

# Teacher's Supplement

April 2016

# click®

opening windows for young minds



## Wheels



## MAGAZINE ARTICLES

Wonderful Wheels . . . . .	11
Informational Text	630L
Speed Racers . . . . .	19
Informational Text	930L
Without Wheels. . . . .	23
Informational Text	990L
Rolling Along. . . . .	26
Informational Text	860L
Sam's Wheels . . . . .	28
Narrative Fiction	400L





## Teacher's Guide for *Click: Wheels*

Using This Guide. . . . .	2
Common Core: Reading, Speaking & Listening, and Writing . . . . .	3
Article Pages. . . . .	4
Cross-Text Connections with Multiple Articles . . . . .	9
Mini-Unit . . . . .	10
Printables. . . . .	13
Glossary . . . . .	16
Online Resources . . . . .	17



## OVERVIEW

*In this magazine, readers will learn all about wheels. **Click: Wheels** includes information about the invention of the wheel, how it*

*works, how wheels help move people and things from place to place, how some things move without wheels, and how two animals have their own ways of rolling along.*

## ESSENTIAL QUESTION:

***What are the benefits to humans and animals of being able to roll?***






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 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:



**Essential Question**

**Content Concepts**  
*Next Generation Science Standards*

**Key Vocabulary**  
*CCSS.Reading.4*

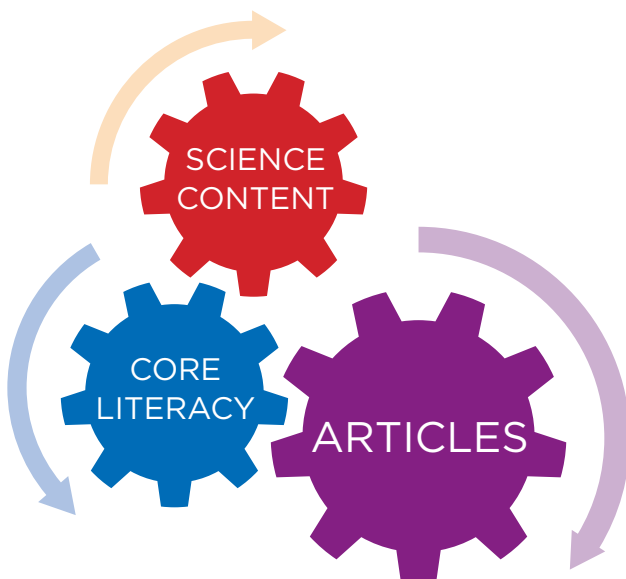
**Prepare to Read**  
*CCSS.SpeakListen.1, 2, 4*

**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.ReadingInfoText.9). Discussing multiple articles (CCSS.SpeakListen.1, 2, 4) prepares students to write informational 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.

## 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.

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

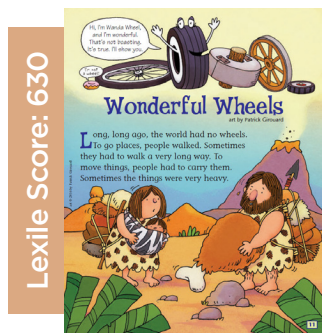
## WRITING

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.



# ARTICLE: Wonderful Wheels

Magazine page 11, Informational Text



Find out what life was like before the invention of the wheel.  
Learn about how the wheel has changed over time and how it is used for work and for play.

## ESSENTIAL QUESTION

**What are the benefits to humans and animals of being able to roll?**

## SCIENCE CONCEPT

A situation that people want to change or create can be approached as a problem to be solved through engineering.

## CROSS-CURRICULAR EXTENSION

### Art

Draw three different kinds of wheels and write what each wheel is used for.

## KEY VOCABULARY

**axle (p. 13)** a bar on which a wheel or pair of wheels turns

**gear (p. 14)** a toothed wheel in a machine

**roller (p. 13)** a part that rolls and is used to move, press, shape, spread, or smooth something

**spoke (p. 14)** one of the bars that connect the center of a wheel to the rim

**tame (p. 12)** to make (an animal) less wild

## PREPARE TO READ

Build background by encouraging students to discuss what they know about wheels. Ask: *Have you seen a wheel today? What is a wheel?* Then have students do a picture walk through the article in search of wheels. Discuss what students notice about their findings.

## CLOSE READING QUESTIONS

- What do you notice about the title of this article? What makes it catchy, or unique?
- What is the problem with rollers? Use the text at the top of page 13 to find your answer.
- How do the illustrations and text on page 13 of the article help you understand the meaning of the word “axle”?

## COMMON CORE CONNECTIONS

### Key Ideas *CCSS Info Text 1*

With a partner, discuss what the article is about and why it is important.

### Explain Reasons & Evidence *CCSS Info Text 8*

Use the illustrations and text on pages 13 and 14 of the article to see how people improved upon the idea of the wheel. What evidence does the author provide that shows how wheels became better?

### Narrative Writing *CCSS Writing 3 & 6*

Choose a wheel that you use for play and write about why you like to use it. Then answer these questions: How do you use it? What is the function of the wheels? How do the wheels make this toy work better than it would without wheels?



# ARTICLE: Speed Racers

Magazine page 19, Informational Text

Lexile Score: 930



Do you like to go fast? Find out why race car tires are so speedy and about the crew of people that keep the cars on track.

## ESSENTIAL QUESTION

**What are the benefits to humans and animals of being able to roll?**

## SCIENCE CONCEPT

Pushing or pulling on an object can start or stop it and change the speed or direction of its motion.

## CROSS-CURRICULAR EXTENSION

### Math

How many people are there at the pit stop on page 22 of the article? Write a math expression to show your thinking.

## KEY VOCABULARY

**fraction (p. 19)** a part or amount of something

**mechanic (p. 21)** a person who repairs machines (such as car engines) and keeps them running properly

## PREPARE TO READ

Begin a discussion on race cars. Ask: *Who is interested in becoming a race car driver?* Discuss students' reasons why. Then ask students why they think race cars are fast. Have them read to find answers.

## CLOSE READING QUESTIONS

- Find four words on page 20 of the article that describe how race car tires are faster than regular tires.
- How did the author organize ideas on page 22 of the article? Use the text and illustrations to find your answer.
- Who is the "lollipop guy" and what does he do? Use information from the text to help you.

## COMMON CORE CONNECTIONS

### Summarize Main Ideas *CCSS Info Text 2*

Use the photo, text, and illustrations, on pages 20 and 21 in to help you share a short summary of the article's main ideas with a partner.

### Discuss Relationships *CCSS Info Text 3*

Describe the connection or relationship between the race car driver and the pit crew.

### Narrative Writing *CCSS Writing 3 & 6*

What happens after red race car #26 speeds out of the pit and back onto the racetrack? Be sure to include words that describe the sights and sounds of the race in your writing.





Have you ever thought about how you could get from place to place or move a heavy load without wheels? Read to find out other ways to get a move on!

## ESSENTIAL QUESTION

**What are the benefits to humans and animals of being able to roll?**

## SCIENCE CONCEPT

There are many different kinds of living things in any area, and they exist in different places on land and in water.

## CROSS-CURRICULAR EXTENSION

### Social Studies

Do research to find out more about the Iditarod and sled dogs.

## KEY VOCABULARY

**snowboard (p. 23)** a board like a wide ski that is used for sliding down hills of snow while standing

**pack animal (p. 25)** an animal (such as a horse or donkey) that is used for carrying packs

## PREPARE TO READ

Discuss with students the difficulty of bike riding, skateboarding, or in-line skating on ice and snow. Ask students what kinds of things they could use to get across slick, snowy terrain. Have students talk about any experiences they may have had with skiing, snowboarding, or sledding.

## CLOSE READING QUESTIONS

- What words are used to describe the surfaces that wheels do not work well on? Look at the top of page 23 of the article to help you.
- How does the author divide the text? Look at each section heading to see what the author has included in each part.
- What animals are used to carry heavy loads? What are they called? Use the text to help you.

## COMMON CORE CONNECTIONS

### Summarize Main Ideas *CCSS Info Text 2*

Take turns summarizing the main ideas of each section of the article with a partner.

### Draw Conclusions *CCSS Info Text 1*

On page 25 of the article, the text says that sometimes camels are referred to as “ships of the desert.” Why do you think these animals are called this? Use context clues and what you know about ships to help you.

### Integration of Knowledge and Ideas *CCSS Info Text 9*

How does this article connect to the theme of wheels? How is it similar to the other articles in this magazine? How is it different?





Read about two animals that really know how to get rolling.

## ESSENTIAL QUESTION

**What are the benefits to humans and animals of being able to roll?**

## SCIENCE CONCEPT

Animals have body parts that capture and convey different kinds of information needed for growth and survival.

## CROSS-CURRICULAR EXTENSION

### Science

Find out more about the mother-of-pearl moth. What does it eat? Where does it live?

## KEY VOCABULARY

**creep** (p. 27) to move slowly with the body close to the ground

**glide** (p. 26) to move in a smooth way

**scurry** (p. 26) to move quickly and with short steps

**slither** (p. 26) to move by sliding your entire body back and forth

**threaten** (p. 26) to be something that is likely to cause harm (to something or someone else)

## PREPARE TO READ

Have students look at the photographs of the animals in the article. Ask: *What do these animals look like or remind you of?* Discuss students' responses. Have students predict what they think the article will be about and read to find out.

## CLOSE READING QUESTIONS

- What three verbs, or action words, in the second paragraph on page 26 of the article describe how the golden wheel spider moves?
- What causes the mother-of-pearl caterpillar to start rolling? Go back in the text to find your answer.
- How does the author feel about the topic of this article? What in the text makes you think that? Use the words and punctuation in the article to help you.

## COMMON CORE CONNECTIONS

### Key Ideas and Details *CCSS Info Text 1*

How fast can a golden wheel spider roll? Compare this to a mother-of-pearl moth caterpillar. Which rolls faster?

### Describe Relationships *CCSS Info Text 3*

What is the connection or relationship between the animals described in this article and the wheel?

### Opinion Writing *CCSS Writing 3 & 6*

If you could be a golden wheel spider or a mother-of-pearl moth, which one would you be and why?





clangclangclangclang!" Sam made his loudest siren sound and changed his silver bell as he raced down the sidewalk.

"Goodness, Sam!" called his next-door neighbor, Mrs. Carpenter. "Where's the fire?"

"Zach's fort!" Sam called back over his shoulder. "He just rang the alarm!" And Sam zoomed away as fast as his legs could pedal.



## CROSS-TEXT CONNECTIONS WITH MULTIPLE ARTICLES

### COMPARE ARTICLES

**SYNTHESIZE:** Guide students to compare the 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).

- Create a list of things that use wheels. Look through multiple articles to help you compose your list. How many items can you come up with? Share your list with a partner. How do your lists compare?
- Make a flow chart to show how the wheel came to be invented. Use details from “Wonderful Wheels” to get you started. Then use other articles to extend your chart to include examples of the variety of wheels we use today.
- Make a two-column chart with the headings “Wheels” and “Without Wheels.” Use information in the articles to write or draw examples for each column. Circle the items in each column that you like best. Discuss your choices with a partner.
- What jobs depend on a good set of wheels? Use information from page 15 of “Wonderful Wheels,” and from “Speed Racers” and “Sam’s Wheels” to make a list of jobs that use wheels. Then underline a job that you would like to do.
- Make a chart of different wheels. Use “Rolling Along” as well as other articles to complete your chart. Include a picture of the wheel and a label for it.

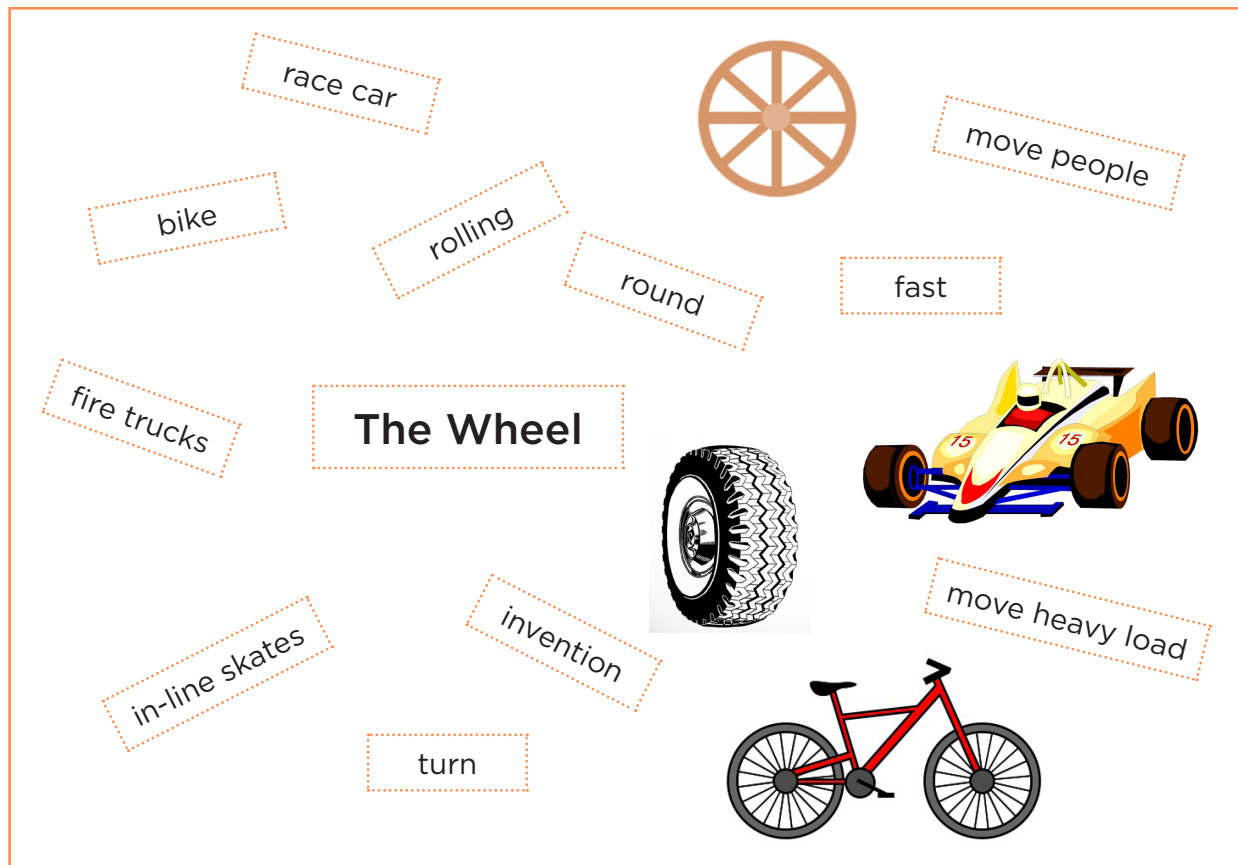


## EXPLORATORY LEARNING - FLEXIBLE MINI-UNIT DESIGN

The Mini-Unit comprises three stages of activities. The Engage activity builds background knowledge. Read and Compare helps students make connections between articles, and the Apply activity invites students to use their new knowledge.

**ENGAGE**
**READ AND  
COMPARE**
**APPLY**

**ENGAGE:** Discuss what students know about the wheel. What does it look like? How is it used? How are some wheels different than others? Create a Word Splash by writing any words, ideas, or pictures in any order and in any direction around the topic of the wheel. Use a Word Splash similar to the one below to collect ideas before reading students and to gather new information as you read.



Share the essential question:

***What are the benefits to humans and animals of being able to roll?***





**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 “Wonderful Wheels” (pgs. 11-15) 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 *Click: Wheels*.

**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 or other readings. How is your topic knowledge growing?

**REVIEW GRAPHIC FEATURES** *CCSS Reading Info Text 7* Review the graphic features in the articles and explain how the pictures help you understand the vocabulary words and content.





## APPLY: MAKE A WHEEL ABOUT WHEELS

**Students will apply their learning by making a collection of important information about wheels from the articles. Using the Wheel Graphic Organizer, students can highlight facts they have learned and illustrate their favorite examples of wheels.**

Materials: Wheel Graphic Organizer, colored pencils or crayons, colored paper, scissors, brads

### Step 1

Have students look through the magazine to compile their own list of important facts and favorite ideas from each of the featured articles about wheels.

### Step 4

Instruct students to cut out the wheel and center it on top of the colored paper. Then, have them push a brad through the center of the wheel, connecting the wheel to the paper and making it able to spin!

### Step 2

Ask students to review their list to find the top 7 facts and ideas about the wheel that they think are the most important. Ask them to circle these ideas.

### Step 5

Have students share their Wheel with a partner. Ask them to answer the following questions:

- Did you pick the same facts?
- Did you have the same favorite wheel?

Prompt students to discuss what is the same and what is different about their work and why they picked the examples they did.

### Step 3

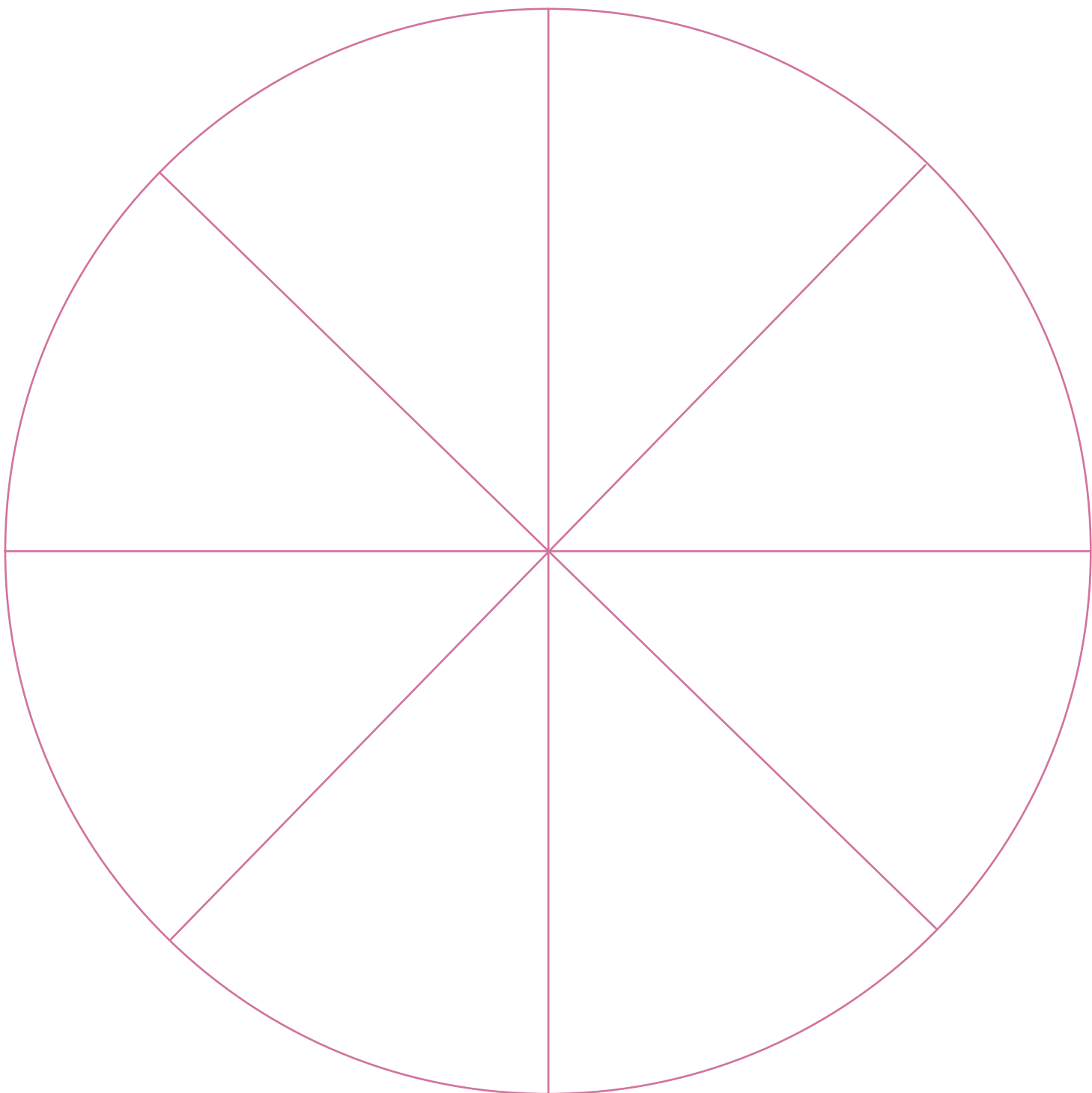
Instruct students to include each top fact and idea in its own slice of the Wheel Organizer. In the remaining slice, have students write "The Wheel." Then prompt them to illustrate each slice.



NAME: \_\_\_\_\_

## Mini-Unit Graphic Organizer

### Wheel Graphic Organizer





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:**





**axle** a bar on which a wheel or pair of wheels turns

*The wheel and **axle** had finally been invented. (p. 13)*

**cotter pin** a metal pin in a wheel and axle

*"Look here— you've lost your **cotter pin**." (p. 30)*

**creep** to move slowly with the body close to the ground

*But as a caterpillar, it **creeps** slowly along, inching its body forward bit by bit—unless it gets scared. (p. 27)*

**fraction** a part or amount of something

*Often, the second-place car crosses the finish line just a **fraction** of a second behind the first-place car. (p. 19)*

**gear** a toothed wheel in a machine

*They added pegs and cut notches in the wheels to make **gears**. (p. 14)*

**glide** to move in a smooth way

*They run and walk, slither and swim, hop and gallop, **glide** and even fly. (p. 26)*

**hubcap** a removable plastic or metal cover on the center of a car or truck wheel

*". . . Now, let's take off the **hubcap**—" and she snapped off the round silver thing in the middle of the wheel. (p. 30)*

**impress** to cause (someone) to feel admiration or interest

*"Wow!" Dorothea was **impressed**. (p. 32)*

**mechanic** a person who repairs machines (such as car engines) and keeps them running properly

*That's when the car's tires are changed, its gas tank is refilled, and **mechanics** fix any problems. (p. 21)*

**pack animal** an animal (such as a horse or donkey) that is used for carrying packs

*Different animals work best on different types of ground, but they're all known as **pack animals**. (p. 25)*

**practically** almost or nearly

*Sam was **practically** crying, he felt so bad. (p. 29)*

**roller** a part that rolls and is used to move, press, shape, spread, or smooth something

*People tried using big logs or tree trunks as **rollers** under the sleds. (p. 13)*

**scurry** to move quickly and with short steps

*It can **scurry** along fairly quickly, but when danger threatens, it rolls away—fast! (p. 26)*

**slither** to move by sliding your entire body back and forth

*They run and walk, **slither** and swim, hop and gallop, glide and even fly. (p. 26)*

**snowboard** a board like a wide ski that is used for sliding down hills of snow while standing

*A **snowboard** looks kind of like a skateboard without wheels, and you could think of a sled as a wagon with long, flat runners in place of round wheels. (p. 23)*

**spoke** one of the bars that connect the center of a wheel to the rim

*They carved **spokes** in the wheels to make them lighter and faster. (p. 14)*

**tame** to make (an animal) less wild

*After a long time, people learned to **tame** animals. (p. 12)*

**threaten** to be something that is likely to cause harm (to something or someone else)

*It can scurry along fairly quickly, but when danger **threatens**, it rolls away—fast! (p. 26)*





### **“Wonderful Wheels”**

- <http://antiquitynow.org/2013/08/20/kids-blog-the-invention-of-the-wheel-how-the-ancient-sumerians-got-humanity-rollin/>

Learn more about the invention of the wheel and follow a link to make your own wheel mobile.

### **“Without Wheels”**

- [http://pbskids.org/dragonflytv/show/sled\\_dogs.html](http://pbskids.org/dragonflytv/show/sled_dogs.html)

Follow this link to find out about sled dogs and the exciting sport of sled dog racing.

### **“Rolling Along”**

- <http://www.wimp.com/spiderwheel/>

Watch the golden wheel spider in action!

### **“Sam’s Wheels”**

- <http://www.mikids.com/Smachines.htm>

Learn about the wheel and other simple machines that people use to do work.