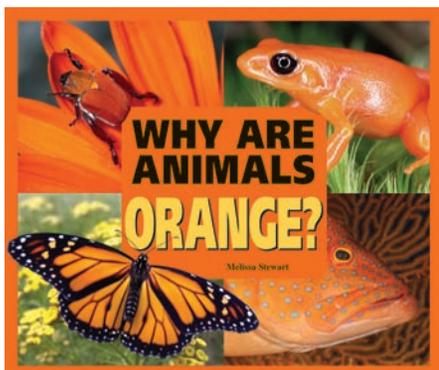
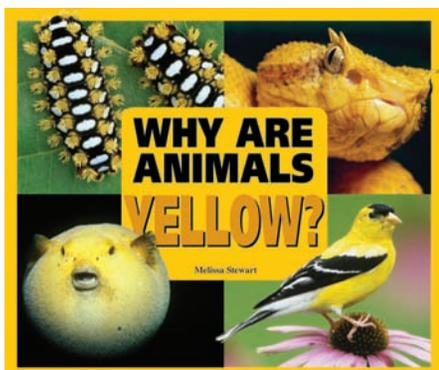


ISBN-13: 978-0-7660-3249-1  
ISBN-10: 0-7660-3249-3



ISBN-13: 978-0-7660-3250-7  
ISBN-10: 0-7660-3250-7



ISBN-13: 978-0-7660-3253-8  
ISBN-10: 0-7660-3253-1

**RAINBOW OF ANIMALS**

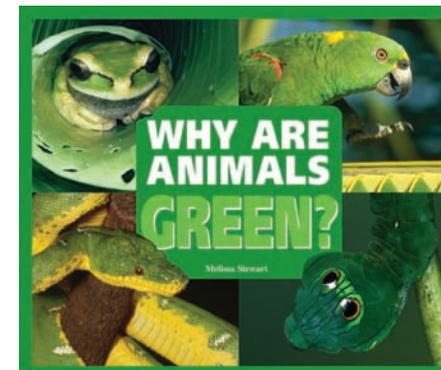
Written by Melissa Stewart

**EDUCATOR'S GUIDE**

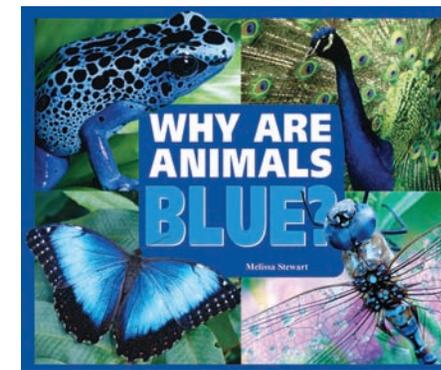
A Guide for  
**LIBRARIANS and TEACHERS**

to enhance the use of the  
**RAINBOW OF ANIMALS**  
series

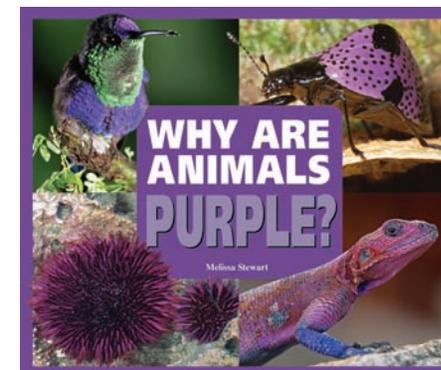
Hardcover / 32 pages / 9 x 7 1/2  
Nonfiction / Science & Nature; Grades 1-3  
Copyright © 2009 by Enslow Publishers, Inc.



ISBN-13: 978-0-7660-3252-1  
ISBN-10: 0-7660-3252-3



ISBN-13: 978-0-7660-3251-4  
ISBN-10: 0-7660-3251-5



ISBN-13: 978-0-7660-3254-5  
ISBN-10: 0-7660-3254-X

## About the Series

Why does a coral snake have red rings? Why does a golden monkey have a bright blue face? How does a fire salamander's yellow body help it survive in the wild? Animals come in all colors of the rainbow—and with good reason, too. The six books in this series clearly explain the science behind animal coloration with easy-to-read text and stunning full-color photographs that are sure to delight and educate young readers.

**Book Features:** Activities to support Science as Inquiry, Maps, Further Reading and Internet Addresses, Index, Words to Know, Note to Parents and Teachers

**Included inside:** Before You Read • As You Read • After You Read • Interdisciplinary Activities: Science, Math, Language Arts, Art, Geography • Further Reading • Internet Addresses • Word Search • Readers Theater Script • About the Author

## Themes

- Animal characteristics, behaviors, and adaptations
- Animal groups (mammals, reptiles, amphibians, birds, fish, insects)
- Interdependence of living things
- Predator-prey relationships
- Habitats

## Skills Reinforced

- Observation
- Description
- Classification
- Comparison
- Sort and sequence

## BEFORE YOU READ

### Grades K–1

- Draw a chart with six columns on the chalkboard. Ask students to think of red, orange, yellow, green, blue, and purple animals. Encourage them to consider mammals, fish, birds, amphibians, reptiles, and insects. Write their responses on the board.
- Define *habitat*. Talk about the different characteristics of habitats, including color.
- Define *prey* and *predator*. Ask students to identify the animals listed on the board as predators, prey, or both.
- How does an animal's color help it survive? Guide students in a discussion of how color is used for camouflage (hiding) and communication (warning, attraction).

### Grades 2–3

- As a class, brainstorm as many habitats as possible. Then break the class into small groups and assign each group a habitat.
- Ask each group to:
  - define their habitat
  - list animals in their habitat that are red, orange, yellow, green, blue, and purple (or have some part of their body this color)
  - note whether the creatures are predators, prey, or bothAsk students to think of ways each animal's color helps it survive in its habitat. List each group's answers on the board.

## AS YOU READ

### Grades K–1

After reading each page of a Rainbow of Animals book, ask students how the featured animal depends on its color for survival. Is the animal prey, predator, or both? What habitat does the animal live in?

### Grades 2–3

Ask students to think about the answers on the board while reading the books. Is there anything they want to add or change? Encourage students to take notes.

## AFTER YOU READ

### Grades K–1

- Divide the class into six groups and assign each group a book. Have students sort the animals in their book into three groups: camouflage, attraction, and warning. Then ask the groups to sort the animals by habitat.
- As a class, determine which habitat has the most animals of each color. Can students explain the class's results?

### Grades 2–3

- As a class, make the necessary changes to the lists on the chalkboard.
- Divide the class into six groups and assign each group a book. Using a Venn diagram, have students classify the animals into groups depending on how they use their color for survival: camouflage, attraction, or warning.

## INTERDISCIPLINARY ACTIVITIES

### Science Activities

### Grades K–1

- Take a walk outside. Look for red, orange, yellow, green, blue, and purple animals. Can you find each color? What color animal did you find the most of? What color animal did you find the least of? Why?
- Have students draw pictures of animals they see in the schoolyard, around their neighborhood, or at a local park. Using field guides, work with students to identify the creatures in the pictures they bring to class.

### Grades 2–3

- Break students into groups of six and assign a habitat to each group. Have each student do a report on a different colored animal in that habitat. Each report should include unique/important body features, habitat and range, diet, and any fun facts the student discovers. Then, as a group, students should present their habitat's Rainbow of Animals to the class.
- Some animals can change their color to hide or communicate. A chameleon turns different colors to control its body temperature. To find out why, have students place pieces of black, red, pink, and white construction paper in a sunny spot outdoors. They should place four more pieces of black, red, pink, and white paper in a shady spot outdoors. What happens when they feel the pieces of paper an hour later? Based on their results, what color should a chameleon turn if it wants to warm up? If it wants to cool down?

# Math Activities

## Grades K–1

- Have students list red, orange, yellow, green, blue, and purple animals that live in the forest, the desert, and the ocean. Each student should choose one of these habitats and draw the animals in rainbow order on a long strip of paper. Line up the rainbow strips around the room to create a large mural.
- Sort the animals from one book into different categories: mammals, birds, amphibians, reptiles, fish, insects, and other. Make a bar graph that shows the number of animals in each animal category.
- Sort the animals from one book according to size and graph them from smallest to largest.

## Grades 2–3

- For each color, students should sort the animals into three groups based on how they use their color to survive in their habitat: warning, attraction, or camouflage. Have them make a bar graph for each color and then compare the graphs. Students should consider the following questions:
  - Why is the red bar short for camouflage but tall for attraction and warning?
  - Why is the green bar tall for camouflage but short for attraction and warning?
- Using the Rainbow of Animals geography pages, have students compare the size of different animals' ranges.

## All Grades

- Take the class outside to play Shark and Minnows. Minnows stand on one end of the field. The shark stands in the middle of the field. Minnows must run to the other end of the field without getting eaten (tagged) by the shark. Have students keep track of how much prey (minnows) the predator (shark) eats during each round.
- Now give each child a red, orange, yellow, green, blue, or purple scarf. Create six bases in the middle of the field. Minnows are safe if they're on the base with the same color as their scarf. After each round, eliminate one base. Ask minnows with that color scarf how they feel. Explain that this is what happens to coral groupers and other reef fish when a coral reef dies due to pollution and development. Have students keep track of how much prey (minnows) the predator (shark) eats during each round. Did the number of minnows who died increase or decrease as the coral reefs disappeared?

# Language Arts Activities

## Grades K–1

- Ask students to create as many words as possible with the letters in CAMOUFLAGE. Then ask the children to sort the words by: number of letters in each word, word families, and vowel sounds. Ask the students to alphabetize the words.
- Have students write a riddle for a specific animal using the model below.

I \_\_\_\_\_ in the \_\_\_\_\_.  
(verb) (noun)

I use my \_\_\_\_\_ to \_\_\_\_\_.  
(color and body part) (attract/warn/hide)

I live in \_\_\_\_\_ on the continent of \_\_\_\_\_.  
(habitat)

What am I?

The riddle should include a typical behavior, the animal's habitat, and how the animal's color helps it survive. Can other students solve the riddles?

## Grades 2–3

- Have students make acrostic poems using the words CAMOUFLAGE, ATTRACTION, and WARNING. Students can write the word vertically, with one letter on each line. Then they can fill in words to create a poem that's related to the starter word. Ask them to include color words, animal or habitat names, or specific behaviors in their poem.
- Ask each student to pretend he or she is an animal and write a story that explains how being a certain color saved his or her life.

## All Grades

- Refer to the Readers Theater script at the end of this Guide and lead the class in performing it. Instructions for creating your own original Readers Theater script are available at the author's website ([www.melissa-stewart.com](http://www.melissa-stewart.com)).
- Have students write letters to author Melissa Stewart, telling her what they liked best about the Rainbow of Animals books. Send the letters to Author Fan Mail, Enslow Publishers, Box 398, 40 Industrial Rd., Berkeley Heights, NJ 07922-0398. If you include an e-mail address, Ms. Stewart will send an e-mail to your class. If students include drawings, Ms. Stewart will post some of them on her website.
- Ask students to think about their favorite color. Imagine what it tastes, feels, smells, and sounds like. Now have them to write a sensory poem about that color.

## Art Activities

### Grades K–1

- Cut sponges or potatoes in the shape of a morpho caterpillar. Have students use paint to make prints of multiple caterpillars to create the scariest shape possible. It should be designed to keep away hungry birds.
- Give each child two precut shapes of a blue shark made from blue paper. Ask students to glue one to a blue piece of paper. Have students draw a forest on a piece of green paper and glue the second shark to it. Explain the concept of camouflage. Can the class name some animals that would blend into their forest scene?
- Ask students to draw pictures showing how the groups of animals (mammals, birds, reptiles, amphibians, birds, insects) described in the Rainbow of Animals series are different from one another.
- Have students paint a rainbow on a large piece of paper. When the paint is dry, have them use a pencil to draw yellow animals in the yellow band, green animals in the green band, etc.

### Grades 2–3

- Provide six colors of clay or dough. Ask students to pick an animal from the Rainbow of Animals series and sculpt it. Then have each student show the class his or her sculpture and provide clues about how that animal uses its color. Can the class guess the correct answer?

- Have each student fold two origami birds—one brown and one brightly colored. Ask them which one they think is the male and explain why.

### All Grades

Have students make hats to wear while they are performing the Readers Theater script at the end of this Guide. Instructions for creating your own Readers Theater script are available at the author’s website ([www.melissa-stewart.com](http://www.melissa-stewart.com)).

## Geography Activity

### Grades K–1

Have each student shade in the area of a world map where the animal he or she created riddles for lives.

### Grades 2–3

- Have each student shade in the area of a world map where the animal he or she sculpted lives.
- Give students a large world map with the continents and oceans labeled. Ask them to use colored pencils to write the names of six animals that live on each continent.

## Further Reading

- Arnosky, Jim. *I See Animals Hiding*. New York: Scholastic, 2000.
- Jenkins, Steve. *Living Color*. Boston: Houghton Mifflin, 2007.
- Kalman, Bobbie, and John Crossingham. *Camouflage: Changing to Hide*. New York: Crabtree Publishing, 2005.
- Schwartz, David, and Yael Sachy. *Where in the Wild? Camouflaged Creatures Concealed and Revealed*. Berkeley, CA: Tricycle Press, 2007.
- Stockland, Patricia M. *Red Eyes or Blue Feathers: A Book About Animal Colors*. Minneapolis, MN: Picture Window Books, 2005.

## Internet Addresses

Animal Colors

[http://www.highlightskids.com/Science/Stories/SS1000\\_animalColors.asp](http://www.highlightskids.com/Science/Stories/SS1000_animalColors.asp)

Beasts Playground: Camouflage Game

<http://www.abc.net/au/beasts/playground/camouflage.htm>

How Animal Camouflage Works

<http://science.howstuffworks.com/animal-camouflage1.htm>



## Rainbow of Animals WORD SEARCH

P	T	A	T	I	B	A	H	H	I	D	E
C	U	A	M	P	H	I	B	I	A	N	L
P	M	R	B	I	L	N	A	B	W	E	I
H	R	B	P	L	L	A	M	M	A	M	T
S	P	E	B	L	U	E	N	N	R	P	P
Y	D	F	Y	G	E	R	R	D	N	R	E
E	G	A	L	F	U	O	M	A	C	U	R
L	K	T	N	M	E	T	I	W	K	P	S
L	B	T	A	O	R	A	N	G	E	O	U
O	I	R	E	F	E	D	S	R	K	I	R
W	R	A	C	I	K	E	E	E	E	S	V
T	D	C	O	S	L	R	C	E	R	O	I
M	A	T	C	H	B	P	T	N	P	N	V
R	A	I	N	B	O	W	L	Y	A	C	E

amphibian	hide	predator
attract	insect	prey
blue	land	purple
bird	mammal	rainbow
camouflage	match	red
fish	ocean	reptile
green	orange	survive
habitat	poison	warn
		yellow

## About the Author



Melissa Stewart is the award-winning author of more than 100 books for children. She has a B.S. in biology from Union College in Schenectady, NY, and a M.A. in science journalism from New York University. Melissa is on the Society of Children's Book Writers and Illustrators' Board of Advisors and is a judge for the American Institute of Physics Children's Science Writing Award.

In her free time, Melissa enjoys exploring natural areas near her home in eastern Massachusetts. She also likes visiting exotic habitats around the world and has spent time in Costa Rica, East Africa, Europe, the Galapagos Islands, and Mexico. Melissa has taught fiction and nonfiction writing classes for children and adults, and is available for school visits. See her website for more information:

[www.melissa-stewart.com](http://www.melissa-stewart.com).

## Notes