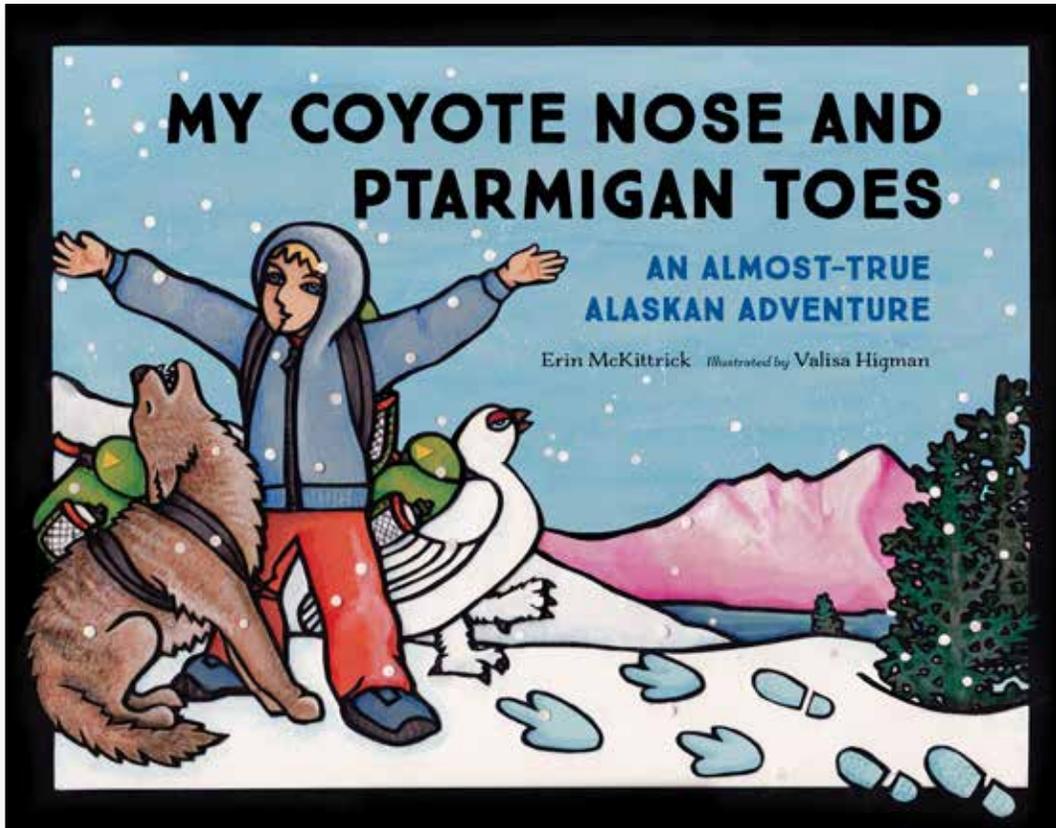


The discussions and activities in this guide align with Common Core State Standards for English Language Arts and Mathematics for K-5.

TEACHER'S GUIDE

Written by Julie Fry, EdM, NBCT



MY COYOTE NOSE AND PTARMIGAN TOES

AN ALMOST-TRUE ALASKAN ADVENTURE

Written by Erin McKittrick
Illustrated by Valisa Higman

BEFORE THE STORY . . .

1. Read the story title and ask students to think about and discuss what the story might be about. Discuss what “almost true” might mean. (SL.K-2.1)
2. Study the title page of the book and use *who*, *what*, *where*, *when*, *why*, and *how* to ask questions about what they see, such as: “Who do you think the story will be about?” “Why is the shortest child carrying a pink bear?” “What is a ptarmigan?” (RL.2.1)
3. Help young students identify the author and illustrator and define the role of each in telling a story. (RL.K.6)



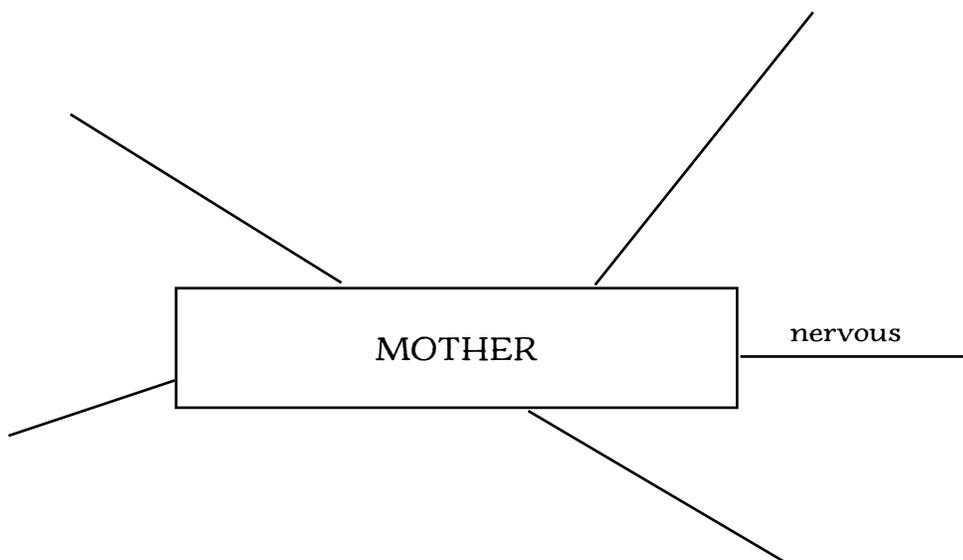
DURING THE STORY . . .

1. After pages 2-3, and throughout the story, ask young students to identify the rhyming words. (RF.K.2) Ask young students to describe the relationship and/or connections between the illustrations and the story. (RL.K.7) For grades 1-3, ask students to use the illustrations and details in the story to describe its characters, setting, and events. (RL.1-3.7)
2. After page 3:
 - a. Have students think about what it takes to prepare for a camping trip or a long journey. Have students write a quick list of five essentials they would take on such a journey and discuss each item with a partner. (SL.K-3.1) Have students ask and answer questions about items on their lists in order to gather additional information or clarify something that is not

understood, such as: “Why would you take a compass?” “Why wouldn’t you take a hair dryer?” (SL.K-3.3)

- b. Using a mind map format, create a “Character Study” poster as illustrated (*fig. 1*). Add words or phrases the author uses throughout the story that describe the mother’s character. (RL.1-3.7) Revisit the poster at the end of the story and use it to draw some conclusions about this character. (See “After the Story,” #3.)

Character Study (*fig. 1*)



3. After page 5, and throughout the rest of the story, tell students they are going on a quest for evidence in the story using the science concept “Structure and Function.” (Structure and Function being one of the seven Crosscutting Concepts, overarching concepts that bridge disciplinary boundaries within science and engineering, found in the **Next Generation Science Standards [NGSS]**.) Explain to students that the way in which an object or living thing is shaped and its substructure determine many of its properties and functions. For example, the shape of our hands and fingers allow animals like us to grip things. Being able to grip something is one of many functions of the structure of our hands and fingers. Similarly, understanding how a catapult works is best addressed by examining the structures and functions of its gears and tension systems. Also, the shape and structure of a maple seed allows this type of tree to disperse (the function) its seeds far and wide, increasing its chances of growing more of its kind. Have students think of other complementary aspects of objects, either natural or man-made.

- a. Create a framework poster (*fig. 2*) to gather text evidence from the story that demonstrates students' understanding of the differences among animals in the story, using the concept of Structure and Function. After reading each page, fill in the blank poster together by asking students, "What is the animal?" "What is its special structure?" "What is the function of its special structure?" (RI.2.3, RI.K-2.8, SL.K-3.4, RL-K-3.1; NGSS Crosscutting Concept: Structure and Function)

STRUCTURE AND FUNCTION (FIG. 2)

Page	Animal	Structure	Function
5	Caribou	Strong legs	Can run all day
7	Beaver	Strong teeth	Can chew down trees
9	Sparrow	Straight flight pattern	Can fly through dense brush
11	Moose	Long legs	Can walk through muddy places
13	Coyote	Strong nose and eyes	Can hunt at night
15	Bear	Powerful claws	Can dig large dens
17	Otter	Flexible body	Can swim easily in rapids
19	Beluga	Large melon on head	Aids in echolocation in murky water
21	Snail	Hard shell	Protection
23	Raven	Strong feathers	Can fly in storms
25	Mountain Goat	Narrow hooves	Can easily walk on ledges
27	Ptarmigan	Special feathers	Provides camouflage and warmth
29	Woolly Mammoth	Thick woolly fur	Provides warmth in severe cold

4. After page 5, discuss why animals migrate and the differences between *migrating* and *immigrating*. Have the students share their

family's stories of immigration to the United States, discussing any challenges or landmark experiences they have faced. (SL.K-3.1)

5. After page 7:

- a. Discuss with students how beavers are like engineers. For example, beavers build homes that are in water, but they build them in such a way that they provide protection and dry shelter for their families. Essentially, beavers are solving a problem of making an inhospitable place into a hospitable dwelling called a lodge. As they build their lodges, they also create dams that modify the landscape, backing up a river or stream into larger areas of still water that turn into wetlands. This becomes beneficial for many animals in a large food web. Conversely, when beavers are taken out of a habitat, instability occurs in the system and change happens. (SL.K-3.1 and NGSS Crosscutting Concepts of: Cause and Effect and Stability and Change)
- b. Discuss how students can also be like engineers. Use the following "Engineering Practices" from the NGSS to facilitate this discussion:
 - i. Ask questions (for science) and define problems (for engineering).
 - ii. Develop and use models, such as a 3D model of a beaver dam. (NGSS Crosscutting concept: Systems and System Models)
 - iii. Plan and carry out investigations.
 - iv. Analyze and interpret data.
 - v. Use mathematics and computational thinking. For example, do beavers do math?! Write and illustrate a cartoon of beavers using mathematics to build a dam or lodge. (W.K-3.3)
 - vi. Construct explanations (for science) and design solutions (for engineering). For example, design a people house with the constraint of being over water. How is that design different from one on land? (NGSS Crosscutting concept: Systems and System Models)
 - vii. Engage in argument from evidence.
 - viii. Obtain, evaluate, and communicate information.



6. After page 12, discuss the technology of a compass. Discuss why it is a valuable tool for people on expeditions. Discuss what jobs people do that might require this tool. Conduct an Internet search on how to make and/or use a compass. Research the earliest compass known to man. Discuss how the design is different from a modern compass. (W.K-3.2; K-3.6; SL.K-3.1 and CCSS Math Practice #5)
7. After page 17, have students make a Personal Flotation Device (PFD) awareness poster for their school and/or community, communicating their opinion in the text about why these should be worn by children and adults alike while near deep water. (W.K-3.1)
8. After page 23, have students compare ravens and crows, conducting shared research in a writing project. (W.K-3.7)
9. After page 27, discuss with students how humans adapt to cold weather. (SL.K-3.1)



10. After page 31:

- a. Compare the animals in the picture to the prior images. Ask students to explain why they think the animals are no longer wearing the green backpack. Discuss the question, “Why do you think the illustrator drew the animals wearing a backpack in the story?”
- b. Have students discuss what kinds of “animal powers” they think they might have in them or some they wish they could have. Discuss how animal powers might be the same or different from superhero powers. Have students sketch a portrait, illustrating their special “animal powers.” For example, if they wish they could have strength like a gorilla, have them draw themselves with gorilla arms doing something that requires great strength. Finally, have students write a personal narrative, explaining how they use or could use their special animal powers to overcome obstacles as told in the story or explain how they would help the world be a better place. (SL.K-3.1; W.K-3.3)

AFTER THE STORY...

1. Ask students to describe the overall structure of the story, describing how the beginning introduces the story, details are developed in the middle, and the ending concludes the action. (RL.K-3.3; RL-2.5) Have students retell the story, recounting key details in complete sentences, answering the question, “What is the central message of the story?” (RL.K-2.2)
2. Use the “Structure and Function” poster to write a report on an animal of choice, describing its special structures and functions. Use digital tools to produce and publish their writing. (W.K-3.2; W.K-3.6)
3. Use the “Character Study” poster to discuss and/or write about how the boy’s and his mother’s adventures may have been the same or different. (RL.1-2.9; W.K-2.2) Address the differences in the points of view of the boy and his mother. (RL.2.6)
4. Think about the woolly mammoth on page 29. The author calls this extinct animal a “hero.” Write an opinion piece defending or refuting this point of view. Have students respond to the question, “How could an extinct animal possibly be a hero?” (W.K-3.1)

Note on referencing page numbers: To find the pages in the book referred to in this guide, use the title page as page 1.

ENGLISH LANGUAGE ARTS STANDARDS THIS GUIDE ALIGNS WITH:

Reading Standards for Literature: RL.K.1, RL.K.2, RL.K.3, RL.K.6, RL.K.7, RL.1.1, RL.1.2, RL.1.3, RL.1.7, RL.2.1, RL.2.2, RL.2.3, RL.2.5, RL.2.7, RL.3.1, RL.3.3, RL.3.7

Reading Standards for Informational Text: RI.K.8, RI.1.8, RI.2.3, RI.2.8

Reading Standards: Foundational Skills: RF.K.2

Writing Standards: W.K.1, W.K.2, W.K.6, W.K.7, W.1.1, W.1.2, W.1.6, W.1.7, W.2.1, W.2.2, W.2.6, W.2.7, W.3.1, W.3.2, W.3.6, W.3.7

Speaking and Listening Standards: SL.K.1, SL.K.4, SL.1.1, SL.1.4, SL.2.1, SL.2.4, SL.3.4

Visit the Common Core State Standards website to read about the individual standards: www.core-standards.org/the-standards

Additional reference material *A Framework for K-12 Science Education*, found at National Research Council of the National Academies (www.nap.edu).