

### Follow-up Discussion

Research indicates that students will retain their previous misconceptions about a topic, in preference to new information, until they actively recognize and correct their own errors. Therefore, it is important to have your students re-examine the facts/beliefs they put on their "Everything We Think We Know About..." list. It might also be helpful to review the list by marking each entry with a "+" or "-" to show which facts were correct and which were incorrect.

Discussions that ensue from thought-provoking questions provide a good way to assess the overall depth of student understanding. The following are some suggested discussion questions.

1. Discuss the different ways that animals meet the same basic survival needs.
2. Discuss what can occur when two different animals compete for resources within a habitat.

### Follow-up Activities

- Identifying animal preferences usually reveals how they satisfy their basic needs. Using mealworms, hermit crabs or other available animals, have small groups of students design investigations to test the preferences of these animals (temperature, light, food, moisture...).
- Have students select sample animals from a single habitat, and construct a 6-column chart or table (1 for each basic need) to compare and contrast how each animal satisfies these basic needs.
- Have each student research a specific animal that has become threatened or endangered. As students become familiar with the characteristics of these animals, ask them to think of a new trait for the animal that would help it meet its basic needs and survive. The invented trait can be a structure or a behavior.

### Internet Resources

- [www.aquariumofpacific.org/educate/default2.html](http://www.aquariumofpacific.org/educate/default2.html)  
The Aquarium of the Pacific site contains an online learning center with information about hundreds of animals, lessons about marine habitats and the adaptations that sea creatures possess to meet their basic needs, and other curriculum resources for K-12 teachers that address current national science standards.

(Continued)

- [entowww.tamu.edu/academic/ucourses/ento489/lessons/lesson8.html](http://entowww.tamu.edu/academic/ucourses/ento489/lessons/lesson8.html)

This web page from Texas A & M University describes a twenty-minute activity called "Habitat Breakdown" that illustrates the impact of food, air, water and shelter on organisms in their struggle for survival.

- [www.thewildones.org/Curric/Hdesign.html](http://www.thewildones.org/Curric/Hdesign.html)

This page from The Wild Ones web site details a project designed for fifth grade students to help them explore the needs of animals and issues of captive breeding programs.

### Suggested Print Resources

- Durant, Penny. *Exploring the World of Animals*. Watts Franklin, Danbury, CT; 1995.
- Ganeri, Anita. *Animal Science*. Dillon Press, New York, NY., 1993.

#### TEACHER'S GUIDE CONSULTANT

Conrad M. Follmer

25 years as a K-5 Science & Math Coordinator for a Pennsylvania public school system, currently an independent consultant to elementary schools.

#### TITLES

- AMPHIBIANS
- ANIMAL ADAPTATIONS
- ANIMAL BEHAVIOR & COMMUNICATION
- ANIMAL CLASSIFICATION
- ANIMAL INTERDEPENDENCY
- ANIMAL LIFE CYCLES
- ANIMAL NEEDS
- BIRDS
- ENDANGERED & EXTINCT ANIMALS
- EVOLUTION
- FISH
- FOOD CHAINS
- INSECTS & OTHER ARTHROPODS
- MAMMALS
- MARINE & OTHER INVERTEBRATES
- REPTILES

Teacher's Guides Included  
and Available Online at:

800-843-3620

**libraryvideo.com**  
The Leading Educational Video & CD-ROM Distributor

**SCHLESSINGER**  
MEDIA  
A DIVISION OF LIBRARY VIDEO COMPANY

Copyright 2000 by Schlessinger Media, a division of Library Video Company  
P.O. Box 580, Wynnewood, PA 19096 • 800-843-3620  
Executive Producers: Andrew Schlessinger & Tracy Mitchell  
Programs produced and directed by Burrud Productions Inc.  
All rights reserved



## Animal Needs

### Grades 5-8

Students in grade 5-8 classrooms possess a wide range of background knowledge. Student response to this video program is sure to be varied, so the teachers for these grades need all the help they can get! This guide has been designed to help science teachers in grades 5-8 by providing a brief synopsis of the program, pre-viewing and follow-up questions, activities, vocabulary and additional resources.

**Before Viewing:** Extensive research tells how important it is for the teacher to discover what the students know — or think they know — about a topic, before actually starting a new unit. Therefore, after prompting discussion with the pre-viewing questions, lead your class to create a "Everything We Think We Know About..." list. You may also wish to preview key vocabulary words, and have students raise additional questions they hope will be answered.

**After Viewing:** Have your students share video excerpts that fascinated or surprised them, then challenge your students to prove or disprove the accuracy of the facts they put on their "Everything We Think We Know About..." list. Discuss what else they learned and use the follow-up questions and activities to inspire further discussion. Encourage students to research the topic further with the Internet and reading resources provided.

**SCHLESSINGER**  
SCIENCE LIBRARY

## Program Summary

All animals, wherever they live, have the same basic survival needs. Animals all need food, water, oxygen, shelter and protection from the changing environment. They also need a way to maintain their body temperature within a safe, healthy range. For most animals, just meeting their basic needs takes up most of their time and energy.

While animals all have the same needs, they each meet these needs in different ways. Animals have features that allow them to survive in the particular environment in which they live. For example, land animals use their lungs to take in oxygen from the air, while many animals living in the water use gills to get oxygen directly from the water. Once the oxygen is taken in, it goes into the blood stream of the animal and is used by the cells in the animal's body.

All animals need to eat food to get the energy needed for life. This energy originally comes from the sun and is transferred to plants, and then on to animals. After eating food, an animal's body then transforms the energy, releasing it during essential activities like breathing, growing, and running. Even sleeping takes energy! In addition to food, getting enough fresh water is important for many essential bodily functions. Of course, some animals need much more water than others. Many animals drink water, but some, like the desert rattlesnake, are able to get enough water from the bodies of the animals they eat. Some ocean-dwelling creatures can take in seawater and excrete the excess salt.

Each animal needs a place to live. The environment in which an animal makes its home is called its habitat, and every creature has its own special habitat requirements. Many animals require shelter to escape predators, to raise young and to help regulate body temperature. Some animals, like sharks, require large spaces to roam; others, like anemones, are anchored to one spot and don't need much room at all. Within a habitat, there are always animals in competition for the available food, space and water. In addition to these pressures, habitat destruction by humans has created a hardship for many animals. Humans have learned a great deal about the individual needs of animals, and by practicing animal husbandry are able to breed animals for a number of reasons.

Warm-blooded animals use a lot of energy to keep their bodies at a constant temperature. Cold-blooded animals are the same temperature as their surroundings, and while they need less energy to survive, they must find ways to escape extreme temperature conditions. Like fruit flies, many cold-blooded animals slow down when exposed to low temperatures. Some animals hibernate or estivate when their environment cannot support their needs, while some migrate to new locations. Throughout the many different environments in the world, all animals face the same struggles: to meet their basic survival needs.

## Vocabulary

The following words are included for teacher reference or for use with students. They are listed in the order in which they appear in the video.

**basic needs** — The survival requirements that all animals have, including food, water, oxygen, and a habitat that provides space to grow, shelter and protection from changes in temperature.

**oxygen** — A gas contained in the atmosphere and dissolved in the water, which is vital to all animals.

**lungs** — The organs used by land animals to obtain the oxygen contained in the air.

**gills** — The organs that fish use to breathe the oxygen in water.

**habitat** — A specific environment in which an animal naturally lives. Includes factors such as temperature, climate, light and the presence of food.

**shelter** — A place that protects animals from predators and from changes in the environment.

**competition** — The active demand of two or more animals for limited resources within a shared habitat.

**curator** — Someone in charge of a zoo, museum, aquarium or other place with exhibits.

**animal husbandry** — The protection and breeding of animals, taking care to provide all basic needs in an appropriate environment (e.g. creating a suitable environment in an aquarium for fish).

**warm-blooded** — A term describing animals that maintain a nearly constant body temperature that is not influenced by the temperature of the environment.

**cold-blooded** — A term describing animals that cannot internally regulate their own body temperature, but assume the temperature of their environment.

**hibernation** — The dormant or sleeping state that some animals go into in response to extreme cold temperatures. During hibernation, the animal lowers its body temperature in order to survive.

**migration** — The act of traveling from one location to another which can better satisfy an animal's needs in response to unfavorable temperature or food availability.

**estivation** — A response to extreme heat or dryness, by which some animals go into a temporary sleeping state by burying themselves or sealing off their shells.

**adaptation** — Changes in an animal's body structure or behavior that occur over long periods of time that make the animal more fit for living in its environment.

## Pre-viewing Discussion

Before students generate their list of "Everything We Think We Know About..." for this topic, stimulate and focus their thinking by raising these questions so that their list will better reflect the key ideas in this show:

1. What do living organisms need in order to survive?
2. Do humans have the same survival needs as other animals?

After the class has completed their "Everything We Think We Know About..." list, ask them what other questions they have that they hope will be answered during this program. Have students listen closely to learn if everything on their class list is accurate and to hear if any of their own questions are answered.

## Focus Questions

1. What are the three most important basic needs of animals?
2. What else do animals need to survive?
3. Why do animals need oxygen?
4. How do land animals obtain oxygen?
5. How do animals that live underwater obtain oxygen?
6. Why do animals need to eat?
7. How is energy transferred from one living thing to another?
8. Why are all living things dependent on the sun to meet their basic needs?
9. How do animals transform their food into useful energy?
10. How do animals expend energy when they sleep?
11. Why is water so necessary for living things?
12. How do animals like lizards or snakes get enough water, even if they rarely take a drink?
13. What adaptations do camels possess that allow them to survive in the desert?
14. What is a habitat?
15. Why is it important for animals to live in their natural habitats?
16. How are humans causing habitats to shrink?
17. Can you give an example of a species of animal that is suffering because of habitat destruction? Explain.
18. What is the difference in the way warm-blooded and cold-blooded animals meet their needs for temperature regulation?
19. What is "animal husbandry"?
20. What are some specific things that must be considered when people try to raise animals in captivity?
21. What environmental triggers cause animals to migrate?
22. What is the difference between estivation and hibernation?