Teacher's Guide



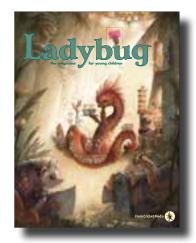
MAGAZINE ARTICLES

| Max and Kate |
|-----------------------------------|
| Stumps |
| A Meal Fit for a King |
| Kites |
| There's a Dragon in my Tree House |

From Cricket Media 🔒

Teacher's Guide for *Ladybug: February 2017*

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OVERVIEW

In this magazine, readers will meet many characters, both human and non-human, and read about their adventures. Ladybug: February 2017

includes stories and poems in which kids have outdoor fun through hiking, looking at tree stumps, and flying kites. Other stories describe the adventures of animals and dragons.

ESSENTIAL QUESTION:

What kinds of adventures do different characters experience?



Using This Guide

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: What kinds of adventures do different characters experience?

| MAGAZINE ARTICLES | CORE CONTENT CONCEPT | LITERACY SKILLS | CORRESPONDING CCSS ANCHOR STANDARDS |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Max and Kate Contemporary Realistic Fiction | The illustrations in a story can help readers understand how characters feel. | Close Reading Interpret Visual Information Analyze Word Choice Write a Story | Reading 1, 3, 4 & 7 Writing 3 |
| Stumps Lyrical Poem | Rhyming words are words that have the same ending sound. Example: <i>stump</i> and <i>bump</i> . | Close Reading Identify Sound Devices Interpret Visual Information Write a Poem | Reading 1, 2, 5 & 7 Writing 3 |
| A Meal Fit for a King Fantasy | Stories have a beginning, a middle, and an end. | Close Reading Analyze Text Structure Analyze Word Choice Write a Recipe | Reading 1, 3, 4 & 5 Writing 2 |
| Kites Lyrical Poem | Poets use rhyme to make their poems fun to read. | Close Reading Analyze Word Choice Identify Sound Devices Write a Concrete Poem | Reading 1, 3, 4 & 7 Writing 3 |
| There's a Dragon in My Tree House Fantasy | In fantasy stories, the characters may be made- up creatures that act like humans. | Close Reading Interpret Fantasy Analyze Word Choice Discuss a Story | Reading 3, 4 & 5 Speaking & Listening 1 |

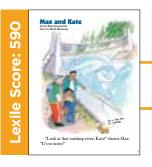
Comparing Texts: Reading 9

Mini-Unit: Reading 1 & 2; Writing 3 & 5



ARTICLE: Max and Kate

Magazine pages 3 - 7, Contemporary Realistic Fiction



Max and Kate go on an outing with their dads. Max's dad helps him face a challenge.

ESSENTIAL QUESTION

What kinds of adventures do different characters experience?

CORE CONTENT

English Language Arts The illustrations in a story can help readers understand how characters feel.

CROSS-CURRICULAR EXTENSION

Art Draw a picture of you and a friend taking a hike. Then make a list of the things you will take with you on your hike, such as a backpack, a water bottle, and cookies. Share your picture and list with a friend.

KEY VOCABULARY

rushing (p. 3) moving quickly

wobbles (p. 4) moves with an unsteady side-to-side motion

PREPARE TO READ

Preview the illustration on page 3 with students. Ask students to guess what Max and Kate and their dads are doing. Discuss the picture clues that helped them guess. Then read the story aloud and discuss whether students guessed correctly.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- Why does Max hold on tight to Mo and to his daddy's hand? Find words and pictures that support your answer. *CCSS Reading 1*
- How does Kate feel on the bridge? Does Max feel the same or different? Use details in the words and pictures to support your answer. *CCSS Reading 3*
- What happens after Max and Kate cross the bridge? Use information in the words and picture on page 7 to explain what happens. *CCSS Reading 3*

Craft and Structure

- Interpret Visual Information How do the pictures help you understand what Max and Kate are feeling? Work with a partner to describe how they feel in three different pictures. *CCSS Reading 7*
- **Analyze Word Choice** Why does Max feel like "wobbly jelly"? What makes him feel this way? Have you ever felt like wobbly jelly? *CCSS Reading 4*

WRITING

Write a Story What will happen when Max and Kate cross the bridge again to go home? How will they each feel? Write an ending to the story that tells about this. Draw a picture to go with your story.





ARTICLE: Stumps

Magazine pages 8 - 9, Lyrical Poem



This poem explains what you can learn by looking at the rings on a tree stump.

ESSENTIAL QUESTION

What kinds of adventures do different characters experience?

CORE CONTENT CONCEPT

English Language Arts Rhyming words are words that have the same ending sound. Example: *stump* and *bump*.

CROSS-CURRICULAR EXTENSION

Science Take a walk in a park or nature sanctuary. Look for plants, animals, and other items that begin with each letter of the alphabet, such as an acorn, a butterfly, a caterpillar. Make a list and then share it with classmates.

KEY VOCABULARY

stump (p. 8) the part of a tree that remains in the ground after the tree is cut down

hearty (p. 9) strong and healthy

PREPARE TO READ

Show students close-up photos of a tree stump. Explain that a stump is the part of a tree that is left after a tree has been cut down. Ask students to share what they notice in the photos. If necessary, point out the rings. Then read aloud the poem as students listen.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- How many rings does a tree grow in one year? Find details in the poem that support your answer. *CCSS Reading 1*
- What are two things you can learn about a tree by looking at the rings on a stump? Which parts of the poem helped you find an answer? *CCSS Reading 1*
- How can people be like a hearty tree? Use information in the last part of the poem to help you answer. *CCSS Reading 2*

Craft and Structure

- Identify Sound Devices With a partner, take turns reading lines from the poem out loud. Listen for word pairs that rhyme. Make a list of these pairs. Then add one more word to rhyme with each pair. *CCSS Reading 5*
- Interpret Visual Information What do you learn from the pictures? Who are the people? What are they doing? *CCSS Reading 7*

WRITING

Write a Poem Write a poem about one of the animals shown in the picture. Why does the animal like to sit or stand on a tree stump? What does it do there? You can choose to make your poem rhyme. When you are finished writing, draw a picture to go with your poem.







ARTICLE: A Meal Fit for a King

Magazine pages 14 - 17, Fantasy



Gorilla and Chimp are very excited because the Great King Ape is coming for dinner. Gorilla plans to cook a delicious meal and Chimp wants to help. There's just one problem— Gorilla doesn't want Chimp's help.

ESSENTIAL QUESTION

What kinds of adventures do different characters experience?

CORE CONTENT

English Language Arts Stories have a beginning, a middle, and an end.

CROSS-CURRICULAR EXTENSION

Science Use a library book or a website to find interesting facts about apes. Create a poster that includes drawings of apes and 4-5 facts about them. Share your poster with the class.

KEY VOCABULARY

spices (p. 16) substances that come from dried plants and are used in cooking to add flavor to food

hosts (p. 17) people who entertain guests

PREPARE TO READ

Tell students that in the next story, one character doesn't want the other character to help her with a project. Ask students to share times when they have felt this way. Then ask students to talk about things they like to do alone and things they like to do with other people.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- Why doesn't Gorilla want Chimp to cook? Find information in the story to support your answer. *CCSS Reading 3*
- Why does Gorilla send Chimp to the store three times? Use information in the story to help you answer. *CCSS Reading 3*
- Why didn't Gorilla serve perfect sliced bananas for dessert? Look for information in the story to help you answer this question. *CCSS Reading 1*

Craft and Structure

- **Analyze Text Structure** Who are the characters in this story? What happens at the beginning, middle, and end of the story? Write your answers in the Story Chart handout (p. 13). *CCSS Reading 5*
- **Analyze Word Choice** How do you know that Gorilla and Chimp are excited on page 14? Which words on the page help you know this? How does the picture show excitement? *CCSS Reading 4*

WRITING

Write a Recipe Write down Chimp's recipe for banana cream pudding. Use the words and picture on page 16 to help you. First, write a list of the ingredients. Next, write the steps for making the pudding. Be sure to number the steps. Include information about tools needed to make the pudding, such as a bowl and a spoon. Draw a picture of the pudding to go with your recipe.





ARTICLE: Kites Magazine pages 22 - 23, Lyrical Poem



The girl in this poem sees colorful flying kites in many different shapes.

ESSENTIAL QUESTION

What kinds of adventures do different characters experience?

CORE CONTENT

English Language Arts Poets use rhyme to make their poems fun to read.

CROSS-CURRICULAR EXTENSION

Art Design a kite that you would like to fly. It can have any shape you want. Draw the outline of your kite on a large sheet of paper. Cut it out and color it in. Add a ribbon tail. Display your kite in the classroom.

KEY VOCABULARY

mighty (p. 22) powerful

treasure troves (p. 22) sources or collections of valuable things

PREPARE TO READ

Show a photo or a short video of a kite flying festival (available online). Then invite students to share their kite-flying experiences. Ask what their kites look like and where they flew them. Then explain that the next poem tells about flying kites.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- What shapes does the girl see flying? Use information in the poem to help you answer this question. *CCSS Reading 1*
- What does the girl wish she could do? Support your answer with details from the poem. *CCSS Reading 3*
- What does the girl need to do so her kite can join the other kites? Find information in the poem to support your answer. *CCSS Reading 1*

Craft and Structure

- Analyze Word Choice The girl sees a large number of diamonds. What kind of diamonds is the girl talking about? Look for information in the picture to help you figure this out. *CCSS Reading 7*
- Identify Sound Devices This poem has three stanzas, or groups of lines. Which word pairs rhyme in the first stanza? Which pairs rhyme in the second and third stanzas? Add one more rhyming word to each pair. CCSS Reading 4

WRITING

Write a Concrete Poem Imagine that you are a kite. Write a poem about what it's like to fly in the air. Describe how the wind and sun feel. Tell about other things you see up in the air and on the ground. Next, draw the outline of a diamond-shaped kite. Make the kite as big as you can on your paper. Copy your poem into the kite. Add colors and decoration to the kite. Then share your poem with the class.





ARTICLE: There's a Dragon in My Tree House

Magazine pages 24 - 28, Fantasy



Jaina has a problem. It's a big problem. It's a rumbling, grumbling problem. There's a dragon in her tree house!

ESSENTIAL QUESTION

What kinds of adventures do different characters experience?

CORE CONTENT

English Language Arts In fantasy stories, the characters may be made-up creatures that act like humans.

CROSS-CURRICULAR EXTENSION

Language Arts Ask your librarian to help you find other stories that have dragons in them. Choose one story to read. Then write a paragraph that tells what the story is about and why you like it. Share your report with classmates.

KEY VOCABULARY

hoisted (p. 25) to raise something, especially by using ropes or machinery

despise (p. 26) to dislike something or someone very much

detest (p. 26) to dislike someone or something very strongly

shimmy (p. 27) to vibrate or move very quickly from side to side

PREPARE TO READ

Read aloud the title and walk through the illustrations with students. Discuss what is happening in each picture. Then ask students to predict what they think will happen in the story. After reading the story, help students check their predictions.

CLOSE READING AND TEXT ANALYSIS

Key Ideas

- What problem does Jaina have at the beginning of the story? Use details from the story to support your answer. *CCSS Reading 3*
- Find three of Jaina's ideas about dragons that turn out to be wrong. Use details from the story to support your answer. CCSS Reading 3
- How does the story end? Use details in the text and pictures to help you answer this question. CCSS Reading 3

Craft and Structure

- Interpret Fantasy Which character in this story is a made-up creature? How does this creature act like a human? What does it do that humans can't do? How do the pictures show this? *CCSS Reading 7*
- Analyze Word Choice Find four words in this story that help you imagine how things sound. Write these words. Then write what is making each sound. CCSS Reading 4

SPEAKING AND LISTENING

Discuss a Story Jaina has a new problem at the end of the story. If you were Jaina, how would you solve this problem? Get together with one or two other classmates and talk about what you would do.



COMPARING TEXTS

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)*.

- "Max and Kate" and "A Meal Fit for a King" tell about characters that help other characters. Draw pictures of the characters that are helpful in each story. Then write sentences that tell what these characters do to help others.
- Think about the story "Max and Kate" and the poem "Stumps." Both tell about outdoor activities and adventures. Compare the story and the poem by writing answers to these questions:
 - What do the characters do outside?
 - What do the characters learn?
 - How do the characters feel about their experiences?
- Compare "Stumps" and "Kites." In what ways do these poems look and sound similar? Write sentences that describe your ideas.
- Think about the characters in "A Meal Fit for a King" and "There's a Dragon in My Tree House." Which characters are realistic? Which are make-believe? Write your answers in the Character Chart (p. 14). Then compare your chart with a classmate's. Explain what made each character seem realistic or make-believe.
- Different characters in the magazine feel different ways. Which characters feel excited? Which feel scared? Which feel angry? Why do they feel this way? Write sentences to answer these questions.



EXPLORATORY LEARNING - FLEXIBLE MINI-UNIT DESIGN

This mini-unit offers students the opportunity for an in-depth look at the adventures experienced by different characters in the magazine. After looking closely at the magazine texts, students will write their own stories based on a prompt.

ENGAGE

READ FOR A PURPOSE

APPLY

ENGAGE: Engage students in the topic of story adventures by first reviewing the Essential Question: What kinds of adventures do different characters experience? Remind students that the characters in the magazine experienced many different adventures. Ask students to identify and describe these adventures. Record their ideas in a chart like the one below.

| Story/Poem | Adventure |
|-------------------------------------|-------------------------------------------------------------------------|
| "Max and Kate" | Max and Kate cross a wobbly bridge over a rushing river. |
| "Stumps" | Kids go on a school field trip where they learn about trees. |
| "A Meal Fit for a King" | Gorilla and Chimp make a delicious meal and dessert for Great King Ape. |
| "Kites" | |
| "There's a Dragon in My Tree House" | |

READ FOR A PURPOSE

INTRODUCE THE ACTIVITY: Adventure Story Remind students that the texts from the magazine tell about different kinds of adventures. Explain that students will now write their own stories about an adventure. Continue by explaining that their stories may be about a realistic or a make-believe adventure. Finally, tell students that they will draw pictures to go with their stories.

RETURN TO THE TEXT: Explain to students that before they can write their own adventure stories, they need to think about the kinds of realistic and make-believe details they might use. Work with students to identify some of the realistic and make-believe details in different magazine texts. Record ideas in a chart like the one below. (Sample text is shown in this chart.)

| Realistic Details | Make-Believe Details |
|------------------------------------------------------------|---------------------------------------------------------------|
| Kids go on a walk with their dads. A girl flies a kite. | A gorilla and a chimp make dinner for an ape. |
| | Animals can talk. A girl finds a dragon in her tree house. |

MINI-UNIT (cont.)

APPLY: ADVENTURE STORY Now that students have taken a closer look at realistic and make-believe details, they are ready to begin writing their own adventure stories. Students should work independently to draft their stories. If any students need help, invite them to meet with you for a brief writer's conference.

STEP 1: Build Background

Remind students that they will be writing a story about an adventure. Explain that you are going to give them a story starter to help them get started with their writing. Then write the following story starter on the board: "Yesterday, I found a lost dog at my front door." Briefly brainstorm some realistic and make-believe things that might happen next.

STEP 2: Plan

Distribute a copy of the Story Planner to each student. Explain that students can use the planner to help them plan and write a first draft. Have students think about the stories they want to tell. Then have them fill in the boxes in the planner with their ideas. Tell students they will be able to add details and make changes to their stories later.

STEP 3: Draft

Tell students to begin writing their first draft on the back of the Story Planner page. Remind them to use the information in their planners to help them write. Explain that students can add details to their stories by:

- including information about characters' feelings and thoughts.
- writing dialogue—the words characters say.

MATERIALS

- writing paper
- pencils
- colored pencils, markers, crayons
- Story Planner (p. 14)

STEP 4: Revise and Edit

Tell students to read their first drafts to see if they need to add more details or information. Then have them write their final drafts on a sheet of writing paper. Display the checklist below and have students use it to edit their final drafts.

- 1. My story has a title.
- 2. My story begins with the story prompt.
- 3. My handwriting is clear.
- 4. My sentences begin with a capital letter.
- 5. My sentences end with a punctuation mark.

STEP 5: Draw

Distribute drawing paper, markers, crayons, and colored pencils. Have students create drawings to go with their stories.

STEP 6: Publish

Have students read their stories to the class. Discuss realistic and make-believe details in the stories. Finally, compile the stories into a class book titled "Yesterday, I found a lost dog at my front door."

STORY CHART

| Story Characters | | | |
|------------------|--------|-----|--|
| | | | |
| Beginning | Middle | End | |
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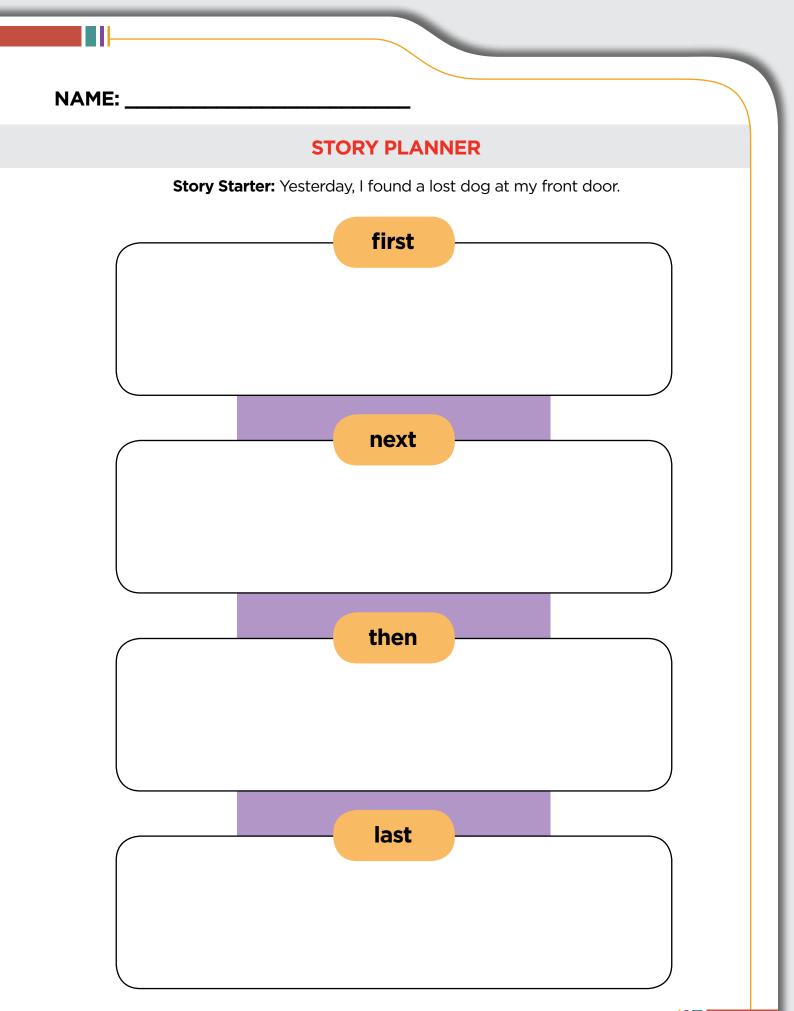


| NAME: | |
|-------|---|
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CHARACTERS CHART

| REALISTIC CHARACTERS | MAKE-BELIEVE CHARACTERS |
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Appendix 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

| I SKILLS AND CONCEPTS | CORRESPONDING STANDARD |
|-----------------------|---------------------------|
| | |

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 | Writing 1 | |
|------------------------------------------------------------------------------|------------|--|
| and sufficient evidence. | | |
| Write informative/explanatory texts to examine and convey complex | Writing 2 | |
| ideas and information clearly and accurately. | | |
| Write narratives to develop real or imagined experiences or events. | Writing 3 | |
| Draw evidence from literary or informational texts to support analysis, | Writing 9 | |
| reflection, and research. | | |
| 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. | |

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 ٠ solutions (for engineering)
- Engaging in argument from evidence ٠
- 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

Interactions

Energy

Light

Sound

Matter

Waves

Heat

•

Electricity/

Magnetism

Chemistry

Information

Processing

- Structure and Function of Living Things
- Life Cycles and Stages
- Reproduction & Inherited Traits
- Animals
- Plants

- PHYSICAL SCIENCE
 - Forces and
 - Weather

EARTH SCIENCE

- Climate
- Rocks & Soil
- Erosion and Weathering
- Landforms
- Water
- Oceans
- History of Earth
- **Plate Tectonics**
- Volcanoes. Earthquakes.
- and Tsunamis

- SPACE SYSTEMS
- Solar System
- Planets
- Moon Sun

