

Teacher's Supplement

arts & sciences for kids

ask[®]



But I DID
wash my
ears!

How Do Wild Animals Stay Healthy?

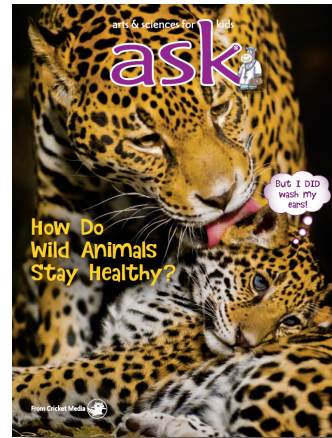
MAGAZINE ARTICLES

Wild Medicine	6
Expository Nonfiction	1030L
Ask Polly Proper	13
Narrative Nonfiction	790L
Why Is This Salamander Smiling?	14
Expository Nonfiction	960L
Plenty to Do at the Zoo.	18
Expository Nonfiction/Biography	1060L
Rescuing Orphan Elephants.	24
Photo Essay	100L



Teacher's Guide for *Ask: How Do Animals Stay Healthy?*

Using This Guide	2
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OVERVIEW

*In this magazine, readers will learn about the ways animals stay healthy. **Ask: How Do Animals Stay Healthy** includes information about risks to animals'*

physical health and what humans do to help them, how research into animal health may provide the key to treating some human illnesses, and ways that humans work with animals in captivity to ensure they are mentally healthy.

ESSENTIAL QUESTION:

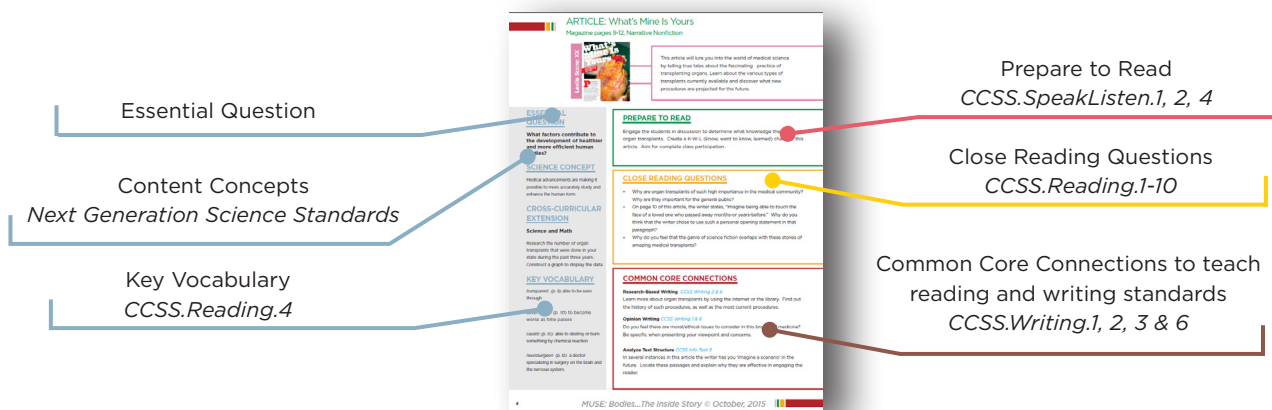
How do human and animal patterns of self-care compare to one another?



We invite you to use this magazine as a flexible teaching tool that is ideal for interdisciplinary learning of social studies and science content and core literacy concepts. Find practical advice for teaching individual articles or use a mini-unit that helps your students make cross-text connections as they integrate ideas and information.

READ MULTIPLE ARTICLES PAGES 4 - 8

Each article in this magazine is well-suited for teaching Common Core literacy concepts and content area knowledge. For each individual article page in this guide, you'll find the following:



Essential Question

Content Concepts
Next Generation Science Standards

Key Vocabulary
CCSS.Reading.4

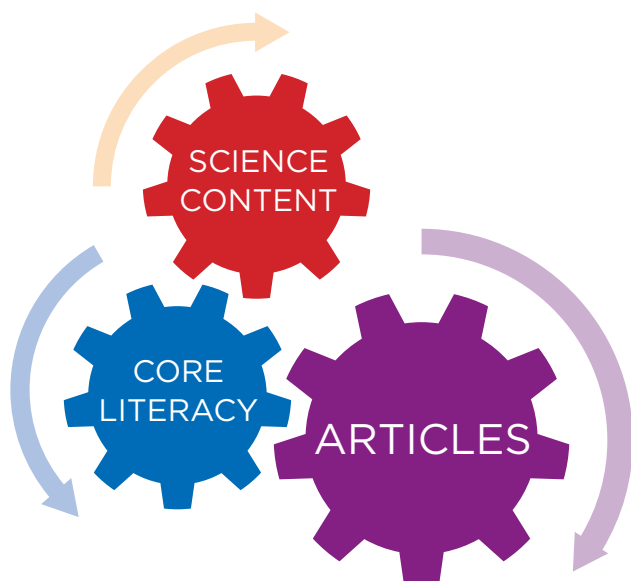
Prepare to Read
CCSS.SpeakListen.1, 2, 4

Close Reading Questions
CCSS.Reading.1-10

Common Core Connections to teach reading and writing standards
CCSS.Writing.1, 2, 3 & 6

TEACH A MINI-UNIT PAGES 10 - 12

Magazine articles can be easily grouped to make cross-text connections and comparisons. Our Common Core mini-unit guides students to read and discuss multiple articles and integrate ideas and information (CCSS.Reading.9). Discussing multiple articles (CCSS.SpeakListen.1, 2, 4) prepares students to write texts to share and publish in a variety of ways (CCSS.Writing.2).



READING

Core literacy concepts, such as the ones found in the Common Core State Standards, help students access social studies and science content. Integration of both literacy thinking and content study offers students a great way to become experts in reading informational text and literature for content knowledge. This guide provides questions to cover many core literacy concepts.

Draw Inferences (CCSS.InfoText.1)

Describe Relationships (CCSS.InfoText.3)

Analyze Text Structure (CCSS.InfoText.5)

Interpret Visual Information (CCSS.InfoText.7)

Summarize (CCSS.InfoText.2)

Determine Word Meaning (CCSS.InfoText.4)

Understand Author's Point of View (CCSS.InfoText.6)

Explain Reasons and Evidence (CCSS.InfoText.8)

FOCUS STANDARD: CCSS.InfoText.9: Integrate Ideas and Information

Have students read multiple articles on the same topic from this magazine to build knowledge and make cross-text comparisons. See ideas for Cross-Text Connections on page 13 of this guide.

SPEAKING AND LISTENING

Use the articles in this magazine to spark meaningful discussions in person and online. Encourage deeper discussions where students can become topic experts (CCSS.SpeakListen.1, 2, 4).

DISCUSSION OPTIONS—IN CLASS OR ONLINE

Article Clubs: Form small reading groups of students reading the same article. Have students discuss the content, share ideas, and critically evaluate the text.

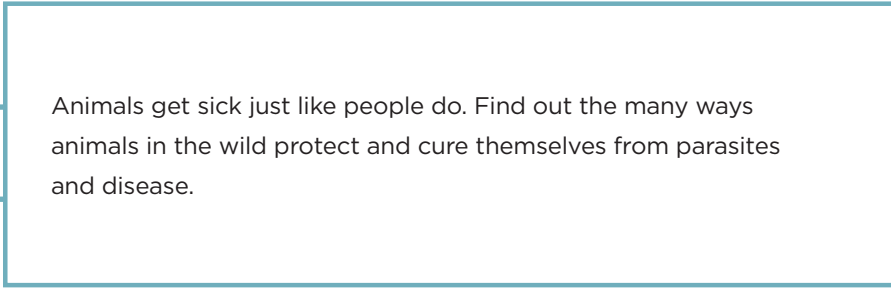
Jigsaw Clubs: Form small reading groups of students reading *different* articles. Invite students to share information and resources with each other.

Inquiry Discussions: Pose open-ended questions that engage students and prompt them to form an opinion and support it with reasons found directly in the text.

Whole Class: Launch with the essential question. Encourage students to find and share evidence from different articles to build a greater understanding of the question.

WRITING

Use the articles in this magazine to prompt **informative/explanatory writing** (CCSS.Writing.2). Have students use evidence from the texts to share information about social studies, language arts, or science content. See the **Mini-Unit** section of this guide (pgs. 10 - 12) as well as the **Article Pages** (pgs. 4 - 8) for ways to incorporate writing into your instruction.



parasite (p. 8) an animal or plant that lives in or on another animal or plant and gets food or protection from it

ARTICLE: Ask Polly Proper

Magazine page 13, Narrative Nonfiction/Letters



What happens when a flea-bitten mouse and an itchy fish need advice? Polly Proper has just the answers. Find out how Polly helps solve these animals' health problems in an imaginary health column.

ESSENTIAL QUESTION

How do human and animal patterns of self-care compare to one another?

SCIENCE CONCEPT

Animal species coexist both with and without conflict.

CROSS-CURRICULAR EXTENSION

Art

Create a cartoon or illustration that shows an animal taking action to be healthy.

KEY VOCABULARY

burrow (p. 13) a hole or tunnel in the ground that an animal (such as a rabbit or fox) makes to live in or for safety

wrasse (p. 13) any of nearly 500 species of marine fishes of the family Labridae, including cleaner fish.

PREPARE TO READ

Explain how this article is written in a creative way to share information. Read the letters first and have children predict what type of advice the parrot might give to the fish and the mouse.

CLOSE READING QUESTIONS

- How do the pretend letters provide information about the topic of animal health? Underline details in the letters that support your answer.
- The mouse has a problem with an insect. Highlight details in the text that explain why Polly suggests using another insect to help.
- How are the two problems and solutions similar in the letters? Cite evidence from the letters to support your answer.

COMMON CORE CONNECTIONS

Analyze Text Structure *CCSS Info Text 5 & 6*

In what other formats could this same information be presented? How would this article change without elements of fiction?

Write Narratives *CCSS Writing 3 & 6*

Write your own Ask Polly Proper letter and response, using other articles or research to guide your information.

Describe Relationships *CCSS Reading 3*

Find examples of cause and effect relationships in the article. Share and compare what you find with a partner or your class.

ARTICLE: Why Is This Salamander Smiling?

Magazine pages 14 -17, Expository Nonfiction



Animals have some amazing abilities to protect and cure themselves. See why scientists are looking at animals for possible human treatments.

ESSENTIAL QUESTION

How do human and animal patterns of self-care compare to one another?

SCIENCE CONCEPT

Animals are adapted to survive through their unique behaviors and physical attributes.

CROSS-CURRICULAR EXTENSION

ELA

Write a story about having one of the animal's abilities described in the article. Write about a situation in which you need to use this ability.

KEY VOCABULARY

regeneration (p. 16) to grow again after being lost, damaged, etc.

stimulate (p. 15) to cause or encourage (something) to happen or develop

tentacle (p. 17) one of the long, flexible arms of an animal (such as an octopus) that are used for grabbing things and moving

PREPARE TO READ

Take a picture walk through the article and discuss the different animals shown. Ask students to think about the ways these animals stay healthy that scientists want to understand for human health.

CLOSE READING QUESTIONS

- Highlight details from the article that describe why losing a limb or tail is an advantage for some animals. Find as many examples as you can.
- Underline details from the article that could be used to support the argument that a cat's purr may be healthy.
- Is the gecko in the photo on page 17 at risk? Cite evidence from the article to support your answer.

COMMON CORE CONNECTIONS

Describe Relationships *CCSS Reading 3*

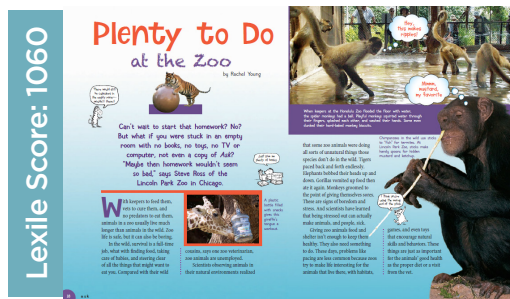
What do the animals the author chose to write about have in common? Are there other animals that might have been included in this article?

Analyze Key Ideas and Details *CCSS Reading 2*

Find examples in the article where scientists hope to find ways to use animals' abilities to help humans. Explain how these animals' abilities could help people.

Summarize Key Ideas and Details *CCSS Reading 2*

Review the main ways animals protect themselves as described in the article. Add the animals that fit into each category. Which animals have similar abilities?



Hiding ketchup, smearing peanut butter in trees and shooting air guns is all part of a day on the job at the zoo! Read about the inventive ways zoo animals are kept from getting bored.

ESSENTIAL QUESTION

How do human and animal patterns of self-care compare to one another?

SCIENCE CONCEPT

Mental health is an area of health that affects animals as well as people.

CROSS-CURRICULAR EXTENSION

Science

Design an activity to engage a zoo animal. What factors will you consider for the animal you choose? How might you find out if this activity will interest and benefit the animal?

KEY VOCABULARY

forage (p. 21) to search or browse for grass or other plants

habitat (p. 23) the place or type of place where a plant or animal naturally or normally lives or grows

veterinarian (p. 18) a person who is trained to give medical care and treatment to animals; an animal doctor

PREPARE TO READ

Ask students to share their favorite animals at the zoo. Then discuss these prompts: Have you seen zoo animals stressed or bored? How might different animals act if they are bored? What do you think can be done about it?

CLOSE READING QUESTIONS

- Highlight details from the article that describe signs and symptoms animals show when they are stressed.
- Underline details from the article that explain why stress and boredom pose a danger to animal health. Find evidence in the article.
- What is the main idea of this article? Cite details from the text to support your answer.

COMMON CORE CONNECTIONS

Describe Relationships *CCSS Reading 3*

Why is food often used as a way to get zoo animals mentally active? What is the relationship between food and mental motivation? Find evidence in the article.

Make Inferences *CCSS Reading 1*

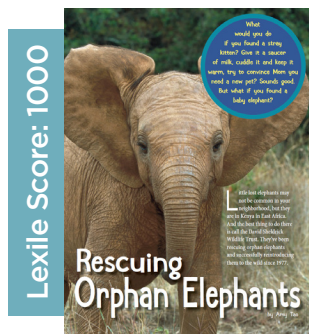
How do the scientists need to think from an animal's perspective when designing activities for the animals to do? What helps the scientists understand what activities benefit the animals the most?

Conduct Research *CCSS Writing 7*

Visit a zoo online to find other examples of how zookeepers are helping animals stay sharp. Compare what you find with the examples in the article.

ARTICLE: Rescuing Orphan Elephants

Magazine pages 24 - 28, Expository Nonfiction



Elephant babies have lots of needs and must be protected in order to grow into healthy adult elephants. Find out how they are taken care of in an elephant orphanage in Kenya.

ESSENTIAL QUESTION

How do human and animal patterns of self-care compare to one another?

SCIENCE CONCEPT

Young animals inherit traits from their parents.

CROSS-CURRICULAR EXTENSION

Science

Research to learn more about elephants and the efforts to protect and care for them.

KEY VOCABULARY

coax (p. 27) to influence or persuade (a person or animal) to do something by talking in a gentle and friendly way

commitment (p. 25) the attitude of someone who works very hard to do or support something

release (p. 28) to stop holding (someone or something)

PREPARE TO READ

Explain that this article is about the orphan elephants in Kenya and how their substitute human parents care for them. Ask students to think about what kind of needs a baby elephant might have and how people can provide these needs to orphaned babies.

CLOSE READING QUESTIONS

- Highlight details in the text that describe what makes baby elephants challenging to care for.
- Using details from the text, make a list of equipment the orphanage may need to care for the baby elephants.
- Underline details from the text that describe how older orphan elephants impact younger orphans.

COMMON CORE CONNECTIONS

Describe Relationships *CCSS Reading 3*

What kind of relationship do the orphans have with their human caregivers? Is this a job you would like? Why or why not?

Interpret Visual Information *CCSS Reading 7*

The photos in the article show different ways humans care for the baby elephants. Write captions to explain what is happening in each photo.

Make Inferences *CCSS Reading 1*

What needs of a baby elephant are similar to those of a human baby? Find places in the text that describe these needs and explain how they are similar.

CROSS-TEXT CONNECTIONS WITH MULTIPLE ARTICLES

COMPARE ARTICLES

SYNTHESIZE: Guide students to compare articles they read. Help students find the connections between pieces of information in multiple texts. Use prompts, such as the following examples, to have students work together to **Integrate Ideas and Information** (CCSS.Reading.9).

- Combine the information in “Wild Medicine” (p. 6) and “Why Is This Salamander Smiling?” (p. 14) to make a chart that describes important facts about the ways animals care for themselves in the wild.
- Compare the ways people help animals in “Plenty to Do at the Zoo”(p. 18) and “Rescuing Orphan Elephants” (p. 24). What special knowledge and skills do people who help animals need?
- Using information from multiple articles, format a response to the essential question: **How do human and animal patterns of self-care compare to one another?**
- Use multiple articles to help you explain the similarities and differences in how animals and humans care for themselves.

EXPLORATORY LEARNING - FLEXIBLE MINI-UNIT DESIGN

The mini unit offers three levels of activities. The Engage section helps activate prior knowledge. Compare Articles offers additional ways to use information from multiple articles and prepares students to integrate their ideas and knowledge in the Apply activity.

ENGAGE

**READ AND
COMPARE**

APPLY

ENGAGE: Engage students in the topic of animal health by creating a comparison chart like the one below. As a class, fill in details that correspond with each column. A few animals have been added to get the process started. Continue to add different animals to the chart. Use the magazine photos to generate additional ideas. This chart can be used during and after reading to collect information gained from the articles.

Animal	Health Risk	Solution
Mouse		
Fish		
Elephant		
Bird		
Salamander		
Human		

Share the essential question:

How do human and animal patterns of self-care compare to one another?



READ AND COMPARE ARTICLES: Begin with a focus article as a base for building content knowledge and model how to work through the text.

1) READ ALOUD: Use “Wild Medicine” (pgs. 6-12) as a focus article, or choose a different article that works well for your teaching goals. Share the article summary on page 4 of this guide. Students can read their own copies of the article and use sticky notes to mark places they find interesting or have questions about.

2) DISCUSS THE ARTICLE: After reading, guide students to talk about the article. See the Article Pages for Close Reading Questions.

3) READ NEW ARTICLES: Help students choose additional articles to read based on their inquiry questions or what they find interesting. Refer to the Article Pages for summaries of each article within *Ask: How Do Animals Stay Healthy?*

4) COMPARE ARTICLES: After students have read multiple articles, guide them to make cross-text connections. Refer to page 9 to compare articles using prompts that help students integrate ideas and information.

CHOOSE A PURPOSE FOR READING

CLOSE READ *CCSS Reading Info Text 1* Mark the text, noting important details and highlighting what interests, surprises, or confuses you.

UNDERSTAND MAIN IDEAS TO DEVELOP EXPERTISE *CCSS Reading Info Text 2* Record the main ideas in the article. Note how these main ideas build on the main ideas from the focus article. How is your topic knowledge growing?

REVIEW GRAPHIC FEATURES *CCSS Reading Info Text 7* Examine the graphic features within this issue and describe how the images, charts, and photographs enhance your understanding of the content.





APPLY: HEALTH FAIR

In this activity, students apply what they are learning in *Ask: How Do Animals Stay Healthy?* to human health by researching a health topic, creating a poster or presentation, and including an activity or product to share at a culminating health fair.

Below are some possible health topics, or students may choose a different topic. The magazine articles provide many possibilities.

Arrange a time and place for the health fair. This is a great time to get families involved to help set up and manage your event.

Health Fair Topics

Healthy Eating

What kinds of foods does the body need for health? Research to find out and share your findings in a poster or presentation. Prepare healthy snack samples or allow participants to make their own at the health fair.

Exercise

Why is exercise important to human health? Research to find out. Create a presentation to share your findings. Demonstrate effective exercises for participants to try at the health fair.

Mind Matters

Zoo animals aren't the only ones that need mental stimulation. Research to learn more about the type of thinking that contributes to health, and share your findings in a presentation. Create some mind-bending puzzles or activities for the health fair.

Parasite Prevention

Animals use many techniques to rid themselves of pesky parasites. What about people? Research to learn more about human parasites and ways to prevent them. Present your findings at the health fair. Include a recipe and samples for natural bug spray.

Treating Minor Injuries

How do you treat minor injuries that don't require seeing a doctor? Research to find out what "minor" injuries are and how you can treat them at home. Create a presentation to share your findings. Demonstrate some of the ways to treat minor scrapes, bruises, bug bites and strains. Allow participants to try their hand at caring for and bandaging fake injuries.

Cleanliness and Germs

Wild animals do what they can to stay clean to keep healthy. Research to find out why cleanliness is important to human health. Share your findings in a presentation. Include a hand washing station at your booth.



NAME: _____

Mini-Unit Graphic Organizer

Health Fair Team Planner

Health Topic: What is your main topic and the question you are trying to answer?

Research

Source: List your resources next to the notes. Include page numbers so it is easier to go back and check on a detail later.

Notes:

Presentation Plans: Will you create a poster, PowerPoint, slide show, video? Describe your presentation and sketch your plans.

Health Fair Activity: What activity will you share with the participants coming to the health fair? Describe the activity and any materials you will need.

NAME: _____

ANALYZE GRAPHIC FEATURES

GRAPHIC FEATURE	PAGE LOCATION	HOW THIS FEATURE HELPED YOUR UNDERSTANDING

NAME: _____

CONCEPT CHART

Show how reading multiple articles developed your understanding of the essential question or your own inquiry question.

ESSENTIAL QUESTION OR INQUIRY QUESTION:

ARTICLE 1:

ARTICLE 2:

ARTICLE 3:



burrow a hole or tunnel in the ground that an animal (such as a rabbit or fox) makes to live in or for safety

*They'll clean your **burrow** and even your fur. (p. 13)*

coax to influence or persuade (a person or animal) to do something by talking in a gentle and friendly way

*Most of the babies love the mud, but if one's a little shy, the keepers gently **coax** it into a shallow puddle and scoop mud on it, just like a mom would, only with a shovel in place of a trunk. (p. 27)*

commitment the attitude of someone who works very hard to do or support something

*So taking in a stray elephant is a long-term **commitment**. (p. 25)*

forage to search or browse for grass or other plants

*In the wild, chimpanzees spend more than half their time **foraging** for food. (p. 21)*

habitat the place or type of place where a plant or animal naturally or normally lives or grows

*At Lincoln Park Zoo, the door to the outdoor portion of the ape **habitat** is open most of the year, and it's up to the apes whether to stay inside or go out. (p. 23)*

hygiene the things that you do to keep yourself and your surroundings clean in order to maintain good health

*To avoid disease, many animals practice good **hygiene**. (p. 7)*

parasite an animal or plant that lives in or on another animal or plant and gets food or protection from it

*They're attacked by blood-sucking **parasites** and disease-causing germs. (p. 6)*

regeneration to grow again after being lost, damaged, etc.

*This process is called **regeneration**. (p. 16)*

release to stop holding (someone or something)

*There's no special age for **releasing** an orphan. (p. 28)*

stimulate to cause or encourage (something) to happen or develop

*Scientists think the vibrations of purring might **stimulate** bone growth. (p. 15)*

tentacle one of the long, flexible arms of an animal (such as an octopus) that are used for grabbing things and moving

*Octopuses can regrow **tentacles** that have been bitten off by predators. (p. 17)*

veterinarian a person who is trained to give medical care and treatment to animals; an animal doctor

*Compared with their wild cousins, says one zoo **veterinarian**, zoo animals are unemployed. (p. 18)*

wrasse any of nearly 500 species of marine fishes of the family Labridae, including cleaner fish

*I have an appointment with a **wrasse** to have my gills cleaned. (p. 13)*



“Wild Medicine”

- <http://www.natural-wonder-pets.com/do-wild-animals-heal-themselves.html>

Learn more about how wild animals heal themselves.

- <http://news.mongabay.com/2011/11/zoopharmacognosy-how-self-healing-animals-could-save-humans/>

Find out about the field of zoopharmacognosy and how the study of the ways animals cure themselves is helping humans.

“Why Is This Salamander Smiling?”

- <http://www.npr.org/2012/06/12/154523594/what-animals-can-teach-humans-about-healing>

Watch a film about how animals are teaching scientists about healing.

“Plenty to Do at the Zoo”

- <http://www.houstonzoo.org/meet-the-animals/animal-webcams/>

Look for signs of boredom or activity with the Houston Zoo webcams.

- <http://www.chicagotribune.com/entertainment/ct-brookfield-zoo-toy-designers-20140815-column.html>

Meet zoo toy designers from the Brookfield Zoo.

“Rescuing Orphan Elephants”

- <https://www.sheldrickwildlifetrust.org/html/raiseorphan.htm>

Learn more about orphan elephant care at the Elephant Orphans Project.