

Teacher's Supplement



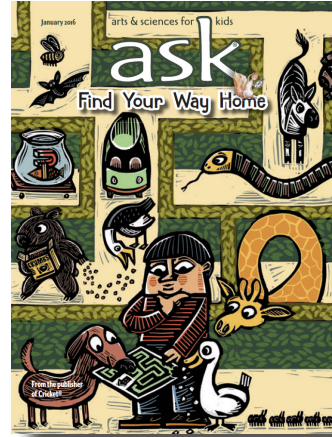
MAGAZINE ARTICLES

- The Long Way Home6
Expository Nonfiction 810L
- The Car that Drives Itself12
Expository Nonfiction 780L
- Livingstone's Guide to Getting Lost.17
Cartoon 210L
- Which Way?18
Expository Nonfiction 900L
- The Gift from the Past.22
Narrative Nonfiction 950L



Teachers' Guide for *ASK:* *Find Your Way Home*

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OVERVIEW

In this magazine, readers will learn about how people and animals find their way.

Find Your Way Home includes information about how animals

navigate when migrating, and how people invent tools and methods to find their way.

ESSENTIAL QUESTION:

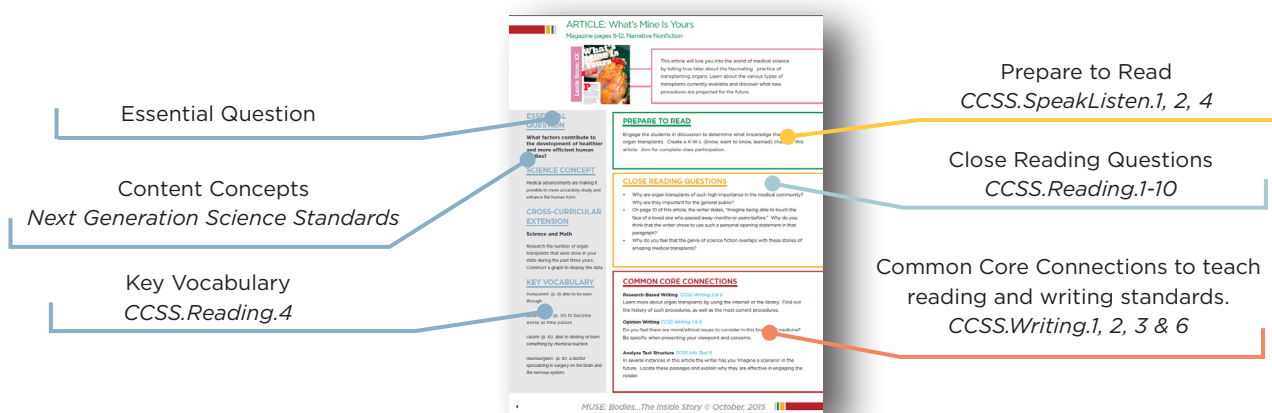
What processes do people and animals use to find their way?



We invite you to use this magazine as a flexible teaching tool, which is ideal for interdisciplinary learning of social studies and science content and core literacy concepts. Find practical advice for teaching articles individually or utilize 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:

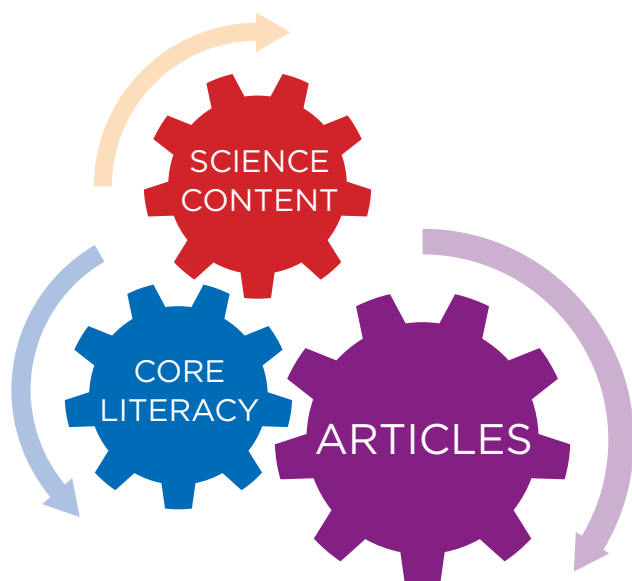


The diagram illustrates the components of an article page, with callouts pointing to a sample article page titled "ARTICLE: What's Mine Is Yours" (Magazine pages 8-12, Narrative Nonfiction).

- Essential Question**: Points to the "ESSENTIAL QUESTION" section on the article page.
- Content Concepts** and **Next Generation Science Standards**: Points to the "SCIENCE CONCEPT" and "CROSS-CURRICULAR EXTENSION" sections on the article page.
- Key Vocabulary** and **CCSS.Reading.4**: Points to the "KEY VOCABULARY" section on the article page.
- Prepare to Read** and **CCSS.SpeakListen.1, 2, 4**: Points to the "PREPARE TO READ" section on the article page.
- Close Reading Questions** and **CCSS.Reading.1-10**: Points to the "CLOSE READING QUESTIONS" section on the article page.
- Common Core Connections to teach reading and writing standards.** and **CCSS.Writing.1, 2, 3 & 6**: Points to the "COMMON CORE CONNECTIONS" section on the article page.

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 from this magazine on the same topic, build knowledge, and make cross-text comparisons. See ideas on 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.

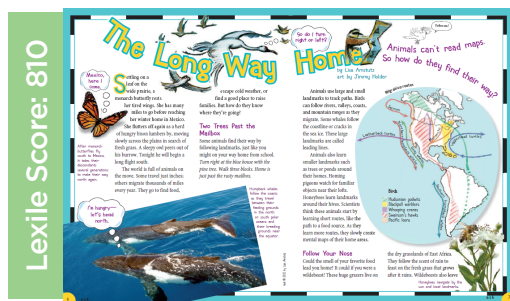
Jigsaw Clubs: Form small reading groups of students reading *different* articles. Invite students to share information and resources with each other.

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

Whole Class: Launch with an essential question. Encourage students to find and share evidence from different articles building 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 in the articles. See the **Mini-Unit** section of this guide (pages 10 – 12) as well as the **article pages** (pages 4 - 8) for ways to incorporate writing into your instruction.



Animals take amazing journeys by air, land and sea. How do they know where to go? This article explores the many different ways animals keep on track as they trek across our planet.

ESSENTIAL QUESTION

What processes do people and animals use to find their way?

SCIENCE CONCEPT

Animals and people use their perceptions and memories to help them know where they are going.

CROSS CURRICULAR EXTENSION

Geography and Art

Create a Migration Mural that includes a map of the migration routes described in the article, as well as images and artwork of the animals.

KEY VOCABULARY

landmark (p. 6) an object or structure on land that is easy to see and recognize

navigate (p. 9) to find the way to get to a place when you are traveling in a ship, airplane, car, etc.

nocturnal (p. 10) active mainly during the night

sonar (p. 9) finding location by using sound waves

transmitter (p. 8) a device that sends out signals

PREPARE TO READ

Ask students to share what they know about animals that migrate and how they navigate on their journeys. Invite students to locate some of the different animals in the article and share their ideas about how each might find their way.

CLOSE READING QUESTIONS

- Locate where the author relates ideas to your own experience. How does this help you understand the concepts in the article?
- What navigation systems do humans use that mimic animal natural abilities? Support your ideas with text evidence.
- On page 11, the author states, "And even with all our high-tech tools, many animals are still better at it than we are." What evidence does she use to support this?

COMMON CORE CONNECTIONS

Comparing Information *CCSS Info Text 1, 2, 3*

Create a two-column chart. List all of the animals discussed in article in the first column, and the ways they navigate in the second. Compare and contrast this information in small group discussions.

Research-Based Writing *CCSS Writing 2 & 6*

Choose a migrating animal and research where it travels and navigates. Organize your findings in a poster or presentation to share with the class.

Support Your Opinion *CCSS Speaking & Listening 1 & 4*

Choose an animal navigation ability you would you like to have. In small groups, discuss the reasons for your choice.



Let the car do the driving! Find out about self-driving cars; how they work, and how they could change the way we get around.

ESSENTIAL QUESTION

What processes do people and animals use to find their way?

STEM CONCEPT

Technology, engineering, and design are used together to create new solutions to real-world challenges.

CROSS-CURRICULAR EXTENSION

Science and Engineering

Use the information in the article to create a diagram of a self-driving car that highlights operational and safety features.

KEY VOCABULARY

automatic (p. 13) having controls that allow something to work or happen without being directly controlled by a person

autopilot [p. 13] a device that steers a ship, aircraft, or spacecraft in place of a person

destination (p. 14) a place to which a person is going or something is being sent

distract (p.14) to cause (someone) to stop thinking about or paying attention to someone or something

PREPARE TO READ

Ask students to imagine what it would be like if people started using self-driving cars. Without a driver, how might they use the car? Ask them to think about the advantages and disadvantages and create a pro /con list before reading the article.

CLOSE READING QUESTIONS

- What is the author's viewpoint about self-driving cars? How can you tell?
- Underline parts of the text that identify the safety features self-driving cars have?
- How does the use of sub-headings help organize the content?

COMMON CORE CONNECTIONS

Interpret Visual Information *CCSS Info Text 7*

This article includes small illustrations to represent concepts. How do these pictures help you understand how the self-driving car works?

Narrative Writing *CCSS Writing 3*

Write a narrative about an imagined ride in a self-driving car. Include details about the ride, how the car operates, and what it feels like to go somewhere without a driver.

Author's Point of View *CCSS Info Text 4*

Re-read the article. What is the author's point of view? How is the author's point of view conveyed in the text? Cite examples.

ARTICLE: Livingstone's Guide to Getting Lost

Magazine page 17, Cartoon



Usually we want to find our way, but in this cartoon, readers explore all the sure ways of getting lost!

ESSENTIAL QUESTION

What processes do people and animals use to find their way?

SCIENCE CONCEPT

Animals and people use their perceptions and memories to help them know where they are going.

CROSS-CURRICULAR EXTENSION

Social Studies

This cartoon includes a famous explorer in the title. Complete a mini-research project to find out when, where, and why Livingstone was lost and what was done about it.

KEY VOCABULARY

compass (p. 17) a device that is used to find direction by means of a needle that always points north

PREPARE TO READ

Ask students to share times when they have been lost. Encourage them to share what caused them to get lost, and what they did to find their way.

CLOSE READING QUESTIONS

- Rank the ways to get lost in order from most likely to occur to least likely to occur.
- The author uses the phrase “unremarkable landmarks.” What is this phrase meant to convey?
- Explain the cause and effect relationships for each of the tips.

COMMON CORE CONNECTIONS

Interpret Visual Information *CCSS Info Text 7*

If you would be able to add one more illustration, what would it be? How would this picture help others in building their game?

Key Ideas and Details *CCSS Info Text 1 & 3*

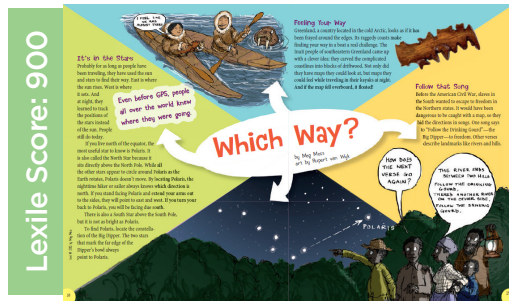
The author provides a choice of how to construct the fishing pole to catch the fish. Explain the two options, which one you would choose, and why you would choose it.

Text Features *CCSS Info Text 5*

Why are numbered steps helpful in directions? Are there any steps that could be put in a different order?

ARTICLE: Which Way?

Magazine page 18, Expository Nonfiction



How did people manage to find their way before digital technologies? This article explores how people from the Arctic to Southern Australia used nature to help find and mark the way for others.

ESSENTIAL QUESTION

What processes do people and animals use to find their way?

SCIENCE CONCEPT

Animals and people use their perceptions and memories to help them know where they are going.

CROSS-CURRICULAR EXTENSION

Science

Stars are often included as a way people and some animals navigate. Research to explore how this works and find out if people still use stars for navigation today.

KEY VOCABULARY

ancient (p. 18) very old; having lived or existed for a very long time

constellation (p.18) a group of stars that forms a particular shape in the sky and has been given a name

buoy (p.19) an object that floats on water in a lake, bay, river, etc., to show areas that are safe or dangerous for boats

PREPARE TO READ

Invite students to share the different tools and skills they use to find their way in different situations. Discuss how they might find their way without technology.

CLOSE READING QUESTIONS

- How are primary documents used in the article? What information do they add?
- What is the main idea of the article? What evidence did you use from the article to decide?
- What details in the “Dear Homebuyer” provide clues that this writing is from the past?

COMMON CORE CONNECTIONS

Draw Inferences *CCSS Info Text 1*

The article presents many different types of signs people used to help others find their way. In small groups discuss the role of culture in how these signs are made and used?

Describe Relationships *CCSS Info Text 3*

What are the connections or relationships between the way people navigate and where they live? Look through the article with a partner to find out how environment influences these methods.

Write Arguments *CCSS Writing 1*

Review the navigation methods described in the article. Which ones are most effective? Write an argument defending your perspective? Use evidence from the article to support your argument.

ARTICLE: The Gift from the Past

Magazine page 22, Narrative Nonfiction



What might it be like to navigate the waters of the Pacific in a small vessel? Generations of navigators have passed down their knowledge about how to read the sky, waves, land, and sea to find their way. Read about one man whose ancient skills helped solve a mystery.

ESSENTIAL QUESTION

What processes do people and animals use to find their way?

SCIENCE CONCEPT

Animals and people use their perceptions and memories to help them know where they are going.

CROSS-CURRICULAR EXTENSION

Science

Review “Knowledge of a Palu” on page 24. Choose one of the items on this list and describe this observation skill in scientific terms. What processes make this a valuable navigation observation?

KEY VOCABULARY

signify (p.24) to be a sign of something

submerge (p.25) to go underwater

turmeric (p.24) a spice made from grinding curcumin roots.

typhoon (p. 25) an extremely large, powerful, and destructive storm that occurs especially in the region of the Philippines or the China Sea

PREPARE TO READ

Ask: What might your elder relatives and neighbors know how to do that could be passed down to you? Explain that this article describes a man whose navigation skills might have been lost if it wasn't for a scientific expedition.

CLOSE READING QUESTIONS

- The author uses a narrative style. How does this help you understand Mau's life and skills?
- Underline parts of the text that explain how Mau's childhood prepared him to be a navigator?
- What is the main idea of the article? Identify three key details that support the main idea.

COMMON CORE CONNECTIONS

Comprehension and Collaboration *CCSS Speaking and Listening 3*

Interview an elder to learn about a skill or experience that can pass down to you. Share the results of your interview with the class.

Narrative Writing *CCSS Writing 3*

Mau's adventures in a typhoon, and another with a whale, are described briefly on page 25. Choose one of these events and write a narrative from Mau's point of view, adding sensory and emotional details.

Key Ideas and Details *CCSS Info Text 1 & 3*

Create a timeline of Mau's life from the clues provided. Share your timeline with a classmate and modify it based on your comparison.

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):

- How do the senses and tracking processes animals use in “The Long Way Home”(pg. 17) compare to the Palu’s navigation knowledge, “A Gift from the Past” (pg. 22)? What do you think people can learn from animals?
- Review the signs people use in different cultures and places in the article, “Which Way?” (pg. 18). How do you think signs will change with the use of self-driving cars, “The Car that Drives Itself? (pg. 12)” Discuss what road signs would be unnecessary, and what other kinds of signs might be used.
- Using information from multiple articles, format a response to the essential question: **What processes do people and animals use to find their way? Why is this information important to those who follow?**
- Which of the navigation solutions from “Which Way?” (page 18) do you think would be useful to a Palu navigator, “Gift from the Past” (page 22)? Which navigation solutions would not be useful to a Palu navigator? Explain with reasons and text evidence.
- Use multiple articles to explain how past knowledge of navigation is still relevant today.
- Find examples from multiple articles to suggest ways technology could (or does) incorporate aspects of what we know about navigation from animals and historical human navigation.

EXPLORATORY LEARNING - FLEXIBLE MINI-UNIT DESIGN

Before the advent of digital technologies, humans developed a variety of creative and ingenious tools to help them navigate. Inspire your students' to deepen their knowledge of human navigation as you guide them to create navigational tools described in this issue.

ENGAGE

READ AND
COMPARE

APPLY

ENGAGE: Engage students in the topic of navigation skills by having them brainstorm ways to help these characters find their way. What should they have done to keep from getting lost? What should they do to find their way home? What if they do not have the use of technology? How does this change your solutions? Fill in a four square grid as shown below to brainstorm solutions.

	With Technology	Without Technology
How to keep from getting lost?		
What to do if lost?		

Share the essential question:

What processes do people and animals use to find their way?



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 the article “Which Way?” (pg. 18-21) as a focus article, or choose a different article that works well for your teaching goals. Share the article summary on page 7 of this guide. Students can read using their own copies of the article and sticky notes to mark places they find interesting or have questions about.

2) DISCUSS THE ARTICLE: After reading, guide students to turn and 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 wonder. Refer to the Article Pages for summaries of each article within *Find Your Way Home*.

4) COMPARE ARTICLES: After students have read multiple articles, guide them to make cross-text connections. Refer to page 9 in the guide for Cross-Text Comparisons 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 graphic features within this issue and describe how the images, charts and photographs enhance your understanding of the content.



APPLY: FINDING YOUR WAY

Students work in groups to apply learning by making one of the following navigation tools described in the articles. Divide students into groups. Guide student groups to complete each step of the Finding Your Way Planner to build their tool. Last, invite students to present their tool to the whole class and describe the construction process, how it works, and why it is useful.

1

COMPASS CRAFTERS

Materials: needle, paper clip, bar magnet, 1 cm square piece of Styrofoam, paper cup, water

Directions:

1. Rub the needle along the bar magnet in the same direction 25 times. Test to see if the needle has been magnetized, by seeing if it attracts the paperclip. If not, continue to stroke the needle along the magnet 25 more times.
2. Carefully poke the needle through the piece of Styrofoam.
3. Decorate the cup and fill it with water
4. Float the needle on the water.
5. Check to see if it is pointing north.

2

START CHARTS

Materials: star stickers, black paper

Directions:

1. Use books or online resources to locate the stars that are prominent in the sky and useful for navigation.
2. Duplicate the constellation arrangements with stickers on a black background (If available you might like to use glow in the dark paint to outline the constellations).

3

BOBBING BUOYS

Materials: plastic containers (cups, bowls, plates), straws, scissors, stapler, tub, water

Directions:

1. Design a model buoy that will stay upright and float as bright red or green signal for vessels
2. Use the collected materials for construction
3. Test the buoy in a tub of water
4. Modify your design so the buoy stays upright

4

TOAS TRACKERS

Materials: sticks, feathers, paint

Directions:

1. Design a Taos stick using symbols to communicate places
2. Choose a stick that works for your plan
3. Add the symbols with colorful paint and decorate with feathers or other embellishments.

NAME: _____

Mini-Unit Graphic Organizer: Make It Yourself Planner

Finding Your Way Planner

Navigation Tool Name and Description	
Purpose of Tool	
Materials Needed	
Design Sketches	
Construction Steps	4.
1.	5.
2.	6.
3.	7.
How to Test the Tool	Results and Modifications
Final Product	

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 or your own inquiry question.

ESSENTIAL QUESTION OR INQUIRY QUESTION:

ARTICLE 1:

ARTICLE 2:

ARTICLE 3:



ancient very old : having lived or existed for a very long time

*At night, **ancient** people all over the world learned to track the positions of the stars instead of the sun. (p. 18)*

automatic having controls that allow something to work or happen without being directly controlled by a person

***Automatic** safety systems can help cars stay on the road, brake if the car gets too close to something, and even park all by themselves. (p. 13)*

autopilot a device that steers a ship, aircraft, or spacecraft in place of a person

*This "**autopilot**" constantly monitors the plane's speed and position and adjusts the wing and tail flaps to keep it on course. (p. 13)*

buoy an object that floats on water in a lake, bay, river, etc., to show areas that are safe or dangerous for boats

*To solve this problem, sailors use special **buoys**, like floating street signs. (p. 19)*

constellation a group of stars that forms a particular shape in the sky and has been given a name

*To find Polaris, locate the **constellation** of the Big Dipper. (p. 18)*

compass a device that is used to find direction by means of a needle that always points north

*Stick a magnet on your **compass**. (p. 17)*

destination a place to which a person is going or something is being sent

*To get you where you're going, you need to be able to follow a route to a **destination**, while obeying traffic rules and not running into anything. (p. 14)*

distract to cause (someone) to stop thinking about or paying attention to someone or something

*After all, computers don't get **distracted**. (p. 14)*

landmark an object or structure on land that is easy to see and recognize

*Some animals find their way by following **landmarks**, just like you might on your way home from school. (p. 6)*

navigate to find the way to get to a place when you are traveling in a ship, airplane, car, etc.

*Humans use the same trick to **navigate** in deep, dark water. (p. 9)*

nocturnal active mainly during the night

*Some **nocturnal** animals navigate by the stars. (p. 10)*

signify to be a sign of something

*Its bright yellow color was like sunlight covering his body and **signified** the knowledge he had been given. (p. 24)*

sonar finding location by using sound waves

*Submarines send out sound waves, called **sonar**. (p. 9)*

submerge to go underwater

*Slowly the whale **submerged**, setting the boat back down in the water. (p. 25)*

transmitter a device that sends out signals

*To track burrowing owls, scientist fit the birds with tiny **transmitter** backpacks that send out radio signals. (p. 8)*

turmeric a spice made from grinding curcumin roots.

*During the ceremony, Mau was dusted with **turmeric**. (p. 24)*

typhoon an extremely large, powerful, and destructive storm that occurs especially in the region of the Philippines or the China Sea

*Another time, a **typhoon** swept him and his crew far off course. (p. 25)*



The Long Way Home

- http://video.nationalgeographic.com/video/wildebeest_migration?source=relatedvideo

Watch this National Geographic video about wildebeest migration in Africa!

The Car that Drives Itself

- <https://www.google.com/selfdrivingcar/>

Read about Google's self-driving car project and watch an informational video.

Which Way?

- <http://www.naturalnavigator.com/find-your-way-using/stars>

Learn how to navigate using the sun, moon, stars, sea, plants, animals, and more on this website from Natural Navigator.

A Gift from the Past

- http://pvs.kcc.hawaii.edu/holokai/2007/mau_1_intro.html

Learn about Mau Pailug and his traditional navigation wisdom on this website from Hawaiian Voyaging Traditions.