

Animals with Backbones

by Keith Pigdon

Overview

Use this book to help children understand how shared characteristics of animals help scientists classify animals into groups.

Literacy Focus *Word Count: 177 words*

High Frequency Words

all, have, let, live, look, with

Content Words

animals, backbones, vertebrates, fish, scales, gills, amphibian, eggs, lungs, reptiles, birds, feathers, mammals, birth, young

Reinforcing Decoding Skills

- **Medial and Final**

Consonant Digraphs: *th*
(*feathers, with, birth*)

- **Contractions:** *can't, don't*

Print Conventions

- Identifying and using the parts of a book

Comprehension/Thinking Skills

- Comparing and contrasting
- Classifying
- Making predictions

Text Features

- Bold-faced type
- Labels
- Glossary

Writing/Speaking and Listening

- Discussing similarities and differences among animals
- Listening and responding to questions about animals
- Writing content words to complete a chart

Observe/Assess

See Graphic Organizers on page 173.

Science Focus

Content and Thinking Skills

- Understanding that animals can be grouped according to their similarities
- Identifying characteristics that distinguish types of animals
- Learning that animals with very different appearances can be alike

Background Information

Vertebrates are complex animals. The backbone, a flexible inner column, supports the body. Vertebrates are divided into two groups: cold-blooded, which require environmental heat to keep warm (amphibians, reptiles, and fish), and warm-blooded, which make their own body heat (birds and mammals).

Correlation to National Standards Life Science

- **Characteristics of Organisms**

See Standards Chart on page 216.

Literacy Focus

Set the Scene

Ask children to point to their backbones. Have children bend over. Then explain what the backbone did during the exercise. Together brainstorm a list of animals with backbones.

Read and Discuss

Cover and Title Page

Have children read the cover and title page and then study the illustrations. Have children set a purpose for reading by telling what they want to find out by reading the book.

Pages 2–3

Read the pages. Look at the pictures together and discuss them with children.

Pages 4–5

Have children use the labels to identify the animals pictured and predict ways the animals are alike. Have children read the text to check their predictions. Explain that the bold-faced word names the subgroup to which these vertebrates belong.

Pages 6–15

Continue reading about other vertebrate subgroups. Talk about how each subgroup is similar to and different from the ones already discussed.

Page 16

Discuss the purpose of the glossary. Ask children to read the entries and give examples of the glossary words.

Respond

- Say the word *father*. Have children locate words in the book with the same sound as the *th* in *father*. List other words with the digraph *th*.

○	○	○
father		
feathers	with	
birth	both	

- Have children find the contractions *can't* and *don't* in the text. Discuss how a contraction is made by combining two words and using an apostrophe in the place of letters that are left out of the new word.

- Display more pictures of vertebrates. Ask children to name the subgroup in which each belongs and explain their groupings.



Classifying

Activity Master, page 20

Have children read each “animal biography” and assign it to a subgroup of vertebrates to complete the Activity Master, page 20.



English Language Learners

Help children understand the terms *all*, *most*, and *many*. Write the words on the board and use manipulatives to demonstrate their meanings. Then have children find the words in the text and read the sentences in which they appear. Discuss the meanings of the sentences.

Science Focus

Science Concept

Animals are grouped by scientists according to shared characteristics. These groups show similarities and differences among animals.

Activities

For Your Own Protection

Have children choose an animal and research how it protects itself from enemies. Encourage children to make posters.

Animal Groups

Divide children into groups to research one of the five types of vertebrates. Have children use library books and the Internet to gather more facts and examples. Provide time for groups to share what they learned.



Animal Characteristics

Activity Master, page 21

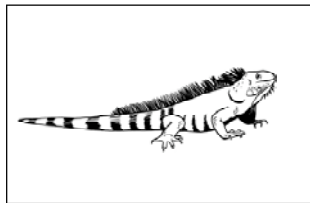
Have children fill in the chart for Activity Master, page 21, with words from the Word Bank to show their understanding of animal groups.

Animals with Backbones

Read about the animals below. Cut out the names of the animal groups. Glue the name next to the animal that belongs in each group.

Iguana

I have lungs and scaly skin. I live on land and lay eggs there, too.



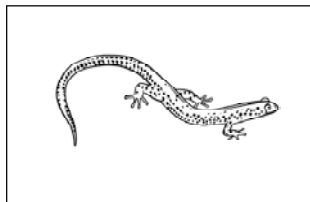
Woodpecker

My feathers help me fly. I lay eggs in a nest.



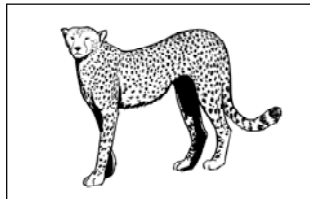
Newt

My skin is smooth and wet. At first, I have gills. Then I grow lungs.



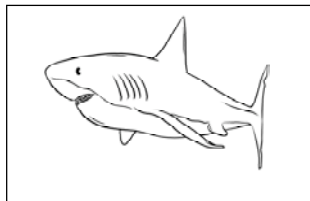
Cheetah

I have fur with spots. I give birth to young cheetahs and feed them milk.



Shark

I live in water. I breathe with gills. I swim through the water.





Fish	Amphibian	Reptile	Bird	Mammal
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Name _____

Animals with Backbones

Fill in the chart with words from the Word Bank.
Use your book for help.

Word Bank

scales	feathers	gills	lungs
lay eggs	give birth	fur or hair	water

Animals with Backbones				
Animal Type	Body Cover	Live In/On	Breathe With	Mother Animals
Fish				lay eggs
Amphibians	skin	water, then on land	gills, then grow lungs	lay eggs
Reptiles	skin	land and water		lay eggs
Birds		land	lungs	
Mammals		land or water	lungs	