



## **WAVE on Wheels Outreach**

### **Croc Talk**

### **Grades K-2**

#### **Time requirement**

1 Hour

#### **Group size and grade**

Up to 50 students maximum

#### **Materials**

1 American Alligator

Crocilian Artifacts Bin

WAVE Tablecloth

#### **Goal**

Through a live alligator encounter, students will be excited, engaged, and educated about the wonders of crocodilian life and the importance of conservation.

#### **Objectives**

1. Students will be able to identify what type of animal an alligator is.
2. Students will be able to differentiate between an alligator and a crocodile.
3. Students will be able to list 2 adaptations a crocodilian has for aquatic life.
4. Students will be able to identify what crocodilians eat.
5. Students will be able to discuss how they can help save crocodilians and other aquatic animals.

#### **Theme**

Crocilians are unique reptilian species that play an important role in their environment.

## **Kentucky Core Academic Standards – Science**

### **Kindergarten** – *Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment*

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

LS1.C: Organization for Matter and Energy Flow in Organisms.

K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

ESS3.A: Natural Resources

ESS3.C: Humans Impacts on Earth Systems

### **First Grade** – *Structure, Function, and Information Processing*

1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

LS3.B: Variation of Traits

### **Second Grade** – *Interdependent Relationships in Ecosystems*

2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

LS4.D: Biodiversity and Humans

## **Background**

### *Crocodylians are Reptiles*

Alligators and crocodiles are reptiles. Reptiles are cold-blooded or ectothermic animals, which means they depend on external sources to maintain their body temperature. Scales or scutes protect reptiles from abrasions and loss of body moisture. Reptiles breathe air through lungs. Most reptiles hatch from eggs which are typically covered in soft, leathery shells. Reptiles include crocodylians, snakes, turtles, and lizards.

### *A Crocodile or an Alligator*

The term “croc” is used to describe any member of the crocodylian species: alligators, crocodiles, caimans, and gharials. Alligators and crocodiles are commonly misidentified, but by observing several key differences, it is easy to tell them apart. Alligators reach average lengths of 15 feet and weigh up to 1,000 pounds while crocodiles can grow over 20 feet long and weigh more than 2,300 pounds. Alligators are primarily freshwater crocs with a “U” shaped snout, whereas crocodiles are capable of living in saltwater and possess a “V” shaped snout. In

alligators, the upper jaw is wider than the lower and completely overlaps which results in their lower teeth being almost completely hidden when the mouth closes. In crocodiles, the upper jaw and lower jaw are approximately the same size so upper and lower teeth are visible when the mouth is closed. Both species have specialized glands which secrete salt, but the crocodile's glands are better adapted to a saltwater environment while the alligator's glands have faded in function.

### *A Croc's Adaptations to Aquatic Life*

A croc has many features which make it suitable for living in water. Large, powerful tails are used for propelling through the water, while strong webbed feet are ideal for paddling. The dark, bumpy appearance provides camouflage resembling a floating log. Crocs also have excellent eye sight for both above and below water, and they possess an extra eyelid, called a nictitating membrane, that functions similar to underwater swim goggles. Their ears are hidden behind slits that close when they dive under water.

### *Croc Diets*

Crocodylians are carnivores that eat a variety of animals near their habitats which may include but are not limited to: fish, turtles, birds, frogs, pigs, deer, buffalo, and monkeys. Crocs swallow their prey whole rather than chewing. They will tear off large portions, if the animal is too large to swallow whole, by a process called the death roll. After biting the prey the croc rolls around, essentially juggling its food around in its mouth until the right position is reached to toss its head back and slide the food down its throat. Some species of croc can eat up to half of their body weight in one meal. These large meals are converted into fat reserves located in the tail, and these fat reserves may allow a croc to survive over a year without eating.

### *Croc Conservation*

About 40 years ago, American alligators were close to extinction. Because the fashion industry targeted alligator skin for exotic leather products, the American alligator was listed as an endangered species in 1967. Fortunately, by 1987, alligators made a comeback thanks to the conservation efforts of several organizations. These efforts sustained, and the American alligator was removed from the Endangered Species list. As of today, alligator harvesting is being regulated closely by state authorities in the form of hunting permits. Alligator skin and meat is still desired; however, a portion of the profits generated from these goods are contributed to alligator management and research.

### **Vocabulary**

Adaptation – the process by which an animal or plant species becomes fitted to its environment through body parts and behaviors

Camouflage - concealing coloration, background matching in animals, the use of biological coloration to mask location, identity, and movement, providing concealment from prey and protection from predators

Conservation – the study of the loss of Earth’s biological diversity and ways this loss can be prevented

Diversity – the variety of life found in a place on Earth or the total variety of life on Earth

Environment – The external conditions, resources, stimuli etc. with which an organism interacts

Habitat – the place where an organism or a community of organisms lives, including all living and nonliving factors or conditions of the surrounding environment

Observation – the act of attentive watching, perceiving, or noticing

Predator – an animal whose diet consists of other animals

Prey – an animal who is eaten by other animals, or predators

Survive – the continuation of life or existence

### **Extension Activities**

Project WILD Activities. Please contact your state Project WILD coordinator for more information. See <http://projectwild.org/KentuckyCoordinator.htm> (for Kentucky) or <http://www.projectwild.org/ProjectWILDCoordinators.htm> (for other states).

- Beautiful Basics – Students will identify five basic survival needs shared by people and all other animals, including pets, and wildlife.
- And the Wolf wore shoes – Students will distinguish between real and imaginary animals, and give example of real and imaginary animals and their characteristics.
- Learning to Look, Looking to See – Students will describe differences seen in the environment as the result of casual and detailed observation, and give reason for the importance of looking closely at any environment.
- Animal Charades – Students will define wildlife, and distinguish between domesticated and wild animals.
- Ethi-Thinking – Students will generate a list of activities that are harmful to wildlife and the environment, discuss reasons these activities are inappropriate, and recommend alternate activities that are not harmful.
- What’s That, Habitat – Students will identify their own basic needs for food, water, shelter, and space in a suitable arrangement; and generalize that wildlife and other animals have similar basic needs.

Alligator Card - <http://www.enchantedlearning.com/crafts/animals/alligator/>

Wooden Spoon Crocodile - <http://www.activityvillage.co.uk/wooden-spoon-crocodile>

Book - I Am a Little Alligator: Mini ("I Am" Series) Hardcover – June 11, 1993 by Francois Crozat

Book - Alligator's Friends Paperback – May 6, 2015 by Jenifer Purcell Rosenberg

### **Resources**

WAVE Foundation - <http://www.wavefoundation.org>

Project Wild - <http://www.projectwild.org>

Project Wet - <http://www.projectwet.org>

Project Learning Tree - <http://www.plt.org>

Endangered Species Information -

<http://education.nationalgeographic.org/media/endangered/>

Alligator Information - <http://myfwc.com/wildlifehabitats/managed/alligator/facts/>

Alligator Information - [http://www.biokids.umich.edu/critters/Alligator\\_mississippiensis/](http://www.biokids.umich.edu/critters/Alligator_mississippiensis/)