

Educator Resource Guide

ANIMALS IN SURPRISING SHADES: POEMS ABOUT EARTH'S COLORFUL CREATURES

Written by Susan Johnston Taylor
Interior illustrations by Annie Bakst

An engaging poetry collection that feels like a field guide to fascinating and colorful creatures throughout the world and doubles as an introduction to simple and fun poetic forms.

Juvenile Nonfiction/Poetry
32 Pages ~ 10 x 10
Grades 1 -5 ~ Ages 7+

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Key Concepts: STEAM, interactive learning, poetry, and animals.

About the author: Susan Johnston Taylor writes for kids and adults. Her magazine articles have appeared in *Dramatics*, *FACES*, *Fast Company*, *Entrepreneur*, *Scout Life*, *Highlights for Kids*, and many others. A strong believer in the power of poetry, Susan co-teaches a summer poetry camp through Austin Bat Cave, an Austin, Texas-based nonprofit that offers writing programs for kids and teens. In addition to *Colorful Creatures*, she has written several children's books for the educational market.

About the illustrator: Annie Bakst is an illustrator and designer living in Vermont. The colors and textures of animals and nature have inspired the work in this lovely poetic book. Traditional gouache drawings and paintings are enhanced digitally in the artwork on each page. Annie has illustrated two graphic novels, children's books, many murals for a children's hospital, and has had several gallery shows. She has also won numerous national design awards and a Society of Illustrators Award in NYC.

Using this guide:

This educational resource guide can be used by anyone interested in sharing enthusiasm about *Animals in Surprising Shades* with children of all ages. If you are a teacher, librarian, home school instructor, camp counselor, or super cool parent, grandparent or guardian, this guide is for you! Feel free to adapt the suggested learning projects and activities according to your needs, interests, time, audience, and goals.

We have done our best to provide information, discussion points, and resources that may be useful for you and your learning participants. However, website content and accessibility is subject to change. Please review all suggested resources and websites prior to sharing them in your learning environment to ensure they meet with your individual standards and contain age-appropriate content for your participants.

This guide is broken down into two general categories: 1) learning opportunities (with associated activities) related to science and animals, and 2) learning opportunities (with associated activities) related to writing and poetry. These are broad categories with overlap between subjects, and each activity will vary in complexity depending on the age of the participants. Please modify as you see fit.

Suggested learning activities can be found for each category and are intended to align with appropriate Common Core, NGSS and/or National Core Arts Standards. To inquire about additional materials or if you have questions about this guide, please view our website at: www.gnomeroadpublishing.com.

PART 1: SCENCE AND LANGUAGE

Learning Opportunity #1: Let's talk about Science! discussion questions)

- The author of *Animals in Surprising Shades* provides additional information and scientific terms for readers to explore on each page of the main text. These areas are called “sidebars” and are used to explain more about the animals in the book and what each poem is about. What was something you learned that you didn't know before reading the book?
- The terms used in the sidebars can be found in the glossary at the end of the book. Choose one of the terms and see if you can think of an example of how this works in the world that is different from what is shown in the book. (Hint: The author shares that the idea of counter-shading is also used on military aircraft. Can you think of other ways this kind of science is used by humans or other animals?)
- The first poem in the book invites readers to marvel and wonder at animals in surprising shades in nature. It's a book for explorers and scientists! What does it mean to you to be a scientist? What sorts of tools do scientists use? Where do they work? What do scientists study?

Suggested Activities ~

Vocabulary Match and Word Search!

- Show off what you know after reading *Animals in Surprising Shades* and complete the vocabulary matching sheet provided at the end of this resource guide. Discuss your answers with another participant or partner. For extra fun, complete the word search, too!

Become a Scientist!

- Now it's your turn to observe and describe an animal of your choice. Start with a little research first. Answer questions like:
 - o Where does that animal live?
 - o What does it eat?
 - o What does it look like?
 - o How does it live?
 - o Does it live in groups or by itself?
 - o What is one unusual fact or feature about your animal?
 - o What tools do you need to study this animal its natural habitat?
- Once you finish your research, draw a picture of your animal or use materials to make a collage or sculpture of one. Write out or present what you have learned to others.

Learning Opportunity #2: Let's talk about (colorful) animals!

- The author of *Animals is Surprising Shades* chose twelve animals to showcase in this poetry collection. It wasn't easy to narrow it down to just these twelve. There are many more animals throughout the world that are colorful for all kinds of reasons. Can you think of other animals that use color in new or interesting ways? Why do you think they are colored that way? (Hint: Is the color a good way to hide from predators? A warning to others? A flashy way to get attention?)
- Colorful animals can be found everywhere! Can you find a map or globe and identify where each of the animals described in the book can be found? Place a dot with a marker or colored paper to show what you know.
- The animals in the first part of the book (the Strawberry Poison Dart Frog through the Picasso Bug) were arranged to resemble the colors of the rainbow as much as possible. Can you identify all the colors in the rainbow? What order are they found in nature?

Suggested Activities ~

Paint Your Own (Rock) Animal!

- The author made her own Picasso Bug using a rock and paints (see her Instagram post here: <https://www.instagram.com/p/CnW8VE9g4dY/>). You can make a rock animal like this, too. Or, find other materials like clay, paper, sticks, pipe cleaners, tape, glue and boxes to make one of the animals in the book. Make sure to add those colorful details!

Act like a _____!

- Use your research skills to find out more about a colorful animal you are interested in. (Hint: There are websites listed at the end of this guide that might be helpful.) Next, with a group of friends or by yourself, create a skit or routine where you can show others what makes your animals unique or interesting and tells something about how the animal lives. Make sure to use some colorful props or clothing to make show off your creation.

Make a Rainbow!

- For the youngest participants, have fun making rainbows using the correct rainbow order. Make them out of any supplies of your choosing. For more of a challenge, select a collection of animals found in nature that were not used in *Animals in Surprising Shades* and make a “rainbow order” book of your own. You can use full-size paper and staple the edges together (or for a smaller version, watch this folding book video: [How To Make A Book](#)). Make sure to add sidebar information with a fact about each animal. Share your books with other participants!

PART II: LANGUAGE AND POETRY

Learning Opportunity #1: *Let’s Talk About Non-Fiction Writing!*

- The author of *Animals in Surprising Shades* did a lot of research to make sure the facts in the book are accurate. The illustrator did a lot of research to make sure the animals looked like they do in nature, too. That is really important to do when writing non-fiction. Can you explain the difference between fiction and nonfiction?
- All those facts had to be verified (meaning, someone had to make sure they were true). How do we know if something is true? How does it differ from an opinion? What types of sources do we need to look at to verify a fact?
- Including facts and details in a story often results in learning or using new vocabulary. What are some of the words you heard for the first-time reading *Animals in Surprising Shades*? (Hint: Many of these words are in bold text in the sidebars on each page and found in the glossary in the back.) Can you use some of these words in a sentence in a new way?

Suggested Activities ~

Make your own vocabulary crossword!

- Reading and researching are great ways to increase vocabulary. If you’ve already done some research for one of the activities above, go back to your projects and find ten words that were new to you or you think can help others increase their vocabulary. Make a list of these words with short definitions to create a crossword puzzle for others. You can use this link: <https://www.puzzle-maker.com/CW> if you need help. Go one step further and make a matching game with definitions.

Compare and Contrast!

- Sharpen your non-fiction research and critical-thinking skills by creating a Venn Diagram. Compare what you know and learned about one of the animals in the book with an animal of your choice. Find 10 true facts about each of these animals and put those facts in the diagram. This can be done individually or in groups on a computer, a piece of paper or whiteboard. How are the animals alike? How are they different? Be sure to share with others when your diagram is complete. [Venn Diagram](#)

Learning Opportunity #2: Let's Talk About a Special Kind of Writing – Poetry!

- The author of *Animals in Surprising Shades* used poetry to share facts about animals, science and nature. That isn't easy! But poetry can be a good way to learn something new and remember it. How many different kinds of poems did you see in the book? What was your favorite poem? What did it mean to you?
- Can you think of another place you can find poetry other than a book? (Hint: If you listen to the radio, you've heard poetry!)
- Some poetry uses rhyme but some poetry doesn't rhyme at all. Rhyming poetry uses words that sound alike, usually at the end of each line. Can you think of an example of rhyming poetry? (Hint: If you've heard a nursery *rhyme*, then you've heard a rhyming poem!) Can you think of an example of non-rhyming poetry? If you can't, why not use your research skills and find other poetry books in your library or classroom with non-rhyming poems!

Suggested Activities ~

Write Your Own Poem!

- Find one of the poems used in *Animals in Surprising Shades* and read about the poetic form. Use this poetic form to make your own poem about a colorful creature! It might help to make a list of words that describe the animal. (Hint: If you completed any of the research activities found above, you can use this here, too.) You can use the printable form found at the end of this resource guide to write your new poem. Feel free to print more copies if you don't have enough space or want to write more poems. Don't forget to add an illustration!

Make A Poem Collage!

- A fun activity for a group, this writing activity involves at least two participants. Decide on a theme for your poem (for example, animals found in the desert) and then have each person takes turns contributing a line until the poem is complete. You can make your own rules about the poem as a group beforehand. Each person then adds an illustration or part of one that fits together to complete the collage.

Wonderful websites about science, animals and the natural world:

- [Science Experiments For Kids](#)
- [National Geographic Kids](#)
- [Planet Pals](#)

Wonderful websites about writing poetry:

- [Poetry4Kids](#)
- [Children's Poetry Archive](#)
- [Read, Write, Think](#)

OTHER SELECTED SOURCES (provided along with those found in the book)

Manta Ray

Laine, Kristian. “How Did This Rare Pink Manta Get Its Color?” *National Geographic*, 19 Feb. 2020, www.nationalgeographic.com/animals/2020/02/pink-manta-ray-australia-rare/.

“Manta Ray (Manta Birostris) FAQ.” *Biology of Sharks and Rays*, ReefQuest Centre for Shark Research, www.elasmo-research.org/education/topics/lh_manta_faq.htm.

“Manta Ray Anatomy.” *Manta Ray World*, www.mantaray-world.com/manta-ray-anatomy/.

“Manta Ray Facts.” *Great Barrier Reef Foundation*, www.barrierreef.org/the-reef/animals/manta-ray.

“Manta Rays Facts - PROJECT MANTA.” *Project Manta*, www.sites.google.com/site/projectmantasite/home/get-involved-1.

Montanari, Shaena. “Why Manta Rays Swim in Mesmerizing Circles.” *National Geographic*, 12 July 2017, www.nationalgeographic.com/news/2017/07/manta-rays-swimming-hawaii-video-spd/.

White, Lewis. “Manta Ray Guide: How to Identify, Diet and Where They Live.” *BBC Wildlife*, www.discoverwildlife.com/animal-facts/fish/facts-about-manta-rays/.

Wu, Katherine J. “Rare Pink Manta Ray Spotted Near Australia's Lady Elliot Island.” *Smithsonian.com*, Smithsonian Institution, 13 Feb. 2020, www.smithsonianmag.com/smart-news/rare-pink-manta-ray-spotted-near-australias-lady-elliott-island-180974196/.

Strawberry Poison Dart Frog

Gruber, Karl. *Earth - Poison Dart Frogs Are the Most Poisonous Animals Alive*. BBC, 22 Apr. 2015, www.bbc.com/earth/story/20150422-the-worlds-most-poisonous-animal.

Lester, Liz. “Strawberry Poison Frogs Feed Their Babies Poison Eggs.” *The Official Blog of the ESA.*, 20 Mar. 2014, www.esa.org/esablog/research/strawberry-poison-frogs-feed-their-babies-poison-eggs.

“Poison Dart Frogs.” *National Geographic*, 24 Sept. 2018, www.nationalgeographic.com/animals/amphibians/group/poison-dart-frogs/.

Eastern Newt

“Eastern (Red-Spotted) Newt - Watchable Wildlife.” *Eastern (Red-Spotted) Newt - Watchable Wildlife - NYS Dept. of Environmental Conservation*, New York State Department of Environmental Conservation, www.dec.ny.gov/animals/67022.html.

“Eastern Newt - *Notophthalmus Viridescens*: Wildlife Journal Junior - Wildlife Journal Junior.” *New Hampshire PBS*, nhpbs.org/wild/easternnewt.asp.

“Eastern Red-Spotted Newt.” *Eastern Red-Spotted Newt | Mountain Lake Biological Station, U.Va.*, Mountain Lake Biological Station at the College of Arts and Sciences at University of Virginia, 19 July 2014, mlbs.virginia.edu/organism/notophthalmus_viridescens.

Fröbisch, Nadia B., et al. “Early Evolution of Limb Regeneration in Tetrapods: Evidence from a 300-Million-Year-Old Amphibian.” *Proceedings of the Royal Society B: Biological Sciences*, vol. 281, no. 1794, 2014, p. 20141550., doi:10.1098/rspb.2014.1550.

“Red-Spotted Newt.” *YouTube*, CatchingCreation, 2 May 2012, www.youtube.com/watch?v=UZ8PxcWOAt4.

“Scientists Have Solved the Spallanzani's Dilemma.” *ScienceDaily*, 30 Mar. 2016, www.sciencedaily.com/releases/2016/03/160330085608.htm.

Ghost Crab

“Atlantic Ghost Crab.” *Chesapeake Bay Program*, www.chesapeakebay.net/S=0/fieldguide/critter/atlantic_ghost_crab.

“Ghost Crab.” *National Parks Service*, U.S. Department of the Interior, www.nps.gov/pais/learn/nature/ghost_crab.htm.

Shultz, David. “Listen to a Ghost Crab Frighten Away Enemies-with Its Stomach Rumbles.” *Science*, 10 Sept. 2019, www.sciencemag.org/news/2019/09/listen-ghost-crab-frighten-away-enemies-its-stomach-rumbles.

Emerald Green Sea Slug

“The Sea Slug That Eats the Sun | Sidney Pierce | TEDxTampaBay.” Performance by Dr. Sidney Pierce, *YouTube*, TEDxTampaBay, 15 Jan. 2013, www.youtube.com/watch?time_continue=460&v=TGZdiXYpY30&feature=emb_logo.

Phone interview with Patrick J. Krug, Professor of Biological Sciences & Graduate Advisor at the California State University – Los Angeles on April 12, 2021.

Blue-Footed Booby

Blue-Footed Booby. National Geographic, 21 Sept. 2018, www.nationalgeographic.com/animals/birds/b/blue-footed-booby/.

“Dance of the Blue-Footed Booby.” PBS, 1 Nov. 2013,
www.youtube.com/watch?v=z922by9_6Fw.

Violet Snail

Crew, Bec. “Violet Snail an Ocean Wanderer.” *Australian Geographic*, 2 Sept. 2018,
www.australiangeographic.com.au/blogs/creatura-blog/2014/03/violet-snail-janthina-janthina/.

Heimbuch, Jaymi. “Violet Sea Snails Sail on a Bubble Raft and Eat Jellyfish.” *MNN*, Mother Nature Network, 7 May 2018, www.mnn.com/earth-matters/animals/blogs/violet-sea-snails-sail-on-a-bubble-raft-and-eat-jellyfish.

“*Janthina Janthina*.” *Scripps Institute of Oceanography*,
scripps.ucsd.edu/zooplanktonguide/species/janthina-janthina.

Picasso Bug

Beukes, Lauren. “Interesting Facts on Beautiful Picasso Bugs.” *Southlands Sun*, 2 Aug. 2017,
southlandssun.co.za/78541/interesting-facts-beautiful-picasso-bugs.

Sain, Todd. “Picasso Bug.” *Our Breathing Planet*, 30 May 2020,
www.ourbreathingplanet.com/picasso-bug.

Animals In Surprising Shades

Word Search



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



OCTAVE

QUATRAIN

ACROSTIC

GHOST CRAB

NONET

PERSONA

GOGYONKA

MANTA RAY

PREGUNTA

CONCRETE

NEWT

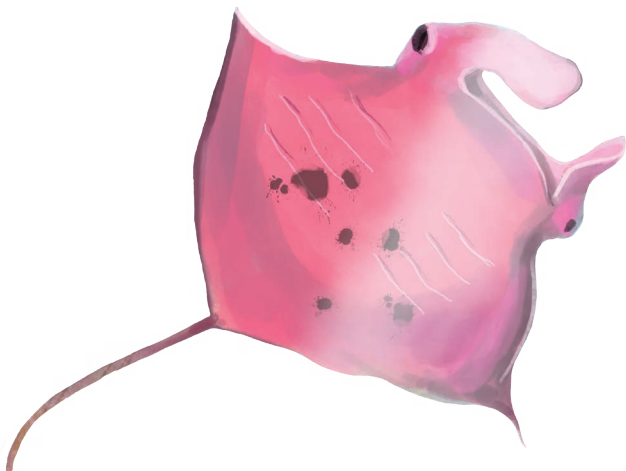
PICASSO BUG

TANKA

HAIKU

FROG

HONEYCREEPER



**ANSWER
KEY**

Animals In Surprising Shades

Word Search



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



OCTAVE

QUATRAIN

ACROSTIC

GHOST CRAB

NONET

PERSONA

GOGYONKA

MANTA RAY

PREGUNTA

CONCRETE

NEWT

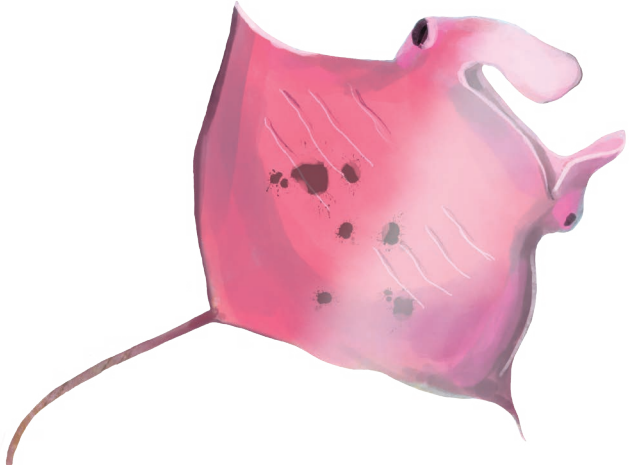
PICASSO BUG

TANKA

HAIKU

FROG

HONEYCREEPER



Animals In Surprising Shades

Vocabulary Matching



Match the word with its meaning by drawing a line to connect them.

Adaptation

A type of camouflage where an animal's coloring is darker on one side and lighter on the other side.

Aposematic coloration

Invertebrates that consume decaying plant and animal parts and help it decompose. They are nature's recyclers.

Camouflage

The process some animals use for choosing a mate.

Chemical defense

When an animal loses a body part and regrows it.

Chloroplast

A structure within a plant cell that uses photosynthesis to change sunlight into energy a plant or certain animals can use.

Countershading

Behaviors or physical traits that an animal developed to survive.

Courtship

Describes an animal that is active at night. It's the opposite of diurnal, which describes animals that are active during the day.

Detritivore

Noticeable coloring that makes an animal less attractive to potential predators. Also called advertising coloration or warning coloration.

Dimorphic

When males and females of the same species display different physical traits.

Erythyrism

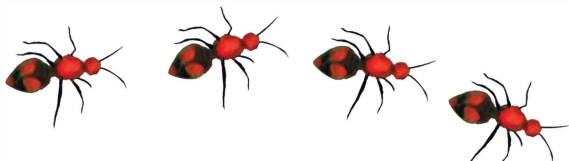
Coloring that blends into its surroundings so the animal can avoid predators.

Nocturnal

A condition that makes skin appear unusually pink or red. It can be caused by diet or genetics.

Regenerate

Certain plants and animals give off toxins that scare away predators.





Animals In Surprising Shades

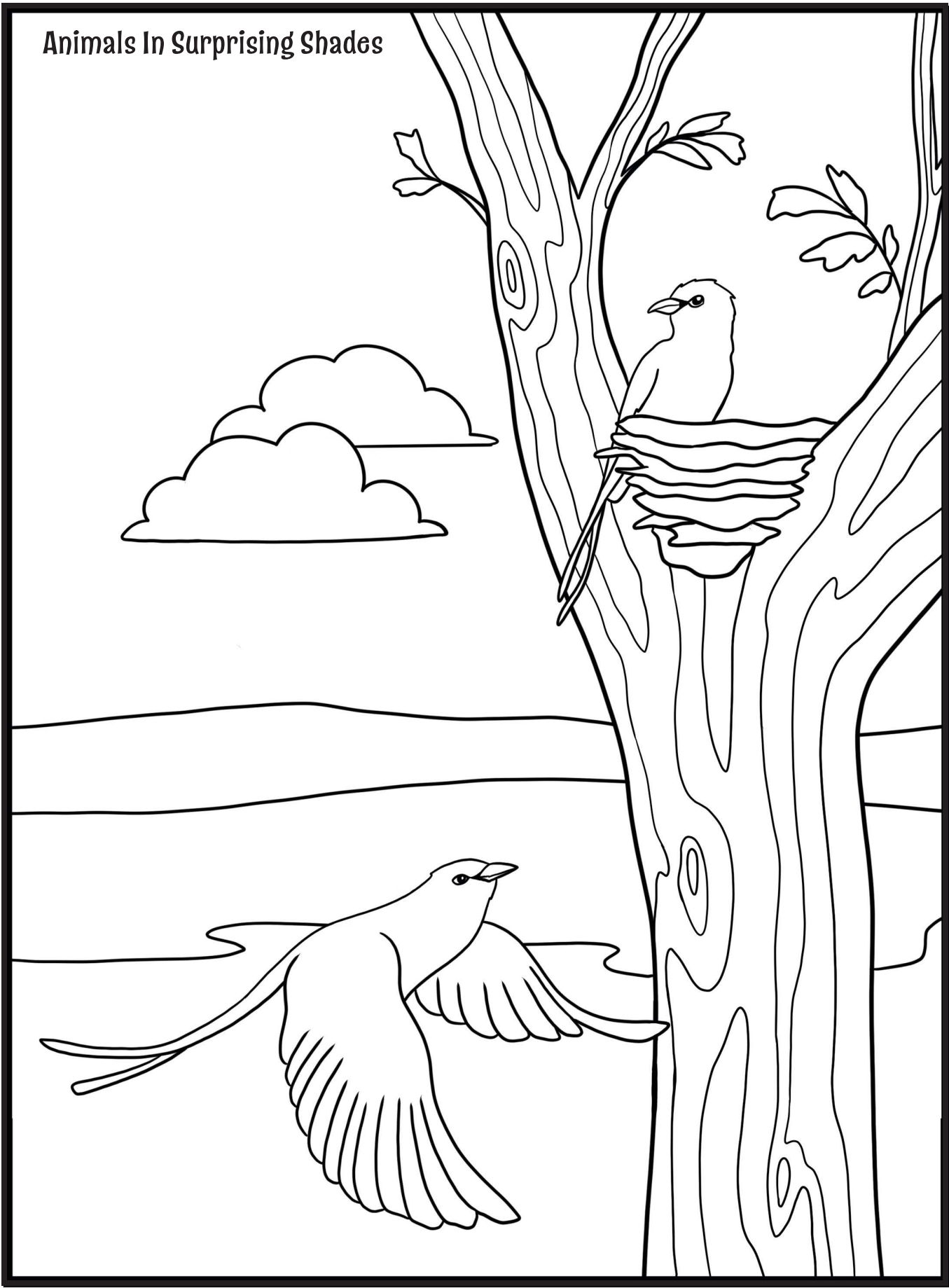


My _____ Poem

Choose your favorite type of poem and write one of your own!



Animals In Surprising Shades





**Animals In
Surprising Shades**