

Follow-up Activities

- After watching the investigation from the show, research the ways that developing chicks get all their needs met while still in the egg. Have students imagine what it must be like for the chick inside its protective shell and draw pictures of what it might be like for the animal.
- Have students create and play a "Guess Who?" animal game, with each child selecting an animal and giving clues about how that animal meets its needs to the rest of the class.
- Create an illustrated "Food Web" bulletin board listing common animals and the ways they are dependent on the sun for energy.
- Have students write a story about a typical day in the life of a specific animal, making sure to mention how the animal meets its basic needs.

Internet Resources

Periodically, Internet Resources are updated on our web site at www.LibraryVideo.com

- www.muohio.edu/dragonfly/houses/
This Dragonfly Web site describes the different shelters that animals create for protection and encourages students to make careful observations of local animals.
- www.enchantedlearning.com/subjects/birds/index.html
This Zoom School site illustrates the features of a fertilized chicken egg that allow a baby to develop.
- www.shambala.org/
This site developed by the ROAR Foundation shows the Shambala Preserve and describes the actions taken by supporters to protect sick and injured wild animals.

Suggested Print Resources

- Hickman, Pamela. *Animals Eating: How Animals Chomp, Chew, Slurp and Swallow*. Kids Can Press, Tonawanda, NY; 2002.
- Mazer, Ann. *The Salamander Room*. Knopf Publishing, New York, NY; 1991.
- Nagda, Ann Whitehead. *Amazing Animal Adventures: A Home for Panda*. Soundprints, Norwalk, CT; 2003.



All About Animal Needs

Grades K-4

This guide is a supplement, designed for educators to use when presenting this program in an instructional setting.

Before Viewing: Research in learning suggests that it is important for the teacher to discover what the students know — or think they know — about a topic, at the start of a new unit, so that their accurate conceptions can be validated and reinforced, and their misconceptions identified and corrected. Therefore, after reviewing the pre-viewing discussion questions provided for your class, create a "Everything We Know About..." list. Preview key vocabulary words and have students raise additional questions they hope will be answered by this program. Most importantly, students should be told that as "science detectives" they must listen closely so that after viewing the program, they will be able to tell whether or not the facts/beliefs they put on their list were scientifically accurate.

After Viewing: After a brief discussion about the program, challenge your "science detectives" to prove or disprove the accuracy of the facts they put on their "Everything 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.

TEACHER'S GUIDE CONSULTANT

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| • ALL ABOUT ANIMAL ADAPTATION | • ALL ABOUT ENDANGERED & EXTINCT ANIMALS |
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Program Summary

Every living creature needs certain things to stay healthy and survive. Animals all need food, water, oxygen, shelter and protection from the changing environment. Each animal fills these needs in different ways. Living takes a lot of energy. But where does this energy come from?

Energy comes from food. Plants absorb the sun's energy and store it as food and this energy is passed along to the animals that eat plants. Herbivores are animals that eat only plants, but some animals do not eat plants. How do they get the sun's energy? Carnivores are animals that get the sun's energy indirectly by eating other animals. Predators like cheetahs, sharks and snakes spend a lot of energy hunting other animals for food. The animals that are hunted and get eaten are called prey. Some carnivores, called scavengers, wait until an animal dies to eat it. This takes less energy than hunting. Omnivores are animals, such as humans, that will eat both plants and other animals to acquire the energy that they need.

In addition to finding and eating food, animals need water to survive. Most animals find water to drink in their environment, but some animals satisfy the need for water by eating other animals. After all, the bodies of all animals are made up mostly of water! Only sea creatures can drink ocean water because they have special ways of getting rid of the salt in the water.

Another thing that plants produce that all animals need is oxygen, an invisible gas that is found in the air and in the water. All animals have a way to acquire oxygen; most land animals have lungs, but some animals, like earth worms, can take in oxygen through tiny holes in their skin. An investigation shows how animals, like baby chicks, that grow in hard-shelled eggs can get oxygen from the air. Animals that live in the water have special gills that take in the oxygen they need to survive.

Warm-blooded animals, like mammals and birds, spend a lot of energy keeping their bodies at a constant temperature, but cold-blooded animals, like snakes and fish, stay the same temperature as the environment. They must lie in the sun for energy, but if they get too hot, they must find shelter or cool off in water. In order to stay healthy and survive, animals must have a safe place to rest and stay protected from predators. Sometimes, when animals cannot meet their own needs, humans can help out by providing food and shelter for sick or injured wild creatures.

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.

herbivores — Animals that eat plants.

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carnivores — Animals that eat other animals.

predator — An animal that hunts and kills other animals for food.

prey — Animals that are killed and eaten by other animals.

scavenger — An animal that eats dead animals.

omnivore — An animal that eats both plants and animals.

lungs — Parts of the body used by most land animals to breathe air.

oxygen — An invisible gas produced by plants that is found in the air and water.

gills — Parts of the body used by fish and other underwater creatures to take in oxygen from the water.

migration — When an animal or group of animals moves to a new place seeking a better environment.

warm-blooded — A term that describes animals, like mammals and birds, that keep their bodies at a constant temperature.

cold-blooded — A term that describes animals, like snakes and lizards, that cannot control their own body temperature, so they assume the temperature of their environment.

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

habitat — The environment where an animal is found.

conservationist — A person who works to protect the environment.

Pre-viewing Discussion

Before students generate their list of "Everything We Know About..." 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 people need to stay healthy and survive?
2. Do other animals need the same things as humans to live?

After the class has completed their "Everything We Know About..." list, and before watching the show, 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

You may wish to ask your class the following questions to assess their comprehension of key points presented in the program:

1. What things do all animals need to survive?
2. How do plants use the energy from the sun?
3. How is the sun's energy passed to plant-eating animals?
4. What is a herbivore?

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5. How is the sun's energy passed to animals that eat meat?
6. What is an example of a carnivore?
7. What is the relationship between predators and prey in the animal world?
8. How do scavengers get their food?
9. What kinds of food do omnivores eat?
10. What are some examples of omnivores?
11. What are some ways different animals get enough water to survive?
12. What invisible gas is needed by all animals? Where does it come from?
13. Where do land animals get oxygen?
14. How do earthworms take in oxygen from the air?
15. How do fish take in oxygen from the water?
16. How does a developing chick in an egg get the air it needs to survive?
17. What is the difference between hot-blooded and cold-blooded animals?
18. How do cold-blooded animals like lizards keep from getting too hot?
19. What is migration?
20. Why do animals need shelter to survive?

Follow-up Discussion

The most important part of this segment is to examine both the facts and beliefs generated by the class in their "Everything We Know About..." list. Research indicates that students will retain their previous misconceptions — in preference to the new information — until they actively recognize and correct their own errors. Because of this, it is important to lead students to the correct ideas while identifying and correcting any misconceptions from the class list. After reviewing the list, encourage students to share the answers they got to the questions raised before viewing the program.

Raising a thought-provoking question is a good way to assess the overall depth of understanding. A couple of suggestions are listed below:

1. Discuss the special structures and behaviors of different animals that allow them to meet their needs. For example, many animals hide during the day and become active at night. How does this behavior aid the animal?
2. Talk about the ways that animals depend on each other to meet their survival needs.