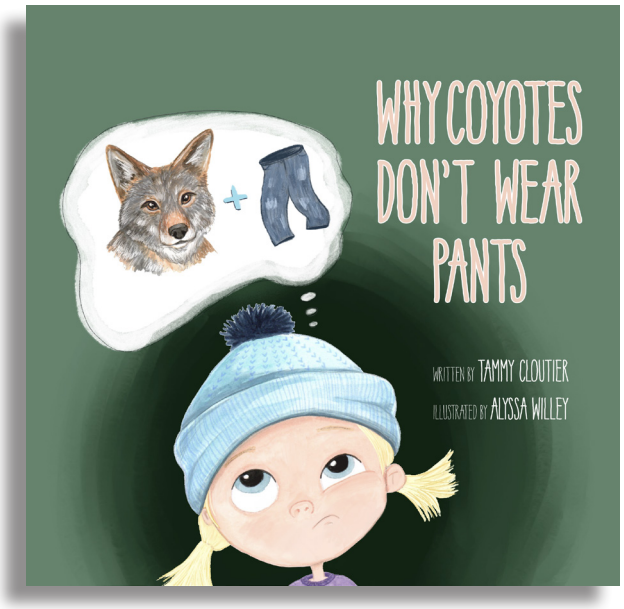

A Common Core State Standards and Next Generation Science Standards-Aligned Discussion & Project Guide

WHY COYOTES DON'T WEAR PANTS

ISBN-13: 979-8987347102

Written by Tammy Cloutier

Illustrated by Alyssa Willey

Published by Tammy Cloutier

Emma, an inquisitive child with a sense of humor, has a close encounter of the fur kind with a coyote. Rather than being afraid, she wonders why adults find coyotes so worrisome. Are sharp teeth and claws really an issue? WHY COYOTES DON'T WEAR PANTS is a light-hearted story that celebrates the similarities and differences in the human and animal world.

Guide created by
Debbie Gonzales, MFA

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Pre-Reading Discussion

Pre-reading Discussion:

- Describe the images featured on the front cover of the book.
- Interpret how the girl is feeling. How do you know?
- The word inquisitive means curious, questioning, and wonder. On the back cover of the book, the girl is described as being inquisitive. Why do you think this is so?
- Can you explain why coyotes don't wear pants?
- Would there ever be instances when wearing pants would be a good idea for a coyote? Explain your answer.
- Predict what this picture book is going to be about.

Meet the Author & Illustrator

Author Tammy Cloutier:

Tammy Cloutier is a conservation ethologist, author, and editor. An ethologist studies the science of animal behavior. As a child, Tammy had a Pegasus as a pet, knew that she was part mermaid, and believed Africa was just around the corner. As an adult, she uses her passion for nature to do her best to make the world a better place through research, writing, collaboration, and education. Learn more about Tammy's books and projects at tammycloutier.com.

Illustrator Alyssa Willey:

Alyssa Willey is an artist living in her hometown of Warren, Maine. She creates illustrations using traditional methods, such as pen, ink, and watercolor, then edits her work digitally. She enjoys illustrating children's picture books, middle grade novels, and book cover illustrations. Alyssa won many poster contests with her art and has published a number of adorable picture books, as well. When she's not creating illustrations, Alyssa is a substitute teacher and works in local after school programs. Learn more about Alyssa and her art at alyssawilley.crevado.com.

Post-Reading Discussion

Emma has heard stories about coyotes.
But this coyote looks curious. So why are people afraid of them?

- The word *curious* is defined as inquisitive or questioning. Determine reasons why the coyote might be curious about Emma.
- Tell all that you know about coyotes.
- To *be afraid* means frightened, scared, or terrified. Have you ever been frightened, scared, or even terrified? Describe the situation.
- Predict why people are afraid of coyotes.
- How do you feel about coyotes? Explain your answer.

Could it be because of a coyote's ears, nose, or teeth?
Coyotes have tall, pointy ears that allow them to hear things that are far away.
A coyote's sense of smell is much better than a person's.
Coyotes have large, sharp teeth that are just right for hunting for food.

- The word *adaptation* means changing, blending in, and survival. The way an animal's body is designed is due to how it adapts to its environment. Adaptation helps animals, such as the coyote, survive. Determine how having pointy ears might help a coyote survive.
- Explain why having a long nose might help the coyote's sense of smell. Why would a keen sense of smell be important to a coyote's survival?
- Explore the importance of sharp teeth to a coyote's adaptation to its environment.

What about a coyote's voice?
Emma tries to yip, bark, and howl like a coyote, but laughs instead.

- Notice how Emma's dog, Penny, and the coyote are similar. They are both members of a scientific taxonomy called canids. Identify how Penny's features are similar to the coyote's.
- List ways that the coyote's need for adaptation differs from Penny's.
- The coyote's fur is an example of *camouflage*, disguising the animal by blending in with the background of the woods or grassy fields. Determine why coyotes need camouflage to live.
- An *ecosystem* is a geographic area where plants, animals, and other organisms survive the same type of weather and landscape. Grasslands and forests are two examples of the types of ecosystems where coyotes live. Tell how the shape of the coyote's ears, nose, teeth, paws, and fur help the animals survive in both ecosystems.

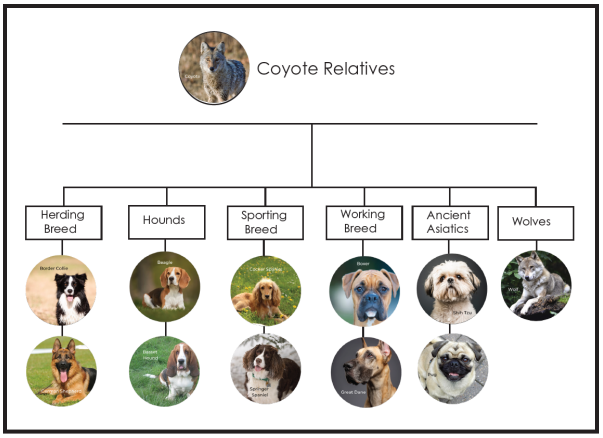
As the coyote disappears into the trees, Emma notices one more difference.
If ears and paws make it difficult to wear hats, mittens, or boots,
then a coyote's tail would make it hard to wear pants!

- There are other ecosystems on the earth, one being the *Arctic Ecosystem* and another is the *Mountain Ecosytem*. The Arctic Ecosystem is very cold, filled with glaciers, icy lakes, and deep snow. Tell why the coyote would struggle to survive in the arctic ecosystem.
- There can be drastic and quick weather and temperature changes, along with rocky and treacherous terrain, in the Mountain Ecosystem, making survival for plants and animals difficult. Explain why a coyote would be unable to live in the Mountain Ecosystem.
- Throughout the story, Emma visualizes how she might adapt to the coyote's way of life. Imagine how the coyote would have to change physically to adapt to living in the Arctic and/or the Mountains.
- Summarize all that you learned about coyotes. Identify your favorite fact. Research more about the coyote, adaptations, and ecosystems. Share what you learn with your class.

Coyote Relatives

Emma thinks about all the similarities between people and coyotes. They both have families, live in the same places, and eat a variety of foods.
But she also thinks how great it is that there are differences because that's what makes each person and coyote special.

Objective: Compare and contrast physical adaptation traits of various canids (wild and domestic).

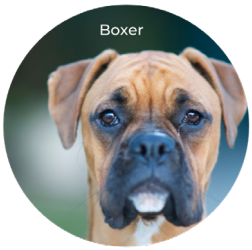


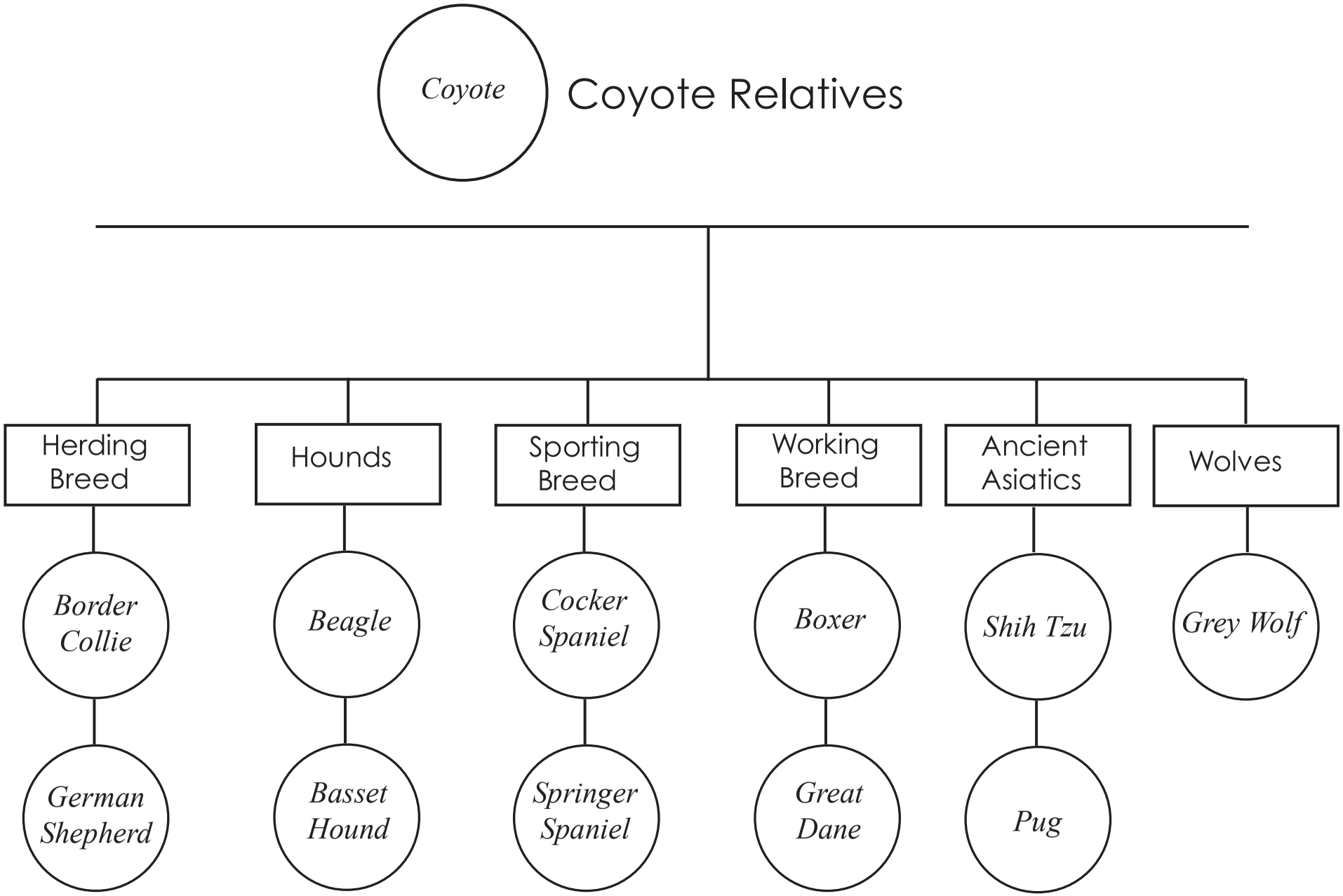
Materials:
- WHY COYOTES DON'T WEAR PANTS, the book
- Coyote Relatives Images (Guide, pg. 7)
- Coyote Relatives Template (Guide, pg. 8)
- Coyote Relatives Answers (Guide, pg. 9)
- Cardstock
- Scissors

Procedure:
- Print a copy of the Coyote Relatives template and the Coyote Relatives Images on cardstock. Trim around the edges of the Coyote Relatives Images with scissors.
- Lead a discussion about the term adaptation with the class. The word adaptation is defined as changing, blending in, and survival.
- WHY COYOTES DON'T WEAR PANTS as reference, consider the illustration featuring the coyote and Emma's dog, Penny. Discuss the similarities and differences of the coyote and Penny's physical features. Explain that the differences between the two are a result of physical adaptation, which is a result of how each animal's ancestors adapted to their natural habitats.
- Explain how Penny and the coyote are different from the domestic dog breeds and wild wolf provided in the template. A breed is a type of animal with similar appearances, behavior traits, and other characteristics that distinguish the breed from others.
- Using the Coyote Relatives template as a reference, explain that there are a number of different breeds of dogs and that this list will focus on the following types of breeds:
  - The Herding Breed: Dogs that have been developed to gather, herd, and protect livestock. Herding dogs have the ability to control the movement of other animals.
  - Hounds: This breed of dog is one of the most popular types in America. Hounds are also known to be excellent hunting dogs.
  - The Sporting Breed: Naturally active and known for their outstanding instincts in the water and the woods, these dogs are great companions while engaging in sporting and outdoor activities.
  - The Working Breed: This type of dog is trained to perform specific tasks such as being guard dogs, sled dogs, and/or therapy dogs.
  - Ancient Asiatics: These breeds are referred to as *ancient* because it is believed they originated more than 500 years ago.
  - The Wolf: Wolves are the largest member of the canid family. They are considered a keystone species, which means they play an important role in the ecosystems where they are found.

- Instruct students to match the Coyote Relatives Images in the appropriate circle on the Coyote Relatives template grid beneath each breed label. Have students compare and contrast the physical adaptations of each breed. Discuss how each dog's physical features reflect specific traits of their breed.
- Instruct students to write a short essay explaining the concept of physical adaptation as it relates to the various types of breeds represented in this lesson.
- Encourage the students to share their work with the class.

Coyote Relatives Images




Coyote
Coyote Relatives
Herding Breed
Hounds
Sporting Breed
Working Breed
Ancient Asiatics
Wolves
Border Collie
German Shepherd
Beagle
Basset Hound
Cocker Spaniel
Springer Spaniel
Boxer
Great Dane
Shih Tzu
Pug
Grey Wolf

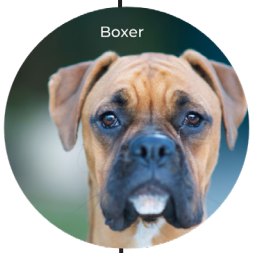
Coyote Relatives Answers

Herding Breed

Hounds

Sporting Breed

Working Breed



Ancient Asiatics

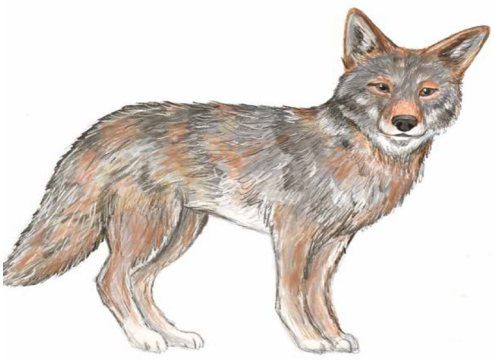
Wolves

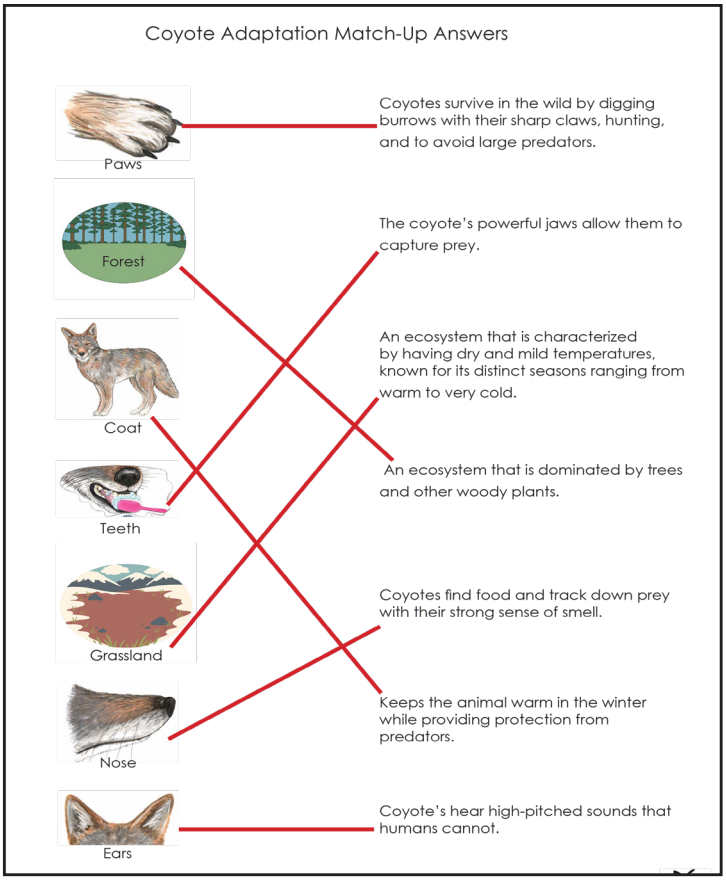
Coyote Adaptation Match-Up

Objective: To associate and define various aspects of a coyote's physical adaptations.

Materials:
- WHY COYOTES DON'T WEAR PANTS, the book
- Coyote Adaptation Match-Up Worksheet (Guide, pg. 11)
- Coyote Adaptation Match-Up Worksheet Answers (Guide, pg. 12)

Procedure:
- Reread WHY COYOTES DON'T WEAR PANTS. Discuss the ways the coyote's physical features help this animal survive, find food, and stay safe in their habitat.
- Lead a discussion about the ecosystems in which coyotes survive. This story takes place in Maine, which is part of the Forest Ecosystem. The Forest Ecosystem is made up of trees and other woody plants. The Forest Ecosystem and the Grasslands Ecosystem are two of the ecosystems coyotes inhabit. The Grasslands Ecosystem consists of large open areas of grass. While there are some trees in the Grasslands, the terrain is primarily flat, grassy areas known as prairies.
- Using The Coyote Physical Traits Match Up as reference, instruct students to associate the correct picture by drawing a line across to match the corresponding definition.
- Instruct students to write and illustrate an essay featuring a coyote in its natural habitat, such as the Forest Ecosystem or the Grasslands Ecosystem. Have them describe and explain how the coyote's physical adaptations help it to survive.

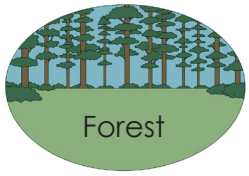




Coyote Adaptation Match-Up

Paws

Coyotes survive in the wild by digging burrows with their sharp claws, hunting, and avoiding larger predators.



A coyote's powerful jaws allow them to capture prey.

Coat

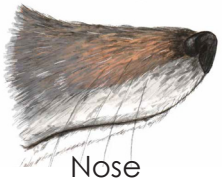
An ecosystem that is characterized by having dry and mild temperatures, known for its distinct seasons ranging from warm to very cold.

Teeth

An ecosystem that is dominated by trees and other woody plants.

Grassland

Coyotes find food and track down prey with their strong sense of smell.



Nose

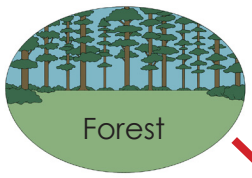
Keeps the animal warm in the winter while providing camouflage.

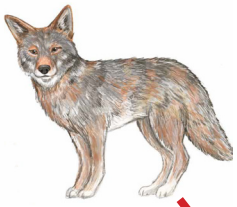
Ears

Coyotes hear high-pitched sounds that humans cannot.

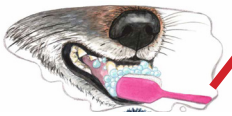
Coyote Adaptation Match-Up Answers

Paws



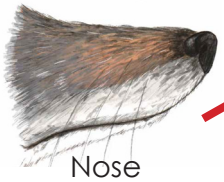


Coat



Teeth

Grassland



Nose

Ears

Coyotes survive in the wild by digging burrows with their sharp claws, hunting, and avoiding larger predators.

A coyote's powerful jaws allow them to capture prey.

An ecosystem that is characterized by having dry and mild temperatures, known for its distinct seasons ranging from warm to very cold.

An ecosystem that is dominated by trees and other woody plants.

Coyotes find food and track down prey with their strong sense of smell.

Keeps the animal warm in the winter while providing camouflage.

Coyotes hear high-pitched sounds that humans cannot.

Coyote Modifications: Ecosystem Analysis

Objective: To artistically design fictional ecosystem-based adaptation strategies.

Materials:
- WHY COYOTES DON'T WEAR PANTS, the book
- Coyote Modifications Template (Guide, pg. 14)
- Markers or crayons

Procedure:
- Print a copy of the Coyote Modifications Template.
- Discuss ways that the coyote's physical features enhance its abilities to survive in both the Grassland Ecosystem and the Forest Ecosystem. Encourage the students to identify how the coyote finds food and shelter in each ecosystem.
- Using the Coyote Modifications Template, ask the students to describe everything that they know about the Mountain Ecosystem and the Arctic Ecosystem. Explain that the coyote does not live in these ecosystems. Explore reasons why that might be.
- Have students imagine how the coyote might adapt to living in both the Mountain Ecosystem and the Arctic Ecosystem. Encourage students to be as creative as possible, even a bit silly, if needed. Have fun with this.
- Instruct students to write an essay describing the adaptations the coyote needs to survive and to share their work with the class.

Ecosystem Description	The Arctic Ecosystem is very cold, windy, and snow-covered most of the year.	The Mountain Ecosystem is made of lots of different types of plants and animals that exist in higher and sometimes very harsh altitudes.
Picture of Ecosytem		
Coyote Coat Adaptation		
Coyote Teeth Adaptation		
Coyote Nose Adaptation		
Coyote Ears Adaptation		
Coyote Total Adaptation		

Draw or describe how the Coyote's coat might change to adapt to the ecosystem. What else might they need or not need? Explain why.

Draw or describe how the Coyote's teeth might change to adapt to the ecosystem. What else might they need or not need? Explain why.

Draw or describe how the Coyote's nose might change to adapt to the ecosystem. What else might they need or not need? Explain why.

Draw or describe how the Coyote's ears might change to adapt to the ecosystem. What else might they need or not need? Explain why.

Draw or describe how the Coyote might change overall to adapt to the ecosystem. What else might they need or not need? Explain why.

Coyote Modifications: Ecosystem Analysis

Ecosystem Description	The Arctic Ecosystem is very cold, windy, and snow-covered most of the year.	The Mountain Ecosystem has plants and animals that exist in higher altitudes, with drastic temperature and weather changes.
Ecosystem		
Coyote Coat Adaptation		
Coyote Teeth Adaptation		
Coyote Nose Adaptation		
Coyote Ears Adaptation		
Coyote Adaptation		

Common Core State Anchor Standards Alignment

		Discussion	Coyote Ancestors	Coyote Adaptation	Dress a Coyote
CCSS Anchor Standards for Reading					
Key Ideas and Details					
	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	✓	✓	✓	✓
	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	✓	✓	✓	✓
	Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	✓	✓	✓	✓
Craft and Structure					
	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	✓	✓	✓	
Integration of Knowledge and Ideas					
	Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.	✓	✓	✓	✓
Range of Reading and Level of Text Complexity					
	Read and comprehend complex literary and informational texts independently and proficiently.	✓	✓	✓	✓
CCSS Anchor Standards for Writing					
Text Types and Purposes					
	Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.	✓	✓	✓	✓
Production and Distribution of Writing					
	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	✓	✓	✓	✓
Research to Build and Present Knowledge					
	Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.	✓	✓	✓	✓
	Draw evidence from literary or informational texts to support analysis, reflection, and research.	✓	✓	✓	✓
CCSS Speaking and Listening					
Comprehension and Collaboration					
	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.	✓	✓	✓	✓
	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.	✓	✓	✓	✓
Presentation of Knowledge and Ideas					
	Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.	✓	✓	✓	✓

Next Generation Science Standards Alignment

		Discussion	Coyote Ancestors	Coyote Adaptation	Dress a Coyote
K-LS1-1 From Molecules to Organisms: Structures and Processes					
	Use observations to describe patterns of what plants and animals (including humans) need to survive.	✓	✓	✓	✓
Analyzing and Interpreting Data					
	Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations	✓	✓	✓	✓
	Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.	✓	✓	✓	✓
Connections to Nature of Science					
	Scientists look for patterns and order when making observations about the world.	✓	✓	✓	✓
LS1.C:	*Organization for Matter and Energy Flow in Organisms*				
	All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow.	✓	✓	✓	✓
Patterns					
	Patterns in the natural and human designed world can be observed and used as evidence.	✓	✓	✓	✓