2011-2012 WHRO VideoClassroom Preview

Series Title: **Animal Science**
Curriculum Area: **Science**
Grades: **7-12**
# of Programs/Length: **13/20:00 minute programs**

The Animal Science Series highlights 39 animals and one aspect of each of their habits, behavior or physical attributes. With short clips, students are given a wealth of details about these features using close-up live-action video as well as computer-generated imagery. Informative narration adds to the photography, giving students additional details, vocabulary and understanding of each animal. The series allows teachers flexibility in how to use the content. Each video has animals featured that have something in common, allowing teachers to choose the content they want to show.

1.) Chicken, Pig, Cow

The first section of this program gives viewers an understanding of how the domestic pig is different from the boar. The feeding and growth rate of piglets as well as the feeding and growth rate of adults are shown. The second section shows how domesticated dairy cows have produced more and more milk. Adaptations in the body, selection of the best qualities of these milk-providing adaptations are explained. The last section of this program provides viewers with an understanding of egg-laying hens, in egg producing farms.

2.) Snow Goose, Heron, Egret

The snow goose's habitat, anatomy and behavior are shown in the first section of this program. It explains the ability of the snow goose to migrate, using its own 'navigation system' and details the bird's pulmonary system. The Great Blue Heron's anatomy begins the second section of this program. To fish for its prey the heron has the ability to stand still, while its eyes can move to search for prey. It also moves about or 'prowls' for fish. The heron's skeletal structure keeps it stable. The third section of this program details the egret's behavior and gives a comparison of the Cattle Egret's and the Snowy Egret's habitat and anatomy. The Egret's bone structure shows the ability of this bird to fly.

3.) Ant, Ladybug, Spider

The first section of this program provides viewers a detailed look at the chemical identity of ants. Watching ants in their colony, students see how ant pheromones directly affect their behavior. The second section details the defense mechanisms of ladybug larvae and adult ladybugs, including their bright coloration, flying and the bitter taste that they give off to feeding predators. The third section highlights the predatory behavior of spiders using intricate webs to trap their food.

4.) Salamander, Garter Snake, Frog

The metamorphosis of the salamander is shown . Different types of salamanders are highlighted and the. The metamorphosis of the salamander is shown in the first section of this program. Different types of salamanders are highlighted and the adaptations providing them with protection from predators. Regeneration of tails or legs that have been bitten off by predators is detailed. The garter snake's hunting technique and adaptations for feeding are shown in the second section. The last part of this program shows the anatomical adaptations that allow frogs to live in a habitat near or in water.

5.) Snail, Leech, Worm

The first section of this program shows the body shape and anatomy of snails. Movement, protection against predators and reproduction is highlighted. Leech's anatomy and feeding habits provide the content for the second section. Viewers are shown leech movement and reproduction. The last section details anatomical information on the earthworm. Color, movement and parts of its body, including the reproductive organs, are highlighted.

6.) Howler Monkey, Iguana, Parot

The Howler Monkey, the subject of the first section of this program, is the largest primate of the 'New World' and is shown in the jungles of Costa Rica. The section shows the Howler Monkey's anatomy, highlighting its prehensile tail and hands, and vocal tract. The second section of this program is about the Iguana. An explanation of why ultraviolet rays are important to the growth and health of the iguana gives students an insight into the importance of the iguana's parietal or 'third eye'. The last section in this program is about the Amazon Parrot. Amazon Parrots live in social groups and communicate in a variety of vocalizations.

7.) Seal, Polar Bear, Sloth

By viewing the first section of this program, students will learn how the seal, a marine mammal, has evolved. Adaptations of seals to water and land, including movement, body temperature and body organs, are highlighted. In the second section, traits of the polar bear, such as types of fur, body temperature and shivering give viewers an understanding of how this animal protects itself against the cold of its habitat. The third section gives viewers information about the sloth and how its body is adapted to its tree-hanging lifestyle and lack of movement. Body temperature, slow metabolism, hook-like claws help the sloth survive the weather, lack of food and predators.

8.) Elephant, Bison, Giraffe (15:00 Preview Segment)

The infrasound that elephants employ is explained in the first section of this program. This unique way of communication is used by elephants to warn of predators, for mating calls and maintaining contact with others in their family groups. Students will see elephants help the renewal of vegetation and the promotion of diversity of species. In the second section of this program, differences in anatomy between Wood Buffalo and Plains Bison provide viewers with an understanding of the largest land mammal of North America. The giraffe and the advantages of its long neck, tongue, and grazing habits are shown in the last section. The anatomy of the giraffe with the same number of vertebrae as humans, and the most powerful heart of any land mammal provides viewers with insights into its physiology.

9.) Horse, Deer, Wolf

The first section outlines the history of horse domestication, detailing the craft of horse shoeing. Behavior of wild horses living on an island in the Atlantic Ocean gives viewers insight into how all horses once lived. The second section shows the Virginia deer, highlighting antler growth and structure, and deer communication through pheromone secretion. The last section is about the wolf. Wolves are considered super predators because they hunt in packs, are fearless and can travel long distances. Complex social relationships in wolf packs are based on dominance. The dominant male's behavior and communication within the pack are shown as well as the structure and function of wolf's teeth

10.) Hummingbird, Bat, Rat

The flying technique of hummingbirds is detailed in the first section of this program. The adaptations that allow for their stationary flight include their size, skeleton, heart, wing and muscle structure. The second section explains how bats, the only mammal that can fly, have adaptations allowing it to sleep while hanging. Ultrasound and echolocation help bats navigate and hunt for food. The Norway rat (or sewer rat) is highlighted in the third section of this program. This nocturnal animal has poor eyesight and relies on its whiskers for navigation. The program examines the structure of rat's teeth and demonstrates the use of lab rats in scientific research.

11.) Beaver, Turtle, Trout

The first section of this program examines the anatomy, habitat and behavior of the beaver. An explanation of the structure of their teeth gives students an understanding of how the beaver handles building material in constructing a dam. The second section highlights the wood turtle. Students will learn about the turtle's internal anatomy as well as the structure of its shell. Predators, such as the fox, skunk and raccoon, prey on a turtle's softer structures, like the legs. The Brook Trout, highlighted in the third section, is in the same family as the salmon. They spawn in fresh water, and viewers can see how these fish lay eggs. Trout's survival in the cold water is explained. Although the trout is not an endangered species, their habitat has been moved farther and farther into the wild, because of urbanization. Dangers to the trout include pollution, other animals and humans.

12.) Sheep, Cat, Jumper Mouse

The artificial breeding of sheep using laparoscopic methods is explained in the first part of this program. The second section highlights the ability of the domestic cat to balance on a variety of surfaces, using their eyes, claws, whiskers, tail and muscular system. In addition, the video explains the inner ear anatomy and how it helps the cat's equilibrium. The last section of this program shows how horses are trained to be jumpers. A horse is not naturally inclined to jump, so the training of these horses is vital. The physiology of how horses lift off and land in a jump is detailed with an emphasis on the connection between horse and rider.

13.) Bacteria, Virus, Flea

Parasitism is discussed in the first section of this program with a comparison of predator-prey and parasite-host relationships. Students will get an understanding of the flea's habits, anatomy and behavior. The structure of bacteria, single-celled organisms, is given in the second section of this program. A comparison of aerobic and anaerobic bacteria is discussed, as well as their harmful and beneficial functions. The last section of this program helps viewers understand what viruses are and how they can infect a host. The influeniza virus is highlighted, providing a discussion of vaccination.