a charge would be unlikely. Second, alligators hunt by surprise acceleration – a single lunge out of the water. It would be extremely rare for an alligator to chase prey for any distance on land. Therefore, if an alligator approaches you aggressively on land, you should run fast and straight away from it as it will probably not go very far.

Advance Preparation

1. Make a copy of the worksheet for each student.
2. If desired, print background information or find books to help students research answers to the quiz questions (optional).

Procedure

1. Ask students to tell you what they already know about the behavior of Florida panthers, Florida black bears, coyotes, American alligators, and bobcats. Write a list of their ideas on the board for each animal. Encourage them to think about how and when each animal hunts, what it eats, and how it responds to humans as well as other behaviors.
2. Open the PowerPoint presentation called "Myth or Reality Quiz". Explain to students that you are going to test their knowledge of Florida predators. Take the quiz as a class. For each question, have each student record their personal answer on their worksheet in the "First Answer" column.

Then, take a class vote to determine the class's answer to the question. Record the class answer on the Class Answers Sheet.

3. Once the quiz is completed, have students conduct research either at home or on computers or mobile devices in the classroom to help them find answers to the questions they were unsure about (or you may choose to have students research every question). Instruct students to cite evidence they find for each question and the source they used in the "Research" column on their worksheet.
4. After students have finished their research (perhaps the next class period), retake the same "Myth or Reality Quiz" as a class. Use the second half of the PowerPoint presentation that will reveal the answers upon a click of the mouse. This time, for each question, have a student cite evidence they found to help the class answer the question.

For instance, for question 1, you could call on a student to tell you that he/she discovered that according to a National Park Service webpage, there is only one species of panther in North America: Puma concolor.

5. For each question, have the student record their "New answer" on the worksheet. Tally a class vote to obtain a new class answer and record it on the Class Answers Sheet. Then reveal the correct answer to the question.
6. After the quiz is completed and you've discussed the answers, compare the class score on the quiz before and after the students conducted research. Did the class score improve?

7. Have a class discussion using the following questions as prompts:

- Were you surprised by any of the answers to the quiz?
- Why do you think so many people have misconceptions about predators?
- Do you feel any differently about the predators of Florida after learning more information about them? How so?

Myth or Reality

Worksheet

Your Name: _____

True or False?	First Answer	Research	New Answer
1. A mountain lion, a cougar, a puma and a panther are all different species of cat.			
2. The Florida black bear eats mostly meat.			
3. Coyotes usually hunt in packs.			
4. Bobcats travel mostly during nighttime hours and can walk up to a mile each night.			
5. Alligators are naturally afraid of humans.			
6. A Florida panther track doesn't usually show claw marks.			
7. Florida black bears don't climb trees.			
8. Coyotes are native to Florida.			
9. Bobcats and panthers are most active during the day.			

10. Alligators can hold their breath to stay underwater for an hour or more.			
11. Florida panthers hunt by jumping out of trees onto their prey.			
12. Florida black bears have a better sense of smell than a bloodhound.			
13. Coyotes will eat carrion (dead animal meat).			
14. Bobcats can hunt and take down an adult deer.			
15. Alligators and crocodiles can both be found in South Florida.			
16. Florida panthers roar before they attack.			
17. Panthers and bears are naturally curious about humans, and it is normal for them to wander past and watch us.			
18. Pumas, including Florida panthers and mountain lions in the West, kill more people than deer do in North America.			

19. You should run zigzag if you come across an alligator.			
20. Florida panthers eat more frequently than large alligators.			

Myth or Reality

Class Answers Sheet

True or False?	Class First Answer	Class New Answer
1. A mountain lion, a cougar, a puma and a panther are all different species of cat.		
2. The Florida black bear eats mostly meat.		
3. Coyotes usually hunt in packs.		
4. Bobcats travel mostly during nighttime hours and can walk up to a mile each night.		
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20. Florida panthers eat more frequently than large alligators.		