

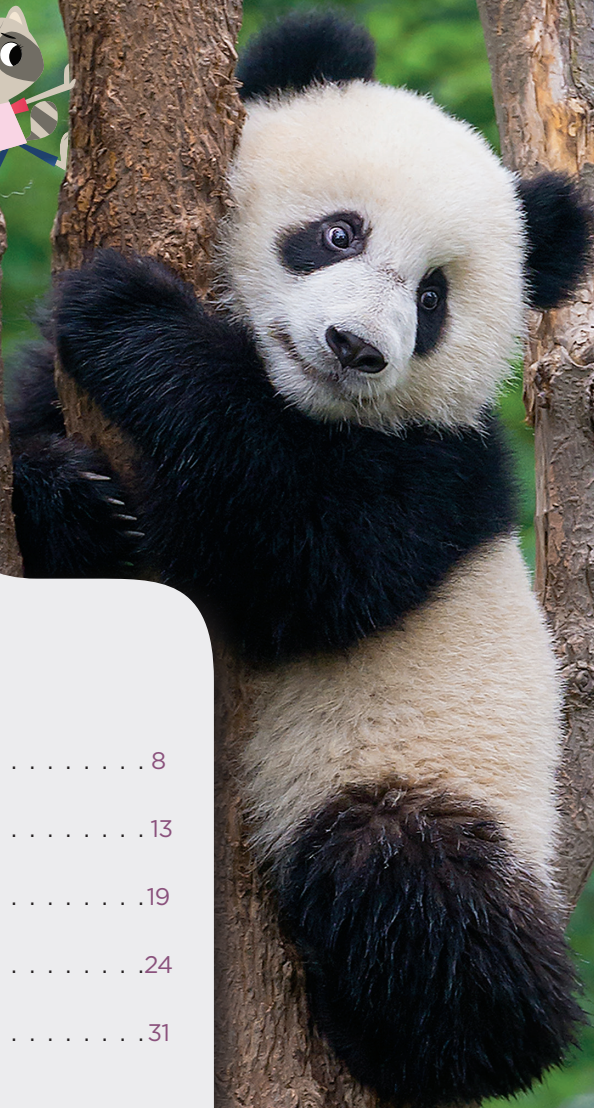
Teacher's Guide

From Cricket Media



click

opening windows for young minds



MAGAZINE ARTICLES

Helping Pandas	8
Expository Nonfiction	1000L
Our Very Own Dog.	13
Contemporary Realistic Fiction	800L
With Love.	19
Photo Essay	960L
Turtle Rescue.	24
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Caleb Counts.	31
Activity	

Teacher's Guide for *Click: Caring for Animals*

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OVERVIEW

In this magazine, readers will learn about the different ways adults and children help the animals on our planet survive.

Click: Caring for

Animals includes information about pandas in China, a dog who was adopted from an animal shelter, orphaned baby elephants in Kenya, a loggerhead turtle hatchling, and backyard birds.

ESSENTIAL QUESTION:

How can people help animals survive?

We invite you to use this magazine as a flexible teaching tool, ideal for providing interdisciplinary instruction of social studies and science content as well as 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.

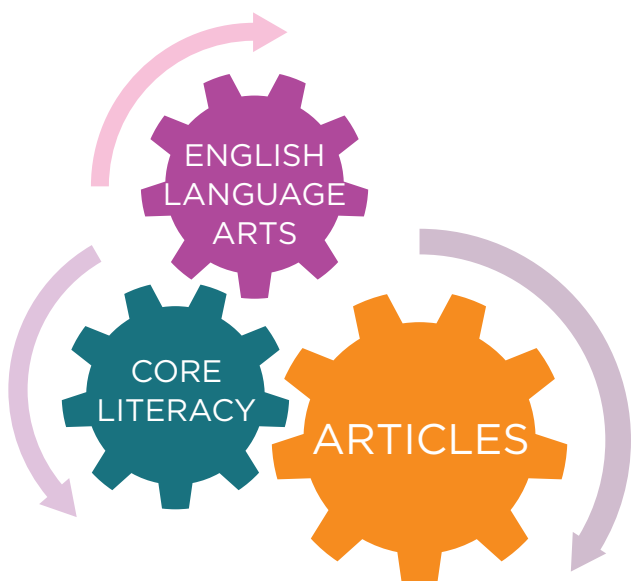
READ INDIVIDUAL ARTICLES PAGES 4 - 8

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



TEACH A MINI-UNIT PAGES 10 - 12

Magazine articles can easily be grouped to make cross-text connections and comparisons. Our Mini-Unit allows students to read and discuss multiple articles and integrate ideas and information (CCSS.Reading.9). Discussing multiple articles (CCSS.Reading.9) prepares students to write texts to share and publish in a variety of ways (CCSS.Writing.2).



Essential Question: How can people help animals survive?

MAGAZINE ARTICLES	CORE CONTENT CONCEPT	LITERACY SKILLS	CORRESPONDING CCSS ANCHOR STANDARDS
Helping Pandas Expository Nonfiction	Captions are sentences that give information about what is shown in photos and pictures.	<ul style="list-style-type: none"> Close Reading Identify Text Features Identify Reasons Write a Caption 	<i>Reading 1, 2, 3, 5 & 8</i> <i>Writing 2</i>
Our Very Own Dog Contemporary Realistic Fiction	Facts are ideas that can be proven to be true.	<ul style="list-style-type: none"> Close Reading Analyze Text Structure Analyze Text Features Read Aloud 	<i>Reading 1 & 5</i> <i>Speaking & Listening 1 & 6</i>
With Love Photo Essay	Nonfiction writers may compare two objects or ideas to show readers similarities and differences between them.	<ul style="list-style-type: none"> Close Reading Analyze Text Structure Interpret Visual Information Write a Caption 	<i>Reading 1, 3, 5 & 7</i> <i>Writing 2</i> <i>Speaking & Listening 1</i>
Turtle Rescue Contemporary Realistic Fiction	Different characters in a story may tell different parts of a story. Sometimes a narrator tells parts of the story too.	<ul style="list-style-type: none"> Close Reading Identify Point of View Interpret Visual Information Compare Texts 	<i>Reading 1, 3, 6 & 7</i> <i>Speaking & Listening 1</i>
Caleb Counts Activity	Illustrations help readers understand the setting, or time and place, of a story.	<ul style="list-style-type: none"> Close Reading Analyze Text Features Interpret Visual Information Research and Write a Story 	<i>Reading 1, 5 & 7</i> <i>Writing 3 & 7</i>

Comparing Texts: *Reading 9*

Mini-Unit: *Reading 1, 2 & 3; Writing 3, 4, 5 & 7; Speaking & Listening 4 & 6*



At one time, giant pandas were in danger of becoming extinct. This article describes how people have helped pandas by protecting their homes, making sure more baby pandas grow up healthy, and training baby pandas to live in the wild.

ESSENTIAL QUESTION

How can people help animals survive?

CORE CONTENT CONCEPT

Language Arts Captions are sentences that give information about what is shown in photos and pictures.

CROSS-CURRICULAR EXTENSION

Science Is there a panda living near you? Use the internet to find out which zoos in the United States have pandas. Look on the zoo websites to learn about their pandas. If possible, go visit a panda at the zoo.

KEY VOCABULARY

roam (p. 8) to go to different places without having a particular purpose or plan

roly-poly (p. 8) short and fat

helpless (p. 9) not protected; not able to defend yourself

nursing (p. 9) to feed a baby or young animal with milk from the mother's body

PREPARE TO READ

Display a K-W-L chart and explain that this article is about pandas. After previewing the title and photos, use the chart to record what students know and want to know about pandas. Finally, read the article aloud. After students read and analyze the text, help them fill in the last column.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- Why do pandas need bamboo? Support your answer with details from the story. *CCSS Reading 1*
- What is this article mainly about? Support your answer with details from the words and pictures. *CCSS Reading 2*
- How do people help pandas? Tell about three ways. Cite information from the story to support your answer. *CCSS Reading 3*

Craft and Structure

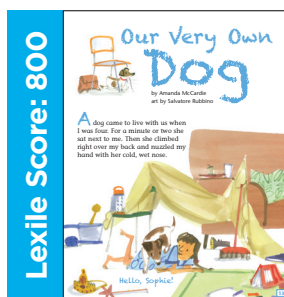
- **Identify Text Features** Use the captions to answer these questions: (1) How much does a panda eat every day? (2) Does a panda have black and white hair when it is born? (3) When are pandas set free? *CCSS Reading 5*
- **Identify Reasons** In the last paragraph on page 9, the author makes the point that "baby pandas are born helpless." Find the reasons the author gives in the paragraph to support this point. Write down the reasons. *CCSS Reading 8*

WRITING

Write a Caption Draw a picture of an object you see in your home or classroom. Then write a caption that tells something about the object. You might describe how the object looks, sounds, feels, or smells. You could also explain what the object is used for.

ARTICLE: Our Very Own Dog

Magazine pages 13 - 18, Personal Essay



When author Amanda McCardie was four, her family adopted a dog from an animal shelter. Here she describes the dog, Sophie, and how to care for dogs in general.

ESSENTIAL QUESTION

How can people help animals survive?

CORE CONTENT CONCEPT

Language Arts Facts are ideas that can be proven to be true.

CROSS-CURRICULAR EXTENSION

Writing Draw a picture of your pet, or a pet you would like to have. Then write sentences to tell about it. Be sure to include the name of your pet. Share your work with your classmates.

KEY VOCABULARY

nuzzled (p. 13) gently pushed or rubbed your nose or face against someone or something to show affection

prepare (p. 15) to make someone or something ready for a purpose

commands (p. 15) orders given to a person or animal to do something

PREPARE TO READ

Ask students to tell about their pets, including how they got them, what they named them, and what they do with them. Discuss some ways students take care of their pets. Then ask students how they learned to take care of their pets. Ask if they looked online or in books, or if they attended classes.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- Where did Sophie live before she came to live with the author? Support your answer with details from the text. *CCSS Reading 1*
- How did the author and her family get ready for Sophie to come home? Use information from the text to support your answer. *CCSS Reading 1*
- Why was the author's father careful around Sophie in the beginning? Cite information from the text to support your answer. *CCSS Reading 1*

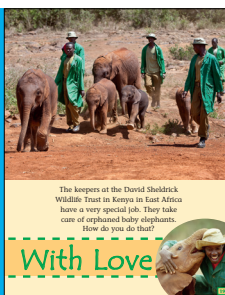
Craft and Structure

- **Analyze Text Structure** Read the text on pages 16 and 17. Make a list of the things Sophie likes. Then make a list of the things Sophie doesn't like. Get together with a classmate and compare your lists. *CCSS Reading 5*
- **Analyze Text Features** Read the captions. What kind of information do they give you? How is this information different from the rest of the article? How is it the same? Discuss your ideas with a partner. *CCSS Reading 5*

SPEAKING AND LISTENING

Read Aloud Read the blue words on each page. These are words the author and her family said to Sophie. Find a partner and take turns reading these words out loud. Pretend you are saying them to Sophie. Use your tone of voice to show Sophie how you feel or what you want her to do.

Lexile Score: 960



Orphaned baby elephants in Kenya need lots of help. Elephant keepers try to take the place of the elephants' lost parents.

ESSENTIAL QUESTION

How can people help animals survive?

CORE CONTENT CONCEPT

Language Arts Nonfiction writers may compare two objects or ideas to show readers similarities and differences between them.

CROSS-CURRICULAR EXTENSION

Language Arts Read a well-known picture book about an orphaned elephant—*The Story of Babar*. Compare this story to the article “With Love.” Tell your classmates how the texts are similar and different.

KEY VOCABULARY

orphan (p. 19) a child whose parents are dead

constant (p. 20) happening all the time or very often over a period of time

surround (p. 22) to move close to someone or something on all sides

tender (p. 22) easily damaged

parasol (p. 22) a light umbrella that you use to protect yourself from the sun

PREPARE TO READ

Preview the pictures with students. Discuss what the people and elephants are doing in the pictures. Then ask students what they think they will learn about in this article. Write predictions on the board. After reading the article, help students check their predictions.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- Why do the baby elephants need to be taken care of by keepers? Use information from the article to support your answer. *CCSS Reading 1*
- What happens when the baby elephants grow up? Cite information from the article to support your answer. *CCSS Reading 1*
- How do you think the keepers and the elephants feel about each other? Cite details from the photographs to support your answer. *CCSS Reading 3*

Craft and Structure

- **Analyze Text Structure** What do baby elephants do in the wild? How do keepers help orphan babies do these same things? Read the text boxes to find out. Write answers in the Orphan Babies chart (p. 14). *CCSS Reading 5*
- **Interpret Visual Information** Look at the top photo on page 21. What do you learn about the elephants from this picture? *CCSS Reading 7*

WRITING

Write a Caption Imagine you are a baby elephant in one of the photos. Tell what is happening to you in the photo. Write 2-3 sentences. Use the word / to tell about yourself—“I am drinking milk.” Read your sentences to a classmate. See if he or she can guess which picture you wrote about.

ARTICLE: Turtle Rescue

Magazine pages 24 - 30, Contemporary Realistic Fiction

Lexile Score: 700

Turtle Rescue

by Chavon Simon
art by Paige Biller-Eise

I first, Stella thought the turtle was a weasel. Small and round, no bigger than Stella's cat, the tiny turtle lay motionless in the sand. Then it moved its flippers, forward and back, forward and back, trying to crawl over the driftwood log in its path.

"Nana!" Stella called out. "Come quick! I found a baby turtle!"

Nana hurried over from her beach house. "Why, so you know," she said. "A brand-new hatched turtle hatching."

Stella reached for the tiny creature.

"We need to put it in the water, where it belongs."

"Not if I mean, love," Nana said. "We need to help the turtle, but we have to do it the right way."

Stella nodded. If anyone knew about sea turtles, it was Nana. Nana was special. "I'm a turtle teacher!" she would explain cheerfully to anyone who asked. Stella knew that meant Nana was trained to help sea turtles on the Florida beaches near her condo. Nana built little fences to protect turtle nests. She taught people to keep outdoor lights dim and to clean up trash that might hurt turtles.

When Stella was older, Nana had promised to take her out at night to watch a mother sea turtle crawl up the beach, dig her nest in the sand, and lay her eggs.

"Right, when?" Stella asked.

"You told me baby sea turtles need to crawl onto the beach right after they're born, so they can swim. But you never said they need to crawl onto the beach right after they're born, so they can swim."

"That's right," Nana said. "Baby sea turtles need to crawl onto the beach right after they're born, so they can swim. But you never said they need to crawl onto the beach right after they're born, so they can swim."

"Stella was confused. "What difference does it make?" she asked.

"The baby turtle looks tired! Why can't I carry it?"

Nana hugged Stella. "Remember how I told you that sea turtles come back to the very same beach where they hatched, when it's time to lay their own eggs? After swimming in the huge, wild ocean for 20 or 30 or 40 years, they know just where to come!"



One day when Stella is at the beach with her grandmother, she discovers a baby loggerhead turtle. Stella wants to pick up the turtle to help it get to the water, but Nana stops her. Nana knows all about loggerhead turtles and she teaches Stella how to help the baby loggerhead in the right way.

ESSENTIAL QUESTION

How can people help animals survive?

CORE CONTENT CONCEPT

Language Arts Different characters in a story may tell different parts of a story. Sometimes a narrator tells parts of the story too.

CROSS-CURRICULAR EXTENSION

Science What should you do if you find a baby animal? Ask a wildlife expert or look online to find out. Make a poster that tells what to do.

KEY VOCABULARY

hatchling (p. 24) a very young animal that has just come out from an egg

patient (p. 27) able to remain calm and not become annoyed when waiting for a long time or when dealing with problems or difficult people

impressed (p. 29) caused someone to feel admiration or interest

PREPARE TO READ

Tell students to think about what they would do if they found a baby animal, such as a bird or a mouse, that was alone—no mother or father nearby. Ask if they would pick it up, put a blanket on it, try to pet it, or call a grown up. Discuss the dangers of picking up a wild creature, for both the creature and the kids.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

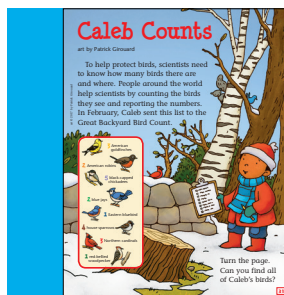
- Stella learns many facts about baby turtles from Nana. Tell three facts Stella learns. Cite information from the story to support your answer. *CCSS Reading 1*
- How do Stella and Nana help the turtle? Use information from the story to support your answer. *CCSS Reading 1*
- Why does Stella get frustrated with Nana? Support your response with details from the text. *CCSS Reading 3*

Craft and Structure

- **Identify Point of View** Work with a partner to reread one page of the story out loud. What are Nana's, Stella's, and the narrator's points of view? *CCSS Reading 6*
- **Interpret Visual Information** The photos in this story show four stages in the life of a baby turtle. Use the Baby Turtle Timeline (p. 15) to make your own drawings of these stages and write sentences about them. *CCSS Reading 7*

SPEAKING AND LISTENING

Compare Texts Go to the library with a partner and find a nonfiction book about sea turtles. Together, read the book and look at the pictures. Compare the nonfiction book to "Turtle Rescue." Which tells a story? Which mainly gives information? How are the pictures similar and different? What else do you notice?



This activity makes students aware of the annual Great Backyard Bird Count, which occurs in February.

ESSENTIAL QUESTION

How can people help animals survive?

CORE CONTENT CONCEPT

Language Arts Illustrations help readers understand the setting, or time and place, of a story.

CROSS-CURRICULAR EXTENSION

Science Bring paper and a pencil outside and record the kinds of birds you notice and how many of each you see. Bring binoculars to get a closer look at the birds. Later, you might enjoy exploring the Great Backyard Bird Count website.

KEY VOCABULARY

reporting (p. 31) telling people about something

PREPARE TO READ

Encourage students to tell about the birds they notice in their backyards or in nearby parks and playgrounds. Show pictures of robins, cardinals, blue jays, and chickadees and allow students to look out the classroom windows to find these birds. Tell students this article is about counting birds.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- How is Caleb helping scientists and birds? Use information from the text to support your answer. *CCSS Reading 1*
- How many different kinds of birds did Caleb see in his backyard? Cite information from the illustrations to support your answer. *CCSS Reading 1*
- When did Caleb send his list to the Big Backyard Bird Count? Support your answer with information in the text. *CCSS Reading 1*

Craft and Structure

- **Analyze Text Features** Find all the birds that Caleb found. Use the bird box on page 31 to help you identify the birds. What other kinds of animals do you see in Caleb's yard? *CCSS Reading 5*
- **Interpret Visual Information** Look at the picture on pages 32-33. What clues tell you that winter is ending and spring is beginning? Work with a partner to find the clues on these pages. *CCSS Reading 7*

WRITING

Research and Write a Story Ask your school librarian to help you find a guide book about birds. Then choose one bird to learn about and find 2-3 interesting facts about it. Then, write a short story about their life from the bird's point of view.

CROSS-TEXT CONNECTIONS

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

- What are different animal helpers called? How do they help animals? Look for answers in “Helping Pandas,” “With Love,” and “Turtle Rescue.” Make a two-column chart with the headings “Helper Name” and “What Helper Does.” Use this chart to record the helper names and one fact about what each helper does.
- Some of the articles in the magazine tell about animal babies. How are baby pandas, baby elephants, and baby turtles like human babies? Work with a partner to talk about this. Make a list of the ways animal and human babies are similar.
- Choose another article from the magazine and compare it to “Caleb Counts.” Record the similarities and differences in a Venn diagram (p. 16).
- Choose two different kinds of helpers in this magazine and compare what they do. How are the things they do to help animals similar? How are they different? Then write a few sentences explaining how they are similar and different.
- Compare the girls and animals in “Our Very Own Dog” and “Turtle Rescue.” Answer the questions in the Compare Stories graphic organizer (p. 17). Are both girls happy at the end?

EXPLORATORY LEARNING - FLEXIBLE MINI-UNIT DESIGN

ENGAGE

READ FOR A PURPOSE

APPLY

This mini-unit offers students an opportunity to think in-depth about the animals in the magazine and how people help them. Students will choose one of these baby animals and research it using the magazine. Then they will write a short, fictional story from the perspective of the animal. Begin with the Engage activity and then move on to the other mini-unit sections in the sequence that works best for your instructional goals.

ENGAGE: Engage students in the topic of helping animals by first reviewing the Essential Question: How can people help animals survive? Then discuss with students what animals need to survive. Tell students to think about what they learned from the magazine and what they know already to answer this question. Then ask students to give examples—from the magazine and from their own knowledge and experience—of people helping animals get what they need to survive. Record responses in a chart like the one below (sample responses shown). Finally, discuss whether humans and animals need similar things.

What do animals need?	How do people help animals get this?
food and water	
a place to live	
shade	Keepers put sunscreen on elephants and hold a parasol over them.

READ FOR A PURPOSE

INTRODUCE THE ACTIVITY: Tell students that they are going to research and write a realistic fictional story from the point of view of one of the animals in the magazine. Continue by telling students that in their reports, they will pretend to be their animal and their sentences will begin with the letter I. As an example, say aloud “I am a baby panda. I eat bamboo.” Remind students of the animals in the magazine and list them on the board: baby panda, dog, baby elephant, loggerhead turtle hatchling.

Have students choose an animal and write the name on a piece of paper. Then go around the room and have students share their choices by saying “I am a _____.”

RETURN TO THE TEXT: Tell students that the first step in creating their stories is to do research. Distribute the Animal Story Organizer (p. 13) and have students write the name of their animal at the top. Go over the organizer. Then explain that students will read a magazine article to find the information about their animal. Tell students to read their articles once without stopping. Then tell them to read the articles again to find information for their reports. Remind them to stop when they find information and write it on their worksheets.

Animal	Article
Baby panda	“Helping Pandas”
Dog	“Our Very Own Dog”
Baby elephant	“With Love”
Turtle	“Turtle Rescue”



APPLY: ANIMAL STORY: Now that students have gathered information using the magazine articles, they are ready to write their animal stories and share them with the class.

Materials

- completed Animal Story worksheets
- drawing paper
- writing pencils
- crayons, markers, and colored pencils

STEP 1: Draft Remind students that they already wrote some information about the animal they chose on their Animal Story organizer. Instruct students to use their organizer to write a short, fictional story from the perspective of the animal. You might want to suggest a simple theme to help students organize their stories, such as “how my human friends helped me.”

STEP 2: Draw Distribute drawing materials to students and allow time for students to create drawings of their animals. Optional: Have students write a caption beginning with the word I at the bottom of their drawing.

STEP 3: Revise and Edit Tell students to exchange their story drafts with a partner. Have students give feedback, using this editing check list:

- Capital letters are used at the beginning of my sentences.
- Periods are used at the end of my sentences.
- All sentences make sense.

STEP 4: Present and Post Gather in a circle. One at a time, invite students to stand up, show their pictures, and read their stories aloud. Display stories and drawings on a wall or bulletin board in the classroom.



NAME: _____

ANIMAL STORY ORGANIZER

I am a

I live in

I need help because

Here are three ways people help me.

1.

2.

3.

Here's an interesting fact about me.

NAME: _____

ORPHAN BABIES CHART

What do baby elephants do in the wild?	How do keepers help orphan babies do these same things?

NAME: _____

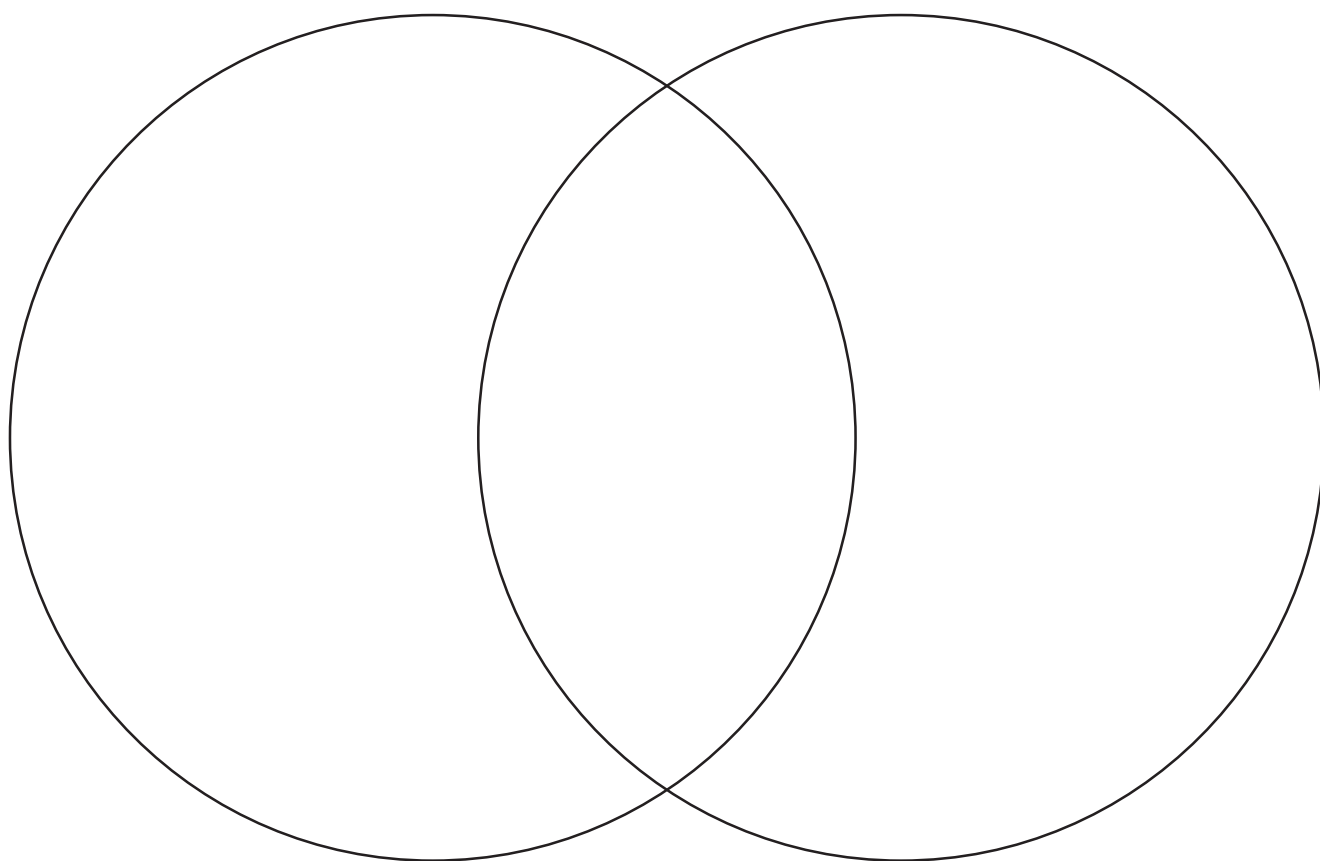
BABY TURTLE TIMELINE

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First	Then	Next	Finally

NAME: _____

VENN DIAGRAM



NAME: _____

COMPARE STORIES

	“Our Very Own Dog”	“Turtle Rescue”
1. What kind of animal is in the story?		
2. How does the girl meet the animal?		
3. How does the girl help the animal?		
4. What happens at the end?		



Meeting State and National Standards: Core Instructional Concepts

The articles in this magazine provide a wealth of opportunities for meeting state and national instructional standards. The following pages contain charts listing Core Instructional Concepts for each of three curricular areas: English Language Arts, Science, and Social Studies.

USING THE STANDARDS CHARTS

ELA

Corresponding CCSS anchor standards have been listed next to each item on the Core Instructional Concepts chart. To customize the chart, add your own grade, state, or district standards in the last column. Match the concepts and standards from the chart to the activities on each page of the Teacher's Guide to complete your lesson plans.

SOCIAL STUDIES

Content Concepts in each Article Guide are based on Dimension 2 of the CS Framework for Social Studies: Applying Disciplinary Concepts and Tools. Use the last column in the accompanying chart to correlate these concepts to your state or district standards.

SCIENCE

Content Concepts in each Article Guide are drawn from the Three Dimensions of the Next Generation Science Standards. You will also find connections to these concepts within individual close-reading questions.

MATH

Content Opportunities for math activities are provided in the Cross-Curricular extensions on each Article Guide page.

CORE INSTRUCTIONAL CONCEPTS: READING, LITERATURE, AND LANGUAGE ARTS

SKILLS AND CONCEPTS	CCSS ANCHOR STANDARD	CORRESPONDING STANDARD
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KEY IDEAS AND DETAILS

Read closely to determine what a text says explicitly.	Reading 1	
Make logical inferences to determine what the text communicates implicitly.	Reading 1	
Cite specific textual evidence to support conclusions drawn from the text.	Reading 1	
Determine central ideas or themes of a text and analyze their development.	Reading 2	
Summarize key supporting details and ideas.	Reading 2	
Analyze how individuals, events, and ideas develop and interact over the course of a text.	Reading 3	

CRAFT AND STRUCTURE

Interpret words and phrases as they are used in a text.	Reading 4	
Determine technical, connotative, and figurative meanings.	Reading 4	
Analyze how specific word choices shape meaning or tone.	Reading 4	
Analyze the structure of texts (sequence, cause/effect, compare/contrast, problem/solution)	Reading 5	
Recognize the genre, key elements, and characteristics of literary texts.	Reading 5	
Assess how point of view or purpose shapes the content and style of a text.	Reading 6	
Analyze how an author's style and tone affects meaning.	Reading 6	

INTEGRATION OF KNOWLEDGE AND IDEAS

Integrate and evaluate content presented in diverse media and formats.	Reading 7	
Identify and evaluate the argument and claims in a text.	Reading 8	
Analyze how two or more texts address similar themes or topics.	Reading 9	

WRITING

Write arguments to support claims, using valid reasoning and relevant and sufficient evidence.	Writing 1	
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately.	Writing 2	
Write narratives to develop real or imagined experiences or events.	Writing 3	
Draw evidence from literary or informational texts to support analysis, reflection, and research.	Writing 9	
Conduct short as well as more sustained research projects .	Writing 10	



CORE INSTRUCTIONAL CONCEPTS: SOCIAL STUDIES

C3 INQUIRY ARC DIMENSION 2: APPLYING DISCIPLINARY CONCEPTS AND TOOLS

STATE OR DISTRICT STANDARD

CIVICS

Analyze the origins, functions, and structure of different governments and the origins and purposes of laws and key constitutional provisions.	
Summarize core civic virtues and democratic principles .	
Evaluate policies intended to address social issues.	

ECONOMICS

Evaluate the benefits and costs of individual economic choices .	
Analyze economic incentives , including those that cause people and businesses to specialize and trade.	
Explain the importance of resources (i.e. labor, human capital, physical capital, natural resources) in methods of economic production .	
Explain the functions of money in a market economy.	
Explain the importance of competition in a market economy.	
Apply economic concepts (i.e. interest rate, inflation, supply and demand) and theories of how individual and government actions affect the production of goods and services .	
Analyze economic patterns , including activity and interactions between and within nations.	

GEOGRAPHY

Construct and use maps and other graphic representations (i.e. images, photographs, etc.) of different places.	
Explain cultural influences on the way people live and modify and adapt to their environments.	
Analyze places, including their physical, cultural and environmental characteristics and how they change over time.	
Analyze movement of people, goods, and ideas .	
Analyze regions, including how they relate to one another and the world as a whole from a political, economic, historical, and geographic perspective.	

HISTORY

Interpret historical context to understand relationships among historical events or developments .	
Evaluate historical events and developments to identify them as examples of historical change and/or continuity .	
Analyze perspectives , including factors that influence why and how individuals and groups develop different ones.	
Evaluate historical sources , including their reliability, relevancy, utility, and limitations.	
Analyze causes and effects , both intended and unintended, of historical developments.	



CORE INSTRUCTIONAL CONCEPTS: SCIENCE

DIMENSION 1: SCIENTIFIC AND ENGINEERING PRACTICES

Dimension 1 focuses on the practice of science, and how knowledge is continually adapted based on new findings. The eight practices of the K-12 Science and Engineering Curriculum are as follows:

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

DIMENSION 2: CROSSCUTTING CONCEPTS

Dimension 2 provides an organizational schema for integrating and interrelating knowledge from different science domains. The eight NGSS Crosscutting Concepts are as follows:

- Patterns
- Similarity and Diversity
- Cause and Effect
- Scale, Proportion, and Quantity
- Systems and System Models
- Energy and Matter
- Structure and Function
- Stability and Change

DIMENSION 3: DIMENSIONS AND DISCIPLINARY CORE IDEAS

Dimension 3 presents a contained set of Disciplinary Core Ideas to support deeper understanding and application of content. The following chart details Core Ideas for curriculum, instructional content, and assessments within four domains.

LIFE SCIENCE	PHYSICAL SCIENCE	EARTH SCIENCE	SPACE SYSTEMS
<ul style="list-style-type: none">• Structure and Function of Living Things• Life Cycles and Stages• Reproduction & Inherited Traits• Animals• Plants	<ul style="list-style-type: none">• Forces and Interactions• Energy• Light• Sound• Electricity/ Magnetism• Matter• Waves• Heat• Chemistry• Information Processing	<ul style="list-style-type: none">• Weather• Climate• Rocks & Soil• Erosion and Weathering• Landforms• Water• Oceans• History of Earth• Plate Tectonics• Volcanoes, Earthquakes, and Tsunamis	<ul style="list-style-type: none">• Solar System• Planets• Moon• Sun

