

Teacher's Guide



MAGAZINE ARTICLES

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From Cricket Media





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OVERVIEW

*In this magazine, readers will encounter characters who face a variety of interesting problems. **Spider: February 2017** presents cousins*

who don't get along, a mouse who falls into a deep hole, an alien looking for someone to bring back to his planet, and a girl having a very bad hair day. In addition, a nonfiction article explains how mucus is helpful.

ESSENTIAL QUESTION:

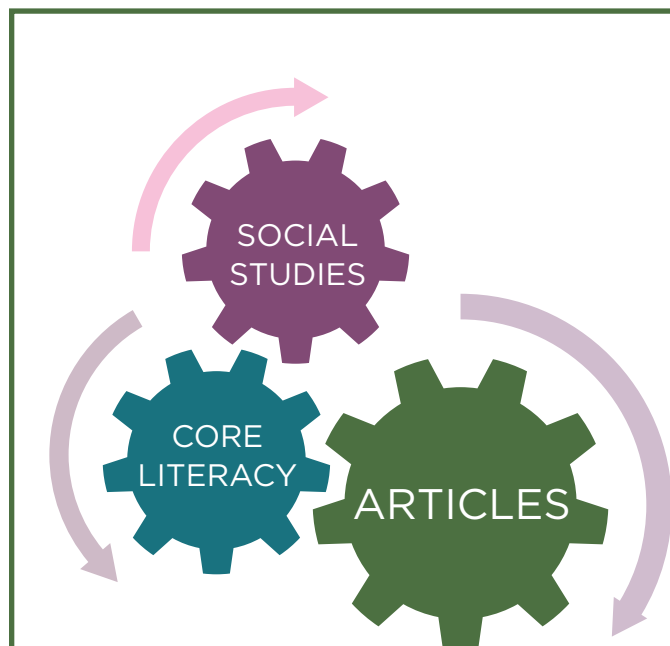
What kinds of problems do characters have?



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 - 9

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: What kinds of problems do characters have?

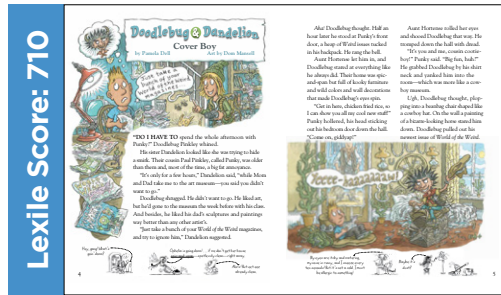
MAGAZINE ARTICLES	CORE CONTENT CONCEPT	LITERACY SKILLS	CORRESPONDING CCSS ANCHOR STANDARDS
Doodlebug & Dandelion Contemporary Realistic Fiction	Readers can learn about characters by paying attention to their actions, words, thoughts, and relationships.	<ul style="list-style-type: none"> Close Reading Interpret Visual Information Analyze Perspectives Create a Contest 	<i>Reading 1, 2, 3, 6 & 7</i> <i>Writing 2</i>
I Won't Sneeze Folktales	Many folktales include a type of character called a trickster. The trickster fools other characters to get what it wants.	<ul style="list-style-type: none"> Close Reading Analyze Word Choice Analyze Perspectives Write a Story 	<i>Reading 1, 2, 3, 4 & 6</i> <i>Writing 3</i>
Earthworm Lyrical Poem	The place where a poet decides to end one line and begin another is called a line break. Poets use line breaks to emphasize meaning in their poems.	<ul style="list-style-type: none"> Close Reading Analyze Text Structure Interpret Visual Information Write a Poem 	<i>Reading 1, 5 & 7</i> <i>Writing 3</i>
The Visitor Contemporary Realistic Fiction	Some authors end stories in a way that surprises the reader. Surprise endings make stories interesting and entertaining.	<ul style="list-style-type: none"> Close Reading Analyze Word Choice Analyze Perspectives Write a Science Fiction Story 	<i>Reading 3, 4 & 6</i> <i>Writing 3</i>
A Lotta Trouble Humorous Poem	The pattern of beats in a poem is called the rhythm. In some poems, the rhythm changes in each line.	<ul style="list-style-type: none"> Close Reading Analyze Sound Devices Interpret Visual Information Write a Poem 	<i>Reading 1, 2, 4 & 7</i> <i>Writing 3</i>
Boogers at Work Expository Nonfiction	Authors of nonfiction use details, examples, facts, and descriptions to help readers understand a topic.	<ul style="list-style-type: none"> Close Reading Interpret Visual Information Analyze Tone Present a Report 	<i>Reading 1, 6 & 7</i> <i>Writing 2</i>

Comparing Texts: *Reading 9*

Mini-Unit: *Reading 1 & 3; Writing 3; Speaking & Listening 1*

ARTICLE: Doodlebug & Dandelion

Magazine pages 4 - 8, Contemporary Realistic Fiction



Dandelion and her parents are going to the art museum. Doodlebug doesn't want to go, so he has to stay at his cousin Punky's house. Doodlebug thinks Punky is weird, and they seem to have nothing in common. When Doodlebug starts reading his magazine *Weird*, Punky and Doodlebug find out that they want the same thing.

ESSENTIAL QUESTION

What kinds of problems do characters have?

CORE CONTENT CONCEPT

English Language Arts Readers can learn about characters by paying attention to their actions, words, thoughts, and relationships.

CROSS-CURRICULAR EXTENSION

Art Draw a picture of Doodlebug's or Punky's entry photo for the contest. Follow the contest directions on page 8 of the story. Use details from the story and illustrations to help you think of weird stuff to put in your picture. Share with the class.

KEY VOCABULARY

annoyance (p. 4) something that causes feelings of slight anger or irritation

spic-and-span (p. 5) very clean and neat

tussled (p. 7) fought or struggled with someone by pushing or grabbing

PREPARE TO READ

Invite students to discuss the magazines they read and why they like those magazines. Then ask them if they've ever entered, or wanted to enter, a contest. Invite students to describe these contests. Then tell students that they will read about a contest that both Doodlebug and his cousin want to win.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

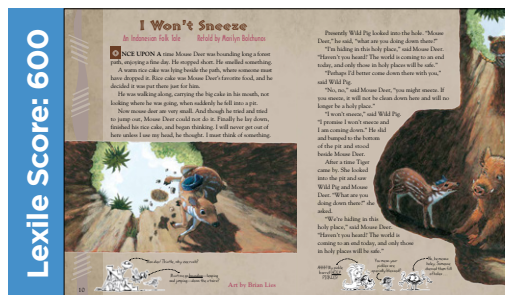
- Summarize this story by retelling the key events in your own words. Cite details from the story to support your response. *CCSS Reading 2*
- Compare Doodlebug and Punky. Use information about their words and actions and the magazines they read to support your response. *CCSS Reading 3*
- What will happen next in the story? What will the boys' magazine covers look like? Use details from the story to support your predictions. *CCSS Reading 1*

Craft and Structure

- Interpret Visual Information** What do the illustrations on pages 6 and 7 help you understand about Punky, Doodlebug, and the story events? Discuss ideas with a partner and cite story details in your discussion. *CCSS Reading 7*
- Analyze Perspectives** Why does Doodlebug want to enter the contest? Why does Punky want to enter? Do you think the boys are entering for the same reason or different reasons? Explain your ideas. *CCSS Reading 6*

WRITING

Create a Contest Imagine that you are in charge of a magazine or TV show. It is your job to create a contest for your fans. What kind of contest would you create? Why do you think it would excite your fans? Write two short paragraphs explaining the contest, the rules, and the prize. Include a drawing to go with your description.



One day Mouse Deer falls into a hole. He's too small to climb out, so he thinks of a plan to escape. First he tricks his friends Wild Pig, Tiger, and Elephant into the hole. Mouse Deer warns them not to sneeze in the hole. Then Mouse Deer sneezes, and his friends throw him out of the hole, which is just what he wanted.

ESSENTIAL QUESTION

What kinds of problems do characters have?

CORE CONTENT CONCEPT

English Language Arts Many folktales include a type of character called a trickster. The trickster fools other characters to get what it wants.

CROSS-CURRICULAR EXTENSION

Language Arts Ask your librarian to help you find another folktale from Indonesia. After you read the folktale, write a summary of it. Then share your summary and the lesson of the folktale with a partner or your class.

KEY VOCABULARY

mouse deer (p. 10) one of the smallest hoofed animals; they live in the forests of South and Southeast Asia and the rainforests of Central and West Africa

dismay (p. 13) a strong feeling of being worried, disappointed, or upset

PREPARE TO READ

Tell students that they are about to read a folktale. Remind students that most folktales teach a lesson or share a message. Invite students to share other folktales they have read and the message of those tales. Then tell students to think about message as they read this folktale.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

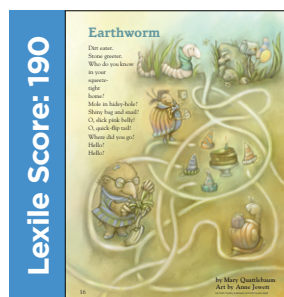
- How does Mouse Deer get into and out of the hole? Support your answer with details from the story. *CCSS Reading 1*
- Is Mouse Deer a good or a bad character? Support your opinion with details from the story. *CCSS Reading 3*
- What lesson or lessons about life does this story teach? Use details to support your answer. *CCSS Reading 2*

Craft and Structure

- Analyze Word Choice** The word holy means “connected to a god or a religion.” It sounds like the word “holey,” which means “having the shape of a hole.” Does Mouse Deer use one or both meanings in this story? Explain. *CCSS Reading 4*
- Analyze Perspectives** How do Wild Pig, Tiger, and Elephant feel about Mouse Deer and themselves at the end of the story? Describe how their perspectives change from the beginning to the end of the story. *CCSS Reading 6*

WRITING

Write a Story Imagine that one of the other characters in this folktale falls into the hole first. Write a story from this character's point of view. Describe how the character falls into the hole. Think of a clever plan for getting the character out of the hole. Create drawings of important events to go with your tale.



In this poem, the speaker wonders who an earthworm sees while he's underground.

ESSENTIAL QUESTION

What kinds of problems do characters have?

CORE CONTENT CONCEPT

English Language Arts The place where a poet decides to end one line and begin another is called a line break. Poets use line breaks to emphasize meaning in their poems.

CROSS-CURRICULAR EXTENSION

Science Use the internet to learn more about earthworms. Find at least five interesting facts. Then write a short paragraph that describes what you learned. Begin your paragraph with a main idea.

KEY VOCABULARY

mole (p. 16) a small animal with very small eyes and soft fur that digs tunnels in the ground and eats insects

PREPARE TO READ

Show students a picture of an earthworm or bring one to class. Tell students to describe the qualities of an earthworm and where it lives. Create a word web on the board to list the details students share. Then tell students to listen for words and phrases that describe an earthworm as you read the poem aloud.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- What words and phrases stood out to you in this poem? What did you visualize when you read or heard them? *CCSS Reading 1*
- What does the speaker in this poem want to know about the earthworm? Use details from the poem to support your response. *CCSS Reading 1*
- Describe the qualities of an earthworm based on the information in this poem. Cite details from the poem in your response. *CCSS Reading 1*

Craft and Structure

- **Analyze Text Structure** Rewrite this poem as a paragraph. Does this make the poem easier or harder to read? Why do you think lines 4-7 are skinnier than other lines? What is the speaker describing in lines 4-7? *CCSS Reading 5*
- **Interpret Visual Information** Look for picture clues to help you explain what the speaker imagines about the earthworm and the other creatures. How would a realistic drawing change your ideas about the poem? *CCSS Reading 7*

WRITING

Write a Poem Choose a creature that fascinates you and write a short poem about it. Describe the way the animal looks and moves, where it lives, and what it eats. Also describe other creatures that live nearby. Try breaking the lines of your poem in unusual ways. Decide whether or not to use rhyme. Add illustrations and then read your poem aloud to the class.



Garg is an alien from the planet Zarnos. His mission is to take an Earthling back to his planet. He asks the members of the Thompson family to go, but they are all too busy. What's a little alien to do when everyone says no? He takes off his costume and gets ice cream with his sister!

ESSENTIAL QUESTION

What kinds of problems do characters have?

CORE CONTENT CONCEPT

English Language Arts Some authors end stories in a way that surprises the reader. Surprise endings make stories interesting and entertaining.

CROSS-CURRICULAR EXTENSION

Literature Science fiction stories describe how people are affected by imaginary scientific developments. Ask your librarian to help you find a science fiction short story. Read it with friends or classmates and discuss your reactions.

KEY VOCABULARY

objections (p. 17) reasons for disagreeing with something

native (p. 18) a person who was born or raised in a particular place

hostile (p. 18) not friendly

doomed (p. 19) certain to fail

PREPARE TO READ

Explain to students that an alien is a being that comes from another planet. Invite students to share the names of stories and movies about aliens. Discuss what these aliens looked like and why they were on Earth. Then tell students they are going to read a story about a visitor from the planet Zarnos.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- Who is Garg? What is his relationship to the other characters in the story? Cite details from the text to support your answer. *CCSS Reading 3*
- Why won't the other characters go with Garg? What are they each busy doing? Support your answer with details from the story. *CCSS Reading 3*
- How does Garg change at the end of the story? Were you surprised? Why or why not? Use details from the story to support your answer. *CCSS Reading 3*

Craft and Structure

- Analyze Word Choice** Notice how Garg describes a bicycle on page 18 and a hammer on page 19. Choose two common items, such as a sneaker and a mug. Describe them as if you were an alien seeing them for the first time. Share your descriptions with classmates. Can they identify the items? *CCSS Reading 4*
- Analyze Perspectives** What do different characters think of Garg and his demands? With a partner, describe each character's attitude. *CCSS Reading 6*

WRITING

Write a Science Fiction Story Work with a partner to write a story about an alien. Think about what the alien wants and why it has visited Earth. Use interesting words and details to describe the alien, its actions, and its spaceship. Include illustrations of important characters and scenes. Share your story with a small group or the class.

ARTICLE: A Lotta Trouble

Magazine pages 22 - 23, Humorous Poem



Lotta's friends try to tame her hair with gel and glitter glue. Now she looks like a porcupine.

ESSENTIAL QUESTION

What kinds of problems do characters have?

CORE CONTENT CONCEPT

English Language Arts The pattern of beats in a poem is called the rhythm. In some poems, the rhythm changes in each line.

CROSS-CURRICULAR EXTENSION

Art Draw a picture of what you think Lotta looked like before her friends tried to fix her hair. Then draw a picture of what you think Lotta's friends wanted Lotta to look like. Compare pictures with your classmates.

KEY VOCABULARY

o' (p. 22) of

porcupine (p. 22) a small animal that has very stiff, sharp parts called quills all over its body

PREPARE TO READ

Invite students to share their experiences getting haircuts or styling their hair. Ask if they have always liked their haircuts and if they have ever had bad hair days. If you have humorous hair stories, share them with the class.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- What problem does Lotta have with her hair at the beginning of the poem? Support your answer with details from the poem. *CCSS Reading 3*
- Why did the friends put gel and glitter-glue in Lotta's hair? Were they being mean or kind? Use details in the poem to support your answer. *CCSS Reading 1*
- What does the speaker compare Lotta's hair to? Do you think this is a good comparison? Support your answer with details from the picture. *CCSS Reading 1*

Craft and Structure

- Analyze Sound Devices** With a partner, identify any words that rhyme or sound alike in some way. Then take turns reading the poem aloud. Does the rhythm of the poem change or stay the same in each line? *CCSS Reading 4*
- Interpret Visual Information** How do the illustrations support the poem? How do you think Lotta and her friends feel about her hair? Identify clues in the illustrations that tell you how they feel. *CCSS Reading 7*

WRITING

Write a Poem Think of something silly you and your friends did together and then write a poem about it. Use funny words and phrases to make your poem playful and amusing. Create an illustration to go with your poem. Then share your poem with the class.



Mucus and cilia play important roles in keeping your body healthy. They help trap bits of dust, dirt, bacteria, and pollen. When you sneeze, blow your nose, or cough, you expel these particles. Mucus, and boogers, might be gross, but we couldn't live without them.

ESSENTIAL QUESTION

What kinds of problems do characters have?

CORE CONTENT CONCEPT

English Language Arts Authors of nonfiction use details, examples, facts, and descriptions to help readers understand a topic.

CROSS-CURRICULAR EXTENSION

Science If this article didn't gross you out enough, look in your school or local library for books about disgusting things, such as *Oh Yuck! The Encyclopedia of Everything Nasty* by Joy Masoff.

KEY VOCABULARY

intestine (p. 26) a long tube in the body that helps digest food after it leaves the stomach

barrier (p. 26) something that blocks movement from one place to another

expel (p. 28) to push or force something out

sensation (p. 28) a particular feeling or effect that your body experiences

PREPARE TO READ

Ask students what they think of when they think of boogers—do they know what they are? Then ask them to think of the last time they sneezed, coughed, or blew their nose. Do they know why they had to do these things? Tell students they are about to learn why boogers and mucus are important.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- What are mucus and cilia? Why are they important? Use details to support your answer. *CCSS Reading 1*
- What happens when you blow your nose or sneeze? Identify details to support your response. *CCSS Reading 1*
- What is a cough? How is it like a sneeze? Cite details to support your response. *CCSS Reading 1*

Craft and Structure

- Interpret Visual Information** Why do you think the illustrator created funny and slightly disgusting pictures for this article? How do the pictures support the mood, or the feeling you get from the article? *CCSS Reading 7*
- Identify Tone** What is the author's attitude toward boogers—Disgusted? Fascinated? Appreciative? Which details convey her attitude? Did your attitude toward boogers change after reading this article? *CCSS Reading 6*

SPEAKING AND LISTENING

Present a Report Think of another part of the body that helps protect us. Use the internet and the library to find out more about this part of the body. Then write a short presentation explaining what it is and how it helps us. Include photographs or drawings to help the audience understand the topic. Practice your presentation. When you are ready, deliver it to the class.



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).

- The stories “Doodlebug & Dandelion” and “The Visitor” tell about characters who dress up, or want to dress up, and pretend to be something else. Compare the reasons why Doodlebug, Punky, and Garg dress up. What makes each of them want to pretend to be something else? Write a paragraph comparing the characters and their attitudes.
- Compare the two poems in the magazine—“Earthworm” and “A Lotta Trouble.” How are the illustrations important in each poem? Do the poems sound alike or different? Explain your ideas in a paragraph.
- In “I Won’t Sneeze” and “The Visitor,” the main characters play tricks on the other characters. Create a two-column chart with the headings “Mouse Deer” and “Garg.” Answer the three questions below for each character. Record your answers in the columns.
 - How does the character try to trick the other characters?
 - What does the character want?
 - What happens to the character at the end of the story?
- “Boogers at Work” and “I Won’t Sneeze” both tell about sneezing. How is the information about sneezing similar and different in each article? Use a Venn diagram (p. 15) to record your ideas.
- Characters in “Doodlebug & Dandelion” and “I Won’t Sneeze” find themselves in places where they don’t want to be. Describe the place where each character ends up. Tell how they got into this place and how they get out of it. Write 1-2 paragraphs to answer this question.



EXPLORATORY LEARNING - FLEXIBLE MINI-UNIT DESIGN

ENGAGE

READ FOR A PURPOSE

APPLY

This mini-unit gives students the opportunity for an in-depth look at the problems story characters face. First, students will identify the problems faced by magazine characters. Then they will write questions they would like to ask one of the characters and the answers the character might give. Finally, students will present their character interviews.

ENGAGE: Engage students in the topic of characters' problems by reviewing the Essential Question: What kinds of problems do characters have? Next, display a chart like the one below. Ask students to name different characters from the magazine, describe the problems they faced, and explain how they dealt with those problems. Sample text is shown below.

Character Name & Story Title	What is the character's problem?	What does the character do?
Doodlebug "Doodlebug & Dandelion"	Doodlebug has to spend the day with his cousin Punky. He doesn't like Punky.	Doodlebug reads a magazine and tries to ignore his cousin. He ends up fighting with his cousin about a contest.
Mouse Deer "I Won't Sneeze"	Mouse Deer falls into a hole and can't get out.	
Garg "The Visitor"		

**READ FOR A PURPOSE**

INTRODUCE THE ACTIVITY: CHARACTER INTERVIEW Tell students that they will interview a character from one of the magazine articles. Explain that they will write interview questions they would like to ask the character. Then they will write the answers they think the character would give. Finally, they will present the interview to the class. If possible, show students an excerpt from a talk show to help them understand the project.

Divide the class into small groups and assign one character from the magazine to each group.

RETURN TO THE TEXT: Explain to students that before they can create and act out an interview, they need to get to know their character better by gathering details and information from the text. Distribute the Character Details chart (p. 14 and shown below) to all students and explain that they will work independently to fill in the chart with information. Then groups will assemble to write questions and answers using the information they gathered.

CHARACTER DETAILS CHART

Name	Age	Male/Female
Friends	Family members	Other important characters
Hobbies	Likes	Dislikes
Traits	Feelings	Problems
Important events, actions, details		





APPLY: CHARACTER INTERVIEW: Now that students have gathered details about magazine characters, they are ready to work with group members to develop their interviews. If possible, allow students to record their interviews using a video recorder or another device.

Materials

- writing paper
- pencils
- completed Character Details chart

STEP 1: Build Background Remind groups that they will write 5- 10 questions they would like to ask their characters. Then they will write the answers their characters might give. Explain that questions should be open-ended and not able to be answered with a simple yes or no. Go over the following question types and examples with students:

- **Background questions:** What kinds of magazines do you like to read?
- **Specific questions:** How did you feel when you saw what your hair looked like?
- **Questions about story events:** Why didn't you go to the museum with your sister?
- **Questions beyond the story:** What kind of costume will you wear for Halloween?

Tell students the answers they write should be based on their understanding of the character and should sound like something the character might say.

STEP 2: Write Questions Have groups refer to their Character Details charts to help them write their questions. Tell groups to appoint a note-taker who will write down the questions they come up with. Explain that after writing, group members should discuss changes or additions they want to make.

STEP 3: Write Answers Tell groups to have each member write some of the answers. Group members should review and agree upon answers. Finally, the note-taker should make a script out of the questions and answers and distribute a copy to each member.

STEP 4: Plan and Practice the Interview Have group members assign roles: character, host, stage hand, and camera person (if you plan to record the interview). Members can take turns playing the host and character so that everyone gets a chance to be part of the production. While hosts and characters rehearse, the stage hands should create a stage set.

STEP 5: Record (optional) Have groups record their interviews now, using whatever devices they have chosen.

STEP 6: Share Have groups take turns presenting their interviews—live or recorded. Be sure each group gets a big round of applause afterward. Then briefly discuss the fun and challenging parts of this activity.



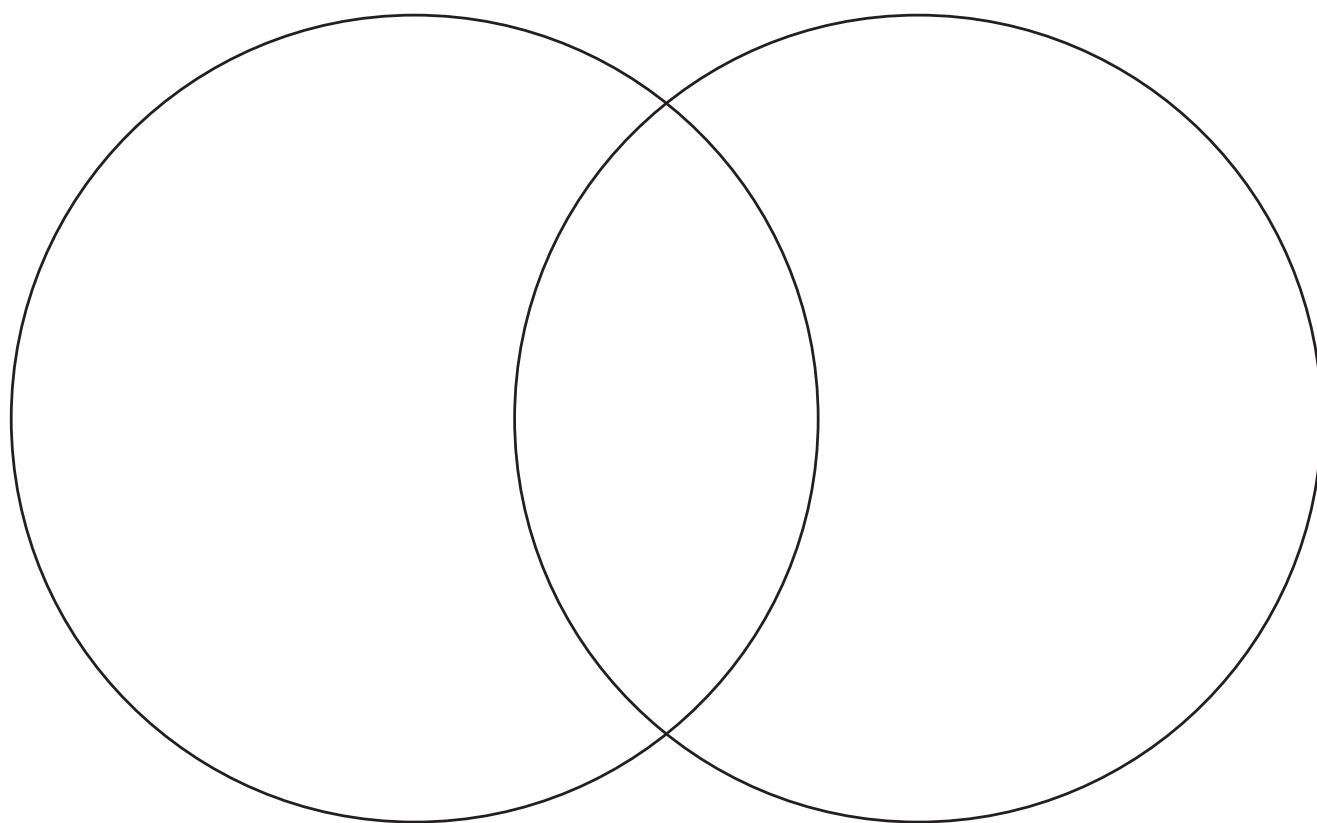
NAME: _____

CHARACTER DETAILS CHART

Name	Age	Male/Female
Friends	Family members	Other important characters
Hobbies	Likes	Dislikes
Traits	Feelings	Problems
Important events, actions, details		

NAME: _____

VENN DIAGRAM





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

