



SYRACUSE  
**Hebrew Day School**  
*Educating the whole child - mind, heart & soul.*

# Curriculum Guide

## Kindergarten–Grade 6

**Revised 2017**

# ENGLISH LANGUAGE ARTS

**K**

## Print Concepts

- Demonstrate understanding of the organization and basic features of print
- Follow words from left to right, top to bottom, and page by page
- Recognize that spoken words are represented in written language by specific sequences of letters
- Understand that words are separated by spaces in print
- Recognize and name all upper- and lowercase letters of the alphabet

## Phonics and Word Recognition

- Know and apply grade-level phonics and word analysis skills in decoding words.
- Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary sound or many of the most frequent sounds for each consonant.
- Associate the long and short sounds with the common spellings (graphemes) for the five major vowels.
- Read common high-frequency words by sight.
- Distinguish between similarly spelled words by identifying the sounds of the letters that differentiate.

## Phonological Awareness

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Recognize and produce rhyming words.
- Count, pronounce, blend, and segment syllables in spoken words.
- Blend and segment onsets and rimes of single-syllable spoken words.
- Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words.
- Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.

## Reading

### (Literary and Informational Text)

- Develop and answer questions about a text.
- Retell stories or share key details from a text.
- Identify characters, settings, major events in a story, or pieces of information in a text.
- Identify specific words that express feelings and senses.
- Identify literary and informational texts.
- Name the author and illustrator and define the role of each in presenting the ideas in a text.
- Describe the relationship between illustrations and the text.
- Identify specific information to support ideas in a text.
- Make connections between self, text, and the world.

## Writing Standards

- Use a combination of drawing, dictating, oral expression, and/or emergent writing to state an opinion about a familiar topic or personal experience and state a reason to support that topic.
- Use a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information.
- Use a combination of drawing, dictating, oral expression, and/or emergent writing to narrate an event or events in a sequence.
- Create a response to a text, author, or personal experience (e.g., dramatization, art work, or poem).
- Develop questions and participate in shared research and exploration to answer questions and to build and share knowledge.
- Recall and represent relevant information from experiences or gather information from provided sources to answer a question in a variety of ways (e.g., drawing, oral expression, and/or emergent writing).

## Speaking and Listening

- Participate in collaborative conversations with diverse peers and adults in small and large groups and during play
- Follow agreed-upon rules for discussions, including listening to others, taking turns, and staying on topic
- Participate in conversations through multiple exchanges
- Consider individual differences when communicating with other
- Participate in a conversation about features of diverse texts and format
- Develop and answer questions to clarify what the speaker says
- Describe familiar people, places, things, and events with detail
- Create and/or utilize existing visual displays to support descriptions
- Express thoughts, feelings, and ideas.

## Language

- Explore and use new vocabulary and multiple-meaning words and phrases in authentic experiences.
- Identify new meanings for familiar words and apply them accurately.
- Use the most frequently occurring inflections and affixes as a clue to the meaning of a word.
- Explore and discuss word relationships and word meanings.
- Sort common objects into categories (e.g., shapes, foods) for understanding of the concepts the categories represent.
- Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).
- Use words to identify and describe the world, making connections between words and their use (e.g., places at home that are colorful).
- Explore variations among verbs that describe the same general action (e.g., walk, march, gallop) by acting out the meanings.
- Use words and phrases acquired through conversations, reading and being read to, and responding.

# ENGLISH LANGUAGE ARTS

## 1

### Reading Standards for Informational Text

- Read informational texts appropriately complex for Grade 1.
- Listen to and demonstrate understanding of nonfiction/informational read-alouds of appropriate complexity for Grades 1-3.
- Read with a partner or alone and demonstrate understanding of decodable nonfiction/informational text.

### Reading Standards for Foundational Skills

#### Print Concepts

- Demonstrate understanding of the organization and basic features of print.
- Recognize the distinguishing features of a sentence.

#### Phonological Awareness

- Demonstrate understanding of spoken words, syllables, and sounds (phonemes).
- Distinguish long from short vowel sounds in spoken single-syllable words.
- Orally produce single-syllable words with various vowel and consonant sounds and consonant blends by blending the sounds.
- Isolate and pronounce initial, medial vowel and final sounds in spoken single-syllable words.
- Segment spoken single-syllable words into their complete sequence of individual sounds.
- Compare words with similar vowel sounds.

### Phonics and Word Recognition

- Know and apply grade-level phonics and word analysis skills in decoding words.
- Know the spelling-sound correspondence for common consonant digraphs.
- Decode regularly spelled words.
- Know final -e and common vowel team conventions for representing long vowel sounds.
- Use knowledge that every syllable must have a vowel sound to determine the number of syllable in a printed word.
- Decode two-syllable words following basic patterns by breaking the words into syllables.
- Read words with inflected endings.
- Recognize and read grade-appropriate irregularly spelled words.

### Fluency

- Read beginning reader texts, appropriate to individual student ability, with sufficient accuracy and fluency to support comprehension.

### Text Types and Purposes

- Write an opinion on a topic or personal experience; give two or more reasons to support that opinion.
- Write an informative/explanatory text to introduce a topic, supplying some facts to develop points, and provide some sense of closure.
- Write narratives which recount real or imagined experiences or events or a short sequence of events.
- Create a response to a text, author, theme or personal experience (e.g., poem, dramatization, art work, or other).

### Research to Build and Present Knowledge

- Develop questions and participate in shared research and explorations to answer questions and to build knowledge.
- Recall and represent relevant information from experiences or gather information from provided sources to answer a question in a variety of ways.

### Comprehension and Collaboration

- Participate in collaborative conversations with diverse peers and adults.
- Develop and answer questions about key details in diverse texts and formats.
- Develop and answer questions to clarify what the speaker says and identify a speaker's point of view.

### Presentation of Knowledge and Ideas

- Describe familiar people, places, things, and events with relevant details expressing ideas clearly.
- Create or utilize existing visual displays to support descriptions to clarify ideas, thoughts, and feelings.
- Express thoughts, feelings, and ideas clearly, using complete sentences when appropriate to task, situation, and audience.

### Vocabulary Acquisition and Use

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from an array of strategies.
- Demonstrate understanding of word relationships and nuances in word meanings.
- Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships.

# ENGLISH LANGUAGE ARTS

## 2

### Key Ideas and Details

- Develop and answer questions to demonstrate an understanding of key ideas and details in a text.
- Identify a main topic or central idea and retell key details in a text; summarize portions of a text.
- In literary texts, describe how characters respond to major events and challenges. In informational texts, describe the connections among ideas, concepts, or a series of events.

### Craft and Structure

- Explain how words and phrases in a text suggest feelings and appeal to the senses.
- Describe the overall structure of a text, including describing how the beginning introduces the text and the ending concludes the text.
- Identify examples of how illustrations, text features, and details support the point of view or purpose of the text.
- Demonstrate understanding of story elements and/or topics by applying information gained from illustrations or text features.
- Explain how specific points the author or illustrator makes in a text are supported by relevant reasons.
- Make connections between self and text (texts and other people/ world).

### Phonics and Word Recognition

- Know and apply phonics and word analysis skills in decoding words.

### Fluency

- Read grade-level text with sufficient accuracy and fluency to support comprehension.

### Text Types and Purposes

- Write an opinion about a topic or personal experience, using clear reasons and relevant evidence.
- Write informative/explanatory texts that introduce a topic, use facts and other information to develop points, use content-specific language, and provide a concluding statement or section.
- Write narratives which recount real or imagined experiences or a short sequence of events, including details to describe actions, thoughts, and feelings; use temporal words to signal event order, and provide a sense of closure.
- Create a response to a text, author, theme or personal experience (e.g., poem, play, story, art work, or other).

### Research to Build and Present Knowledge

- Develop questions and participate in shared research and explorations to answer questions and to build knowledge.
- Recall and represent relevant information from experiences or gather information from provided sources to answer a question.

### Comprehension and Collaboration

- Participate in collaborative conversations with diverse peers and adults in small and large groups and during play.
- Recount or describe key ideas or details of diverse texts and formats.
- Develop and answer questions about what a speaker says; agree or disagree with the speaker's point of view, providing a reason(s).

### Presentation of Knowledge and Ideas

- Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
- Include digital media and/or visual displays in presentations to clarify or support ideas, thoughts, and feelings.
- Express thoughts, feelings, and ideas clearly, adapting language according to context.

### Knowledge of Language

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.

### Vocabulary Acquisition and Use

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from an array of strategies.
- Demonstrate understanding of word relationships and nuances in word meanings.
- Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe.

# ENGLISH LANGUAGE ARTS

## 3

### Literary and Informational Text

#### Key Ideas and Details

- Develop and answer questions to locate relevant and specific details in a text to support an answer or inference.
- Determine a theme or central idea and explain how it is supported by key details; summarize portions of a text.
- In literary texts, describe character traits, motivations, or feelings, drawing on specific details from the text.

#### Craft and Structure

- Determine the meaning of words, phrases, figurative language, and academic and content-specific words.
- In literary texts, identify parts of stories, dramas, and poems using terms such as chapter, scene, and stanza.
- In informational texts, identify and use text features to build comprehension.
- Discuss how the reader's point of view or perspective may differ from that of the author, narrator or characters in a text.

#### Integration of Knowledge and Ideas

- Explain how specific illustrations or text features contribute to what is conveyed by the words in a text.
- Explain how claims in a text are supported by relevant reasons and evidence.
- Recognize genres and make connections to other texts, ideas, cultural perspectives, eras, personal events, and situations.

### Foundational Skills

#### Phonics and Word Recognition

- Know and apply grade-level phonics and word analysis skills in decoding words.

#### Fluency

- Read grade-level text with sufficient accuracy and fluency to support comprehension.

#### Text Types and Purposes

- Write an argument to support claim(s), using clear reasons and relevant evidence.
- Write informative/explanatory texts to explore a topic and convey ideas and information relevant to the subject.
- Write narratives to develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences.
- Create a response to a text, author, theme or personal experience (e.g., poem, play, story, art work, or other).

#### Research to Build and Present Knowledge

- Conduct research to answer questions, including self-generated questions, and to build knowledge.
- Recall relevant information from experiences or gather information from multiple sources; take brief notes on sources and sort evidence into provided categories.

#### Comprehension and Collaboration

- Participate and engage effectively in a range of collaborative discussions with diverse peers and adults, expressing ideas clearly, and building on those of others.
- Determine the central ideas and supporting details or information presented in diverse texts and formats (e.g., including visual, quantitative, and oral).
- Ask and answer questions in order to evaluate a speaker's point of view, offering appropriate elaboration and detail.

#### Presentation of Knowledge and Ideas

- Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
- Include digital media and/or visual displays in presentations to emphasize certain facts or details.
- Identify contexts that call for academic English or informal discourse.

#### Knowledge of Language

- Recognize differences between the conventions of spoken conversational English and academic English; signal this awareness by selecting conversational or academic forms when speaking or writing.

#### Vocabulary Acquisition and Use

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based, choosing flexibly from a range of strategies.
- Demonstrate understanding of word relationships and nuances in word meanings.
- Acquire and accurately use conversational, general academic, and content-specific words and phrases, including those that signal spatial and temporal relationships.

# ENGLISH LANGUAGE ARTS

## 4

### Literary and Informational Text

- Locate and refer to relevant details and evidence when explaining what a text says explicitly/implicitly and make logical inferences.
- Determine a theme or central idea of text and explain how it is supported by key details; summarize a text.
- In literary texts, describe a character, setting, or event, drawing on specific details in the text.

### Craft and Structure

- Determine the meaning of words, phrases, figurative language, academic, and content-specific words.
- In literary texts, identify and analyze structural elements, using terms such as verse, rhythm, meter, characters, settings, dialogue, stage directions.
- In informational texts, identify the overall structure using terms such as sequence, comparison, cause/effect, and problem/solution.
- In literary texts, compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.
- In informational texts, compare and contrast a primary and secondary source on the same event or topic.

### Integration of Knowledge and Ideas

- Identify information presented visually, orally, or quantitatively.
- Explain how claims in a text are supported by relevant reasons and evidence.
- Recognize genres and make connections to other texts, ideas, cultural perspectives, eras, personal events, and situations.

### Phonics and Word Recognition

- Know and apply grade-level phonics and word analysis skills in decoding words.
- Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
- Use combined knowledge of all letter-sound correspondences, syllabification patterns, and morphology (e.g. roots, prefixes, and suffixes) to read accurately unfamiliar multisyllabic words in and out of context.

### Fluency

- Read grade-level text with sufficient accuracy and fluency to support comprehension.

### Text Types and Purposes

- Write an argument to support claim(s), using clear reasons and relevant evidence.
- Write informative/explanatory texts to explore a topic and convey ideas and information relevant to the subject.
- Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- Create a poem, story, play, art work, or other response to a text, author, theme, or personal experience.
- Draw evidence from literary or informational texts to respond and support analysis, reflection, and research by applying grade 4 reading standards.

### Research to Build and Present Knowledge

- Conduct research to answer questions, including self-generated questions, and to build knowledge through investigating multiple aspects of a topic.
- Recall relevant information from experiences or gather relevant information from multiple sources; take notes and categorize information, and provide a list of sources.

### Comprehension and Collaboration

- Engage effectively in a range of collaborative discussions with diverse partners, expressing ideas clearly, and building on those of others.
- Paraphrase portions of information presented in diverse formats (e.g., including visual, quantitative, and oral).
- Identify and evaluate the reasons and evidence a speaker provides to support particular points.

### Presentation of Knowledge and Ideas

- Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace and volume appropriate for audience.
- Include digital media and/or visual displays in presentations to emphasize central ideas or themes.
- Distinguish between contexts that call for formal English versus/or informal discourse; use formal English when appropriate to task and situation.

### Knowledge of Language

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.

### Vocabulary Acquisition and Use

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Acquire and accurately use general academic and content-specific words and phrases, including those that signal precise actions, emotions, or states of being.

# ENGLISH LANGUAGE ARTS

## 5

### Literary and Informational Text

- Locate and refer to relevant details and evidence when explaining what a text says explicitly/implicitly and make logical inferences.
- Determine a theme or central idea and explain how it is supported by key details; summarize a text.
- In literary texts, compare and contrast two or more characters, settings, and events, drawing on specific details in the text.
- In informational texts, explain the relationships or interactions between two or more individuals, events, ideas, or concepts based on specific evidence from the text.

### Craft and Structure

- Determine the meaning of words, phrases, figurative language, academic, and content-specific words and analyze their effect on meaning, tone, or mood.
- In literary texts, explain how a series of chapters, scenes, or stanzas fits together to determine the overall structure of a story, drama, or poem.
- In informational texts, compare and contrast the overall structure in two or more texts using terms such as sequence, comparison, cause/effect, and problem/solution.
- In literary texts, explain how a narrator's or speaker's point of view influences how events are described.
- In informational texts, analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

### Integration of Knowledge and Ideas

- Analyze how visual and multimedia elements contribute to meaning of literary and informational texts.
- Explain how claims in a text are supported by relevant reasons and evidence, identifying which reasons and evidence support which claims.
- Use established criteria to categorize texts and make informed judgments about quality; make connections to other texts, ideas, cultural perspectives, eras and personal experiences.

### Phonics and Word Recognition

- Know and apply grade-level phonics and word analysis skills in decoding words.

### Fluency

- Read grade-level text with sufficient accuracy and fluency to support comprehension.

### Text Types and Purposes

- Write an argument to support claims with clear reasons and relevant evidence.
- Write informative/explanatory texts to explore a topic and convey ideas and information relevant to the subject.
- Write narratives to develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences.
- Create a poem, story, play, art work, or other response to a text, author, theme, or personal experience.
- Draw evidence from literary or informational texts to respond and support analysis, reflection, and research by applying the Grade 5 Reading Standards.

### Research to Build and Present Knowledge

- Conduct research to answer questions, including self-generated questions, and to build knowledge through investigation of multiple aspects of a topic using multiple sources.
- Recall relevant information from experiences or gather relevant information from multiple sources; summarize or paraphrase; avoid plagiarism and provide a list of sources.

### Comprehension and Collaboration

- Engage effectively in a range of collaborative discussions with diverse partners; express ideas clearly and persuasively, and build on those of others.
- Come to discussions prepared, having read or studied required material; draw on that preparation and other information known about the topic to explore ideas under discussion.
- Follow agreed-upon norms for discussions and carry out assigned roles.
- Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.

### Comprehension and Collaboration (continued)

- Consider the ideas expressed and draw conclusion about information and knowledge gained from the discussions.
- Summarize information presented in diverse format (e.g., including visual, quantitative, and oral).
- Identify and evaluate the reasons and evidence a speaker provides to support particular points.

### Presentation of Knowledge and Ideas

- Report on a topic or text, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support central ideas or themes; speak clearly at an understandable pace and volume appropriate for audience.
- Include digital media and/or visual displays in presentations to emphasize and enhance central ideas or themes.
- Adapt speech to a variety of contexts and tasks, using formal English when appropriate.

### Knowledge of Language

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.

### Vocabulary Acquisition and Use

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Acquire and accurately use general academic and content-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

# ENGLISH LANGUAGE ARTS

## 6

### Literary and Informational Texts

- Cite textual evidence to support an analysis of what the text says explicitly/implicitly and make logical inferences.
- Determine a theme or central idea of a text and how it is developed by key supporting details over the course of a text; summarize a text.
- In literary texts, describe how events unfold, as well as how characters respond or change as the plot moves toward a resolution.

### Craft and Structure

- Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings. Analyze the impact of specific word choices on meaning, tone, and mood, including words with multiple meanings.
- In literary texts, analyze how a particular sentence, paragraph, stanza, chapter, scene, or section fits into the overall structure of a text and how it contributes to the development of theme/central idea, setting, or plot.
- In informational texts, analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and how it contributes to the development of theme/ central ideas.
- Identify the point of view and explain how it is developed and conveys meaning.
- Explain how an author's geographic location or culture affects his or her perspective.

### Integration of Knowledge and Ideas

- Compare and contrast how different formats, including print and digital media, contribute to the understanding of a subject.
- Trace and evaluate the development of an argument and specific claims in texts, distinguishing claims that are supported by reasons and relevant evidence from claims that are not.
- Use established criteria in order to evaluate the quality of texts. Make connections to other texts, ideas, cultural perspectives, eras, and personal experiences.

### Text Types and Purposes

- Write arguments to support claims with clear reasons and relevant evidence.
- Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- Write narratives to develop real or imagined experiences or events using effective techniques, descriptive details and sequencing.
- Create a poem, story, play, art work, or other response to a text, author, theme, or personal experience.
- Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply grade 6 Reading standards to both literary and informational text, where applicable.

### Research to Build and Present Knowledge

- Conduct research to answer questions, including self-generated questions, drawing on multiple sources and refocusing the inquiry when appropriate.
- Gather relevant information from multiple sources; assess the credibility of each source; quote or paraphrase the data and conclusions of others; avoid plagiarism and provide basic bibliographic information for sources.

### Comprehension and Collaboration

- Engage effectively in a range of collaborative discussions with diverse partners; express ideas clearly and persuasively, and build on those of others.
- Interpret information presented in diverse formats (e.g., including visual, quantitative, and oral) and explain how it relates to a topic, text, or issue under study.
- Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.

### Presentation of Knowledge and Ideas

- Present claims and findings, sequencing ideas logically and using relevant descriptions, facts, and details to accentuate central ideas or themes; use appropriate eye contact, adequate volume, and clear enunciation.
- Include digital media and/or visual displays in presentations to clarify information and emphasize and enhance central ideas or themes.
- Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

### Knowledge of Language

- Use knowledge of language and its conventions when writing, speaking, reading, or listening.

### Vocabulary Acquisition and Use

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases, choosing flexibly from a range of strategies.
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- Acquire and accurately use general academic and content-specific words and phrases; apply vocabulary knowledge when considering a word or phrase important to comprehension or expression.

# MATHEMATICS

## K

### Numbers to 10

- Count Numbers 1 - 10
- Read and Write Numbers 1 - 10
- Read and Write Zero
- One More
- One More with Numbers to 10
- Ordinal Numbers to Fifth
- Ordinal Numbers to the Tenth
- Alike and Different
- Sort by Size
- Sort by Shape
- Sort by Count

### Two-Dimensional and Three-Dimensional Shapes

- Above and Below
- In Front of and Behind
- Next to and Beside
- Two-Dimensional Shapes

### Comparison of Length, Weight, Capacity and Numbers to 10

- Equal to
- Greater Than
- Less Than
- Compare Numbers 0 to 5 and 0 to 10
- Compare Length, Height and Weight
- Describe Length, Height and Weight
- Compare Capacity

### Number Pairs, Addition and Subtraction to 10

- Make 4, 5, 6, 7, 8, 9 and 10
- Take Apart 4, 5, 6, 7, 8, 9 and 10
- Addition and Subtraction Stories
- Use Objects to Add and Subtract
- Use the Symbols +, - and =
- How Many in All?
- Add to Make 10
- How Many Are Left?
- Subtract to Take Apart

### Numbers 10-20 and Counting to 100

- Numbers 11 – 20
- Count to 50 by Ones
- Count to 100 by Ones
- Count to 100 by Tens
- Make Numbers 11 to 15, 16 to 19
- Take Apart Numbers 11 to 15, 16 to 19

### Analyzing, Comparing, and Composing Shapes

- Shapes and Patterns
- Shapes and Position
- Compose New Shapes
- Model Two-Dimensional Shapes in the World
- Spheres and Cubes
- Cylinders and Cones
- Compare Solid Shapes
- Model Three-Dimensional Shapes in Our World

## 1

### Sums and Differences to 10

- Addition and Subtraction Stories
- Model Addition and Subtraction
- Addition and Subtraction Number Sentences
- Add 0
- Subtract 0 and All
- Vertical Addition and Subtraction
- Compare Groups
- Ways to Make 4, 5, 6, 7, 8, 9 and 10
- Subtract from 4, 5, 6, 7, 8, 9 and 10
- Find Missing Parts of 10
- True and False Statements
- Relate Addition and Subtraction
- Nonstandard Units of Length

### Introduction to Place Value Through Addition and Subtraction Within 20

- Count On and Back 1, 2 or 3
- Use a Number Line to Add and Subtract
- Use Doubles to Add and Subtract
- Use Near Doubles to Add
- Make 10 to Add and Subtract
- Add in Any Order
- Add Three Numbers
- True and False Statements
- Use Related Facts to Add and Subtract

### Introduction to Place Value Through Addition and Subtraction Within 20

- Fact Families
- Missing Addends
- Numbers 11 to 19
- Tens
- Tens and Ones
- Numbers to 100
- Use Models to Compare Numbers

### Ordering and Comparing Length Measurements as Numbers

- Compare and Order Lengths
- Tally Charts
- Make and Read Picture Graphs
- Make and Read Bar Graphs

### Place Value, Comparison, Addition and Subtraction to 40

- Numbers to 100
- Count to 120
- Read and Write Numbers to 120
- Ten More, Ten Less
- Add Tens
- Count On Tens and Ones
- Add Tens and Ones
- Use Symbols to Compare Numbers

### Identifying, Composing, and Partitioning Shapes

- Time to the Hour: Analog and Digital
- Time to the Half Hour: Analog and Digital
- Time to the Hour and Half Hour
- Two-Dimensional Shapes
- Compare Shapes
- Equal Parts, Halves, Quarters and Fourths
- Three-Dimensional Shapes
- Combine Three-Dimensional Shapes

### Place Value, Comparison, Addition and Subtraction to 100

- Count on Using Pennies
- Count by Fives Using Nickels
- Count by Tens Using Dimes
- Tens and Some More
- Add Tens and Ones with Regrouping
- Subtract Tens
- Count Back by 10s
- Relate Addition and Subtraction of Tens

# MATHEMATICS

## 2

### Sums and Differences to 20

- Addition Properties
- Count on to Add
- Doubles and Near Doubles
- Make a 10
- Add three Numbers
- Count Back to Subtract
- Subtract all and Subtract Zero
- Use Doubles to Subtract
- Relate Addition and Subtraction
- Missing Addends
- Fact Families
- Two-step Word Problems

### Customary and Metric Lengths

- Inches
- Feet and Yards
- Select and Use Customary Tools
- Relate Inches, Feet, and Yards
- Centimeters and Meters
- Select and Use Metric Tools
- Relate Centimeters and Meters

### Place Value, Counting, and Comparing of Numbers to 1,000

- Hundreds, Tens, and Ones
- Place Value to 1,000
- Read and Write Numbers to 1,000
- Skip Count on a Hundred Chart
- Skip Count by 2s, 5s, 10s, and 100s
- Compare Numbers to 1,000

### Addition and Subtraction Within 200 with Word Problems to 100

- Take Apart Tens to Add
- Regroup Ones as Tens
- Add to a Two-Digit Number
- Rewrite Two Digit Addition
- Two-Digit Fact Families
- Take Apart Tens to Subtract
- Regroup a Ten as Ones
- Subtract from a Two-Digit Number
- Rewrite Two Digit Subtraction

### Addition and Subtraction Within 1,000 with Word Problems to 100

- Add Three or Four Two-Digit Numbers
- Make a Hundred to Add
- Add Hundreds
- Mentally add 10 or 100
- Regroup Ones to Add
- Regroup Tens to Add
- Add Three-Digit Numbers
- Rewrite Three-Digit Addition
- Take Apart Hundreds to Subtract
- Subtract Hundreds
- Mentally Subtract 10 or 100
- Regroup Tens
- Regroup Hundreds
- Subtract Three-Digit Numbers
- Rewrite Three-Digit Subtraction
- Subtract Across Zeros

### Foundations of Multiplication and Division

- Repeated Addition
- Repeated Addition with Arrays
- Even and Odd Numbers
- Sums of Equal Numbers
- Area

### Problem Solving with Length, Money and Data

- Compare Customary Lengths
- Compare Metric Lengths
- Measure on a Number Line
- Measurement Data
- Pennies, Nickels, and Dimes
- Quarters
- Count Coins
- Dollars
- Take a Survey
- Make and Analyze Picture Graphs
- Make and Analyze Bar Graphs
- Make and Analyze Line Plots

### Time, Shapes, and Fractions as Equal Parts of Shapes

- Two Dimensional Shapes
- Sides and Angles
- Three Dimensional Shapes
- Faces, Edges, and Vertices
- Relate Shapes and Solids
- Halves, Thirds, and Fourths
- Time to the Hour, Half Hour, Quarter Hour
- Time to Five Minute Intervals
- A.M. and P.M.

## 3

### Properties of Multiplication and Division and Problem Solving with Units of 2, 3, 4, 5, and 10

- Model multiplication
- Multiplication as repeated addition
- Arrays and multiplication
- Use multiplication to find combinations
- Model division
- Division as equal sharing
- Relate division and subtraction
- Relate division and multiplication
- Inverse operations
- Patterns in the multiplication table
- Multiply by 0 – 5 and 10
- Divide by 0 – 5 and 10

### Place Value and Problem Solving with Units of Measure

- Place value through thousands
- Compare and Order numbers
- Round to the nearest ten and hundred
- Addition properties
- Patterns in the addition table
- Add mentally
- Estimate sums
- Use models to add
- Add three-digit numbers
- Subtract mentally
- Estimate differences

### Place Value and Problem Solving with Units of Measure (continued)

- Subtract with regrouping
- Subtract three and four-digit numbers
- Subtract across zeros
- Estimate and measure capacity
- Solve capacity problems
- Estimate and measure mass
- Solve mass problems
- Tell time to the minute
- Time intervals

### Multiplication and Division with Units of 0, 1, and 6 – 9

- Multiply and Divide by 6 – 12
- Take apart to multiply
- The Distributive Property
- Multiply three factors
- The Associative Property
- Write and Evaluate expressions
- Write equations
- Solve two-step word problems

### Multiplication and Area

- Understand and Measure area
- Tile rectangles to find area
- Area of rectangles
- Area and the Distributive Property
- Area of composite figures

### Fractions as Numbers on the Number Line

- Unit fractions
- Part of a whole
- Part of a set
- Fractions on a number line
- Equivalent fractions
- Fractions as one whole
- Compare fractions

### Collecting and Displaying Data

- Collect and record data
- Draw scaled picture graphs
- Draw scaled bar graphs
- Relate bar graphs to picture graphs
- Draw and analyze line plots

### Geometry and Measurement Word Problems

- Find perimeter
- Angles
- Polygons
- Triangles
- Quadrilaterals
- Partition shapes
- Measure halves and fourths of an inch

# MATHEMATICS

## 4

### Place Value, Rounding, and Algorithms for Addition and Subtraction

- Place value
- Read and write multi-digit numbers
- Compare numbers
- Order numbers
- Use place value to round
- Addition properties and subtraction rules
- Addition and subtraction patterns
- Add and subtract mentally
- Estimate sums and differences
- Add whole numbers
- Subtract whole numbers
- Subtract across zeros
- Solve multi-step word problems

### Unit Conversions

- Metric units of length, capacity and mass
- Convert metric units
- Convert units of time

### Multi-Digit Multiplication and Division

- Non-numeric patterns
- Numeric patterns
- Sequences
- Addition and Subtraction Rules
- Multiplication and Division Rules
- Order of operations
- Equations with two operations
- Equations with multiple operations

### Multi-Digit Multiplication and Division (continued)

- Measure perimeter
- Model area
- Measure area
- Relate area and perimeter

### Angle Measures and Plane Figures

- Angle measure and plane figures
- Draw points, lines, and rays
- Draw parallel and perpendicular lines
- Model and Classify angles
- Measure and Draw angles
- Triangles
- Quadrilaterals
- Lines of symmetry

### Fraction Equivalence, Ordering, and Operations

- Factors and multiples
- Prime and composite numbers
- Model equivalent fractions
- Simplest form
- Compare and order fractions
- Mixed numbers
- Improper fractions
- Add and Subtract like fractions
- Add mixed numbers
- Subtract mixed numbers
- Multiply fractions by whole numbers
- Display measurement data in a line plot

### Decimal Fractions

- Place value through tenths and hundredths
- Model decimals and fractions
- Use place value and models to add
- Compare and order decimals
- Solve measurement problems

### Exploring Multiplication

- Multiples of 10, 100, and 1,000
- Round to estimate products
- Use place value to multiply
- Use models to multiply
- Multiply by a two digit number
- The distributive property
- Multiply with regrouping
- Multiply by a multi-digit number
- Multiply across zeros
- Multiply by tens
- Estimate products
- Divide multiples of 10, 100, and 1,000
- Estimate quotients
- Use place value to divide
- Divide with remainders
- Interpret remainders
- Distributive property and partial quotients
- Divide greater numbers
- Quotients with zeros
- Convert customary units of length
- Convert customary units of weight

## 5

### Place Value and Decimal Fractions

- Place value through millions
- Comparing and ordering whole numbers through millions
- Representing decimals
- Understanding place value through the thousandths
- Comparing and Rounding decimals
- Ordering whole numbers and decimals
- Prime factorization
- Powers & exponents
- Multiplication patterns
- Multiply decimals by powers of 10
- Divide decimals by powers of 10
- Metric rulers
- Convert metric units of length, mass and capacity

### Multi-Digit Whole Number and Decimal Fraction Operations

- Order of operations
- Numerical Expressions
- Partial products
- Distributive property
- Estimate Products
- Multiply by one-digit numbers
- Multiply by two-digit numbers
- Relate division to multiplication
- Two-digit dividends
- Division patterns
- Estimate quotients
- Distributive property and partial quotients
- Divide three and four-digit dividends
- Placing the first digit

### Multi-Digit Whole Number and Decimal Fraction Operations (continued)

- Quotients with zeros
- Interpreting the remainder
- Estimate quotients
- Divide by a two digit divisor
- Adjusting quotients
- Dividing greater numbers
- Estimate sums and differences
- Add and Subtract decimals
- Addition properties
- Estimate products
- Multiply decimals by whole numbers
- Multiply decimals
- Multiplication properties
- Estimate quotients of decimals
- Divide decimals by whole numbers
- Divide decimals
- Fractions as division
- Greatest common factor
- Simplest form
- Least common multiple
- Comparing fractions
- Writing fractions as decimals

### Addition and Subtraction of Fractions

- Round fractions
- Add and Subtract like fractions
- Add and Subtract unlike fractions
- Estimate sums and differences
- Add mixed numbers
- Subtract mixed numbers
- Subtract with remaining

### Multiplication and Division of Fractions and Decimal Fractions

- Estimating products of whole numbers and decimals
- Estimate products of fractions
- Multiply whole numbers and fractions
- Multiply fractions
- Multiply mixed numbers
- Divide whole numbers by fractions
- Divide fractions by whole numbers
- Measuring with a ruler
- Convert customary units of length
- Estimate and measure weight
- Convert customary units of weight
- Estimate and measure capacity
- Convert customary units of capacity
- Display measurement data on a line plot

### Addition and Multiplication with Volume and Area

- Polygons
- Sides and angles of triangles
- Classify triangles
- Classify quadrilaterals
- Three-dimensional figures
- Volume of prisms
- Volume of composite figures

### Problem Solving with the Coordinate Plane

- Patterns
- Map Locations
- Ordered Pairs
- Graph Patterns

# MATHEMATICS

## 6

### Ratios and Unit Rates

- Factors and Multiples
- Ratios
- Ratio Tables
- Graph Ratio Tables
- Equivalent Ratios
- Ratios and Rate
- Decimals and Fractions
- Percent and Decimals
- Percent Greater than 100%
- Percent Less than 1%
- Compare and Order Fractions
- Estimate with Percent
- Solve Percent Problems

### Arithmetic Operations Including Dividing by a Fraction

- Add and Subtract Decimals
- Estimate Products
- Multiply Decimals by Whole Numbers
- Multiply Decimals by Decimals
- Divide Multi-digit Numbers
- Divide Decimals by Decimals
- Estimate Products of Fractions
- Multiply Fractions and Whole Numbers
- Multiply Fractions
- Multiply Mixed Numbers

### Arithmetic Operations Including Dividing by a Fraction (continued)

- Convert Measurement Units
- Divide Whole Numbers by Fractions
- Divide Fractions
- Divide Mixed Numbers

### Rational Numbers

- Integers and Graphing
- Absolute Value
- Compare and Order Integers
- Terminating and Repeating decimals
- Compare and Order Rational Numbers
- The Coordinate Plane, Graph on the Coordinate Plane

### Expressions and Equations

- Powers and Exponents
- Numerical Expressions
- Variables and Expressions
- Write Expressions
- Properties
- Equivalent Expressions
- Solve and Write Addition Equations
- Function Tables
- Function Rules

### Expressions and Equations (continued)

- Functions and Equations
- Multiple Representations of Functions
- Inequalities
- Write and Graph Inequalities
- Solve One-Step Inequalities

### Area, Surface Area, and Volume Problems

- Area of Parallelograms
- Area of Triangles
- Area of Trapezoids
- Polygons on the Coordinate Plane
- Area of Composite Figures
- Volume of Rectangular Prisms
- Volume of Triangular Prisms
- Surface Area of Rectangular Prisms
- Surface Area of Triangular Prisms
- Surface Area of Pyramids

### Statistics

- Mean
- Median
- Mode
- Line Plots, Histograms, Box Plots

# SOCIAL STUDIES

## SELF AND OTHERS

# K

### Individual Development and Cultural Identity

- Children's sense of self is developed through physical and cultural characteristics and through the development of personal likes, dislikes, talents and skills.
- Children, families, and communities exhibit cultural similarities and differences.
- Symbols and traditions help develop a shared culture and identity within the United States.

### Civic Ideals and Practices

- Children and adults have rights and responsibilities at home, at school, in the classroom, and in the community.
- Rules affect children and adults, and people make and change rules for many reasons.

### Geography, Humans, and the Environment

- Maps and globes are representations of Earth's surface that are used to locate and better understand places and regions.
- People and communities are affected by and adapt to their physical environment.

### Time, Continuity, and Change

- The past, present, and future describe points in time and help us examine and understand events.

### Economic Systems

- People have economic needs and wants. Goods and services can satisfy people's wants. Scarcity is the condition of not being able to have all of the goods and services that a person wants or needs.

# 1

## MY FAMILY AND OTHER FAMILIES, NOW AND LONG AGO

### Individual Development and Cultural Identity

- Language, beliefs, customs, and traditions help shape the identity and culture of a family and a community.
- There are significant individuals, historical events, and symbols that are important to American cultural identity.

### Civic Ideals and Practices

- A citizen is a member of a community or group. Students are citizens of their local and global communities.
- People create governments in order to create peace and establish order. Laws are created to protect the rights and define the responsibilities of individuals and groups.

### Geography, Humans, and the Environment

- The location and place of physical features and man-made structures can be described and interpreted by using symbols and geographic vocabulary.
- People and communities depend on and modify their physical environment in order to meet basic needs.

### Time, Continuity, and Change

- Families have a past and change over time. There are different types of documents that relate family histories.
- Historical source reveal information about how life in the past differs from the present.

### Economic Systems

- People have many economic wants and needs, but limited resource with which to obtain them.
- People make economic choices as producers and consumers of goods and services.

# 2

## MY COMMUNITY AND OTHER UNITED STATES COMMUNITIES

### Individual Development and Cultural Identity

- A community is a population of various individuals in a common location. It can be characterized as urban, suburban, or rural. Population density and use of the land are some characteristics that define and distinguish types of communities.
- People share similarities and differences with others in their own community and with other communities.

### Civic Ideals and Practices

- The United States is founded on the principles of democracy, and these principles are reflected in all types of communities.
- Communities have rules and laws that affect how they function. Citizens contribute to a community's government through leadership and service.

### Geography, Humans, and the Environment

- Geography and natural resources shape where and how urban, suburban, and rural communities develop and how they sustain themselves.

### Time, Continuity, and Change

- Identifying continuities and changes over time can help understand historical developments.
- Cause-and-effect relationships help us recount events and understand historical development.

### Economic Systems

- Communities face different challenges in meeting their needs and wants.
- A community requires the interdependence of many people performing a variety of jobs and services to provide basic needs and wants.

# SOCIAL STUDIES

## 3

### COMMUNITIES AROUND THE WORLD

#### Geography, Humans, and the Environment

- Geographic regions have unifying characteristics and can be studied using a variety of tools.
- The location of world communities can be described using geographic tools and vocabulary.
- Geographic factors often influence where people settle and form communities. People adapt to and modify their environment in different ways to meet their needs.

#### Time, Continuity, and Change

- Each community or culture has a unique history, including heroic figures, traditions, and holidays.

#### Development, Movement, and Interaction of Cultures

- Communities share cultural similarities and differences across the world.
- Communities from around the world interact with other people and communities and exchange cultural ideas and practices.

#### Civic Ideals and Practices

- Governments in communities and countries around the world have the authority to make and the power to enforce laws. The role of the citizen within these communities or countries varies across different types of governments.
- The concept of universal human rights suggests that all people should be treated fairly and should have the opportunity to meet their basic needs.

#### Creation, Expansion, and Interaction of Economic Systems

- Communities meet their needs and wants in a variety of ways, forming the basis for their economy.
- Each community develops an economic system that addresses three questions: what will be produced, how it will be produced, and who will get what is produced.

## 4-6 Social Studies Practices and Themes

### Practices

- Gathering, Interpreting and Using Evidence
- Chronological Reasoning
- Comparison and Contextualization
- Geographic Reasoning
- Economics and Economic Systems
- Civic Participation

### Themes

- Individual Development and Cultural Identity (ID)
- Development, Movement, and Interaction of Cultures (MOV)
- Time, Continuity, and Change (TCC)
- Geography, Humans, and the Environment (GEO)
- Development and Transformation of Social Structures (SOC)
- Power, Authority, and Governance (GOV)
- Civic Ideals and Practices (CIV)
- Creation, Expansion, and Interaction of Economic Systems (ECO)
- Science, Technology, and Innovation (TECH)
- Global Connections and Exchange (EXCH)

## 4

### LOCAL HISTORY AND LOCAL GOVERNMENT

#### Geography of New York State

- Physical features: Location of New York State, mountains, bodies of water, plateaus
- Political features: borders, major cities, boroughs
- climate, vegetation, topography  
(Theme: GEO)

#### Native American Groups and the Environment

- Algonquians, Iroquois (Haudenosaunee), location, climate, environment, animals, natural resources in the development of Native American cultures, organization and governance, Iroquois Confederacy of Nations, customs, beliefs, traditions, values, roles of men, women and children, technology, transportation, contributions evident today  
(Themes: ID, MOV, GEO, GOV)

#### Colonial and Revolutionary Period in New York

- European exploration: gold, route to China, spices, furs, conversion to Christianity
- waterways, trading posts and missions
- Major explorers and important people

- interaction and influences
- New Amsterdam, Dutch West India Co., British rule and Dutch rule, the slave trade, Dutch contributions, Colonial Life
- The French and Indian War, The American Revolution in New York State  
(Themes: MOV, TCC, GEO, SOC, GOV)

#### Transportation and Westward Movement

- transportation and communication: Westward movement, geography, The Erie Canal, growth and settlement, steamboat, telegraph
- economic power, natural resources, agricultural products, banking and finance, Industrial development, Labor and unions
- Entrepreneurs and Inventors  
(Themes: MOV, TCC, GEO, ECO, TECH)

#### In Search of Freedom and a Call for Change

- Slaves: slave life, fight against slavery, people for change, Emancipation Laws
- Expanding Women's Rights: denied rights people in action to bring about change, Seneca Falls and the suffrage movement
- The Civil War: supported the Union providing soldiers, equipment, food contributions to War effort, The Draft Riots  
(Themes: ID, TCC, SOC, CIV)

#### Industrialization, Immigration and Growth: from the Early 1800s to Present

- Urbanization: new buildings, mass transportation, immigration, Castle Garden, Ellis Island, culture, recreation, food, language, labor, skills, Waves of immigration
- Social impact of immigration/ migration, labor movement, child labor, effects of immigration/migration, ethnic enclaves, labor unions, US citizenship
- African-American Migration: freed slaves, The Great Migration, Harlem Renaissance  
(Themes: ID, MOV, CIV, ECO, EXCH)

#### Government

- the new nation, foundations, new government/ideals, democracy, Mayflower Compact, Declaration of Independence, Constitutions, Symbols
- The Constitution: framework, a living document, structure, Congress, the courts, changes and amendments, The Bill of Rights, individual liberties, The Peter Zenger Trial, values, practices, and traditions
- Government: roles and responsibilities of the branches government, elections, bill and laws
- Rights and Responsibilities as Citizens: rights and freedoms, obeying rules and laws, voting, serve jury duty, perform community service  
(Themes: GOV, CIV)

# SOCIAL STUDIES

## 5

### **THE WESTERN HEMISPHERE**

#### **Early Peoples of the Americas**

- Native Americans of the West, Arts in the Desert, Native Americans of the Southwest, Native Americans of the Plains, Native Americans of the Eastern Woodlands  
(Themes: ID, MOV, TCC, GEO)

#### **Complex Societies and Civilizations**

- Mayas, Aztecs, and Incas  
(Themes: ID, TCC, GEO, GOV)

#### **European Exploration and its Effects**

- Europeans come to the Americas, Explorers & Conquerors, Early European Settlements, The search for the Northwest Passage, The New England Colonies, The Middle Colonies, The Southern Colonies, Slavery in the colonies, The French in North America, The French & Indian War, American Revolution  
(Themes: MOV, TCC, GEO, ECO, EXCH)

#### **Geography in the Western Hemisphere**

- Climate zones, landforms, bodies of water, and natural resources of the Western Hemisphere. Regions: North America (Canada and the United States), Mesoamerica (Mexico and Central America), Caribbean, South America  
(Theme: GEO)

#### **Comparative Cultures**

- Key cultural characteristics, such as the languages, religions and contributions, of the United States, Canada, and Mexico  
(Themes: ID, MOV, SOC)

#### **GOVERNMENT**

- Government structures, functions, and founding documents  
(Themes: GOV, CIV)

#### **ECONOMICS**

- Natural Resources, Supply and Demand, Trade, Three Economic Questions: what will be produced, how it will be produced, and who will get what is produced? (Themes: TCC, GEO, ECO, EXCH)

## 6

### **THE EASTERN HEMISPHERE**

#### **Present-Day Eastern Hemisphere Geography**

- Landforms, Bodies of water, Climate and vegetation, natural resources, population and settlement
- Map Skills: variety of maps, globes, aerial and satellite photographs, computer models, cardinal and intermediate directions, Equator, Prime Meridian, latitude, longitude
- Regions of the Eastern Hemisphere, Middle East (North Africa and Southwest Asia), Sub-Saharan Africa, Europe, Russia, Caucasus, Central Asia, East Asia, Southeast Asia, South Asia, Oceania  
(Theme: GEO)

#### **The First Humans Through the Neolithic Revolution in the Eastern Hemisphere**

- history using timelines, B.C.E./C.E., eras, millennia, centuries, decades
- Early Civilizations: The Tigris and Euphrates Valley, The Nile Valley and Ancient Egypt, Nubia and Kush, Asia in the Americas (Indus Valley, Huang He Valley, Mesoamerica)
- Archeological evidence hominids and early humans, artifacts and the fossil record, art, human migration patterns and settlements
- The Neolithic Revolution, significant social, cultural, ecological, political, or economic change, domestication of animals, advances in agriculture, semi-sedentary and sedentary settlement, pastoral nomadic peoples  
(Themes: MOV, TCC, GEO, ECO, TECH)

#### **Early River Valley Civilizations in the Eastern Hemisphere** (ca. 3500 B.C.E. – ca. 500)

- Ancient river valley civilizations: Geographic factors (access to water, resources, food surplus, potential for stability against environmental threats), food production, innovation and new technologies, shared identity, customs, beliefs,

- language, early trade, medicine, disease, military actions, early leaders
- Indus, Mesopotamia, Nile and Yellow River valley civilizations, Religion, Jobs, Cities, Government, Language/record keeping system, Technology, Social hierarchy  
(Themes: ID, TCC, GEO, SOC)

#### **Comparative World Religions**

(ca. 2000 B.C.E. – ca. 630 C.E.)

- Belief system vs. religion, Animism, Buddhism, Christianity, Confucianism, Coptic, Hinduism, Islam, Judaism, Polytheism, Protestantism, Sikhism, Taoism
- Religious Systems, shared values, locations of origin, time period of origin, Founders, major tenets, codes of behavior, Practices, ritual, sacred writing,
- Unity, Social Order and Gender Similarities and differences across belief systems, Influence of belief systems on contemporary events and cultural practices  
(Themes: ID, SOC)

#### **Comparative Classical Civilizations in the Eastern Hemisphere** (ca. 600 B.C.E. – ca. 500 C.E.)

- Locations of classical civilizations (Chinese, Greco-Roman), geographic factors (deltas, deserts, mountains, rivers, peninsulas, plateaus, plains, islands), important cities, political systems, borders
- Golden Age, (Qin, Han, Athens, Roman Empire), influence on societies  
(Themes: ID, TCC, GEO, SOC, GOV, CIV)

#### **Mediterranean World: Feudal Western Europe, The Byzantine Empire, and The Islamic Caliphates** (ca. 600 C.E. – ca. 1450)

- Fall of Rome: Overexpansion, corruption, invasions, civil wars and discord, Feudalism, Decentralization of political authority, Role of the Christian Church
- Byzantine Empire: Preserving Roman Empire, Mediterranean basin, Roman traditions, Greek culture, Orthodox Christianity, Unity of religious and secular leadership
- The Islamic World: Muhammad, Holy Qu'ran, Umayyad caliphate, Abbasid caliphate, Shia and Sunni Islam, Islamic World (Middle East, Iberian peninsula, Indian subcontinent, southwest Asia, North and Central Africa, islands of Indonesia), conquests, cultural blending, cross cultural exchange, Islamic Golden Age
- The Crusades: Three cultural regions of the Mediterranean, locations, borders, The Holy Land, interactions among regions  
(Themes: MOV, TCC, GOV, CIV, EXCH)

#### **Interactions Across the Eastern Hemisphere** (ca. 600 C.E. – ca. 1450)

- Major Afro-Eurasian trade networks (The Silk Roads, Mediterranean, Indian Ocean, and Trans-Saharan routes), trade routes and economics, cultural diffusion (Indian/ Arabic numerals, map-making, printing, china, tea, opium, spices, Swahili, paper, silk, and Buddhism)
- Interregional travelers and explorers, transportation and technology effect on trade, epidemics and pandemics
- The Mongols: the Mongol Empire and Khanates, Pastoralism, Genghis Khan and Kublai Khan, East and West, warfare, conquest and political rule, The Golden Horde, the Yuan Dynasty, Trade, The Silk Road, Black Death (Bubonic Plague)  
(Themes: MOV, TCC, GEO, ECO, TECH, EXCH)

# SCIENCE

## **K-2 Engineering Design**

- Defining and Delimiting Engineering Problems
- Developing Possible Solutions
- Optimizing the Design Solution

*Students will demonstrate understanding through:*

- Asking Questions and Defining Problems
- Developing and Using Models
- Analyzing and Interpreting Data

# K

### **Matter and Its Interactions**

- Structure and Properties of Matter

### **Forces and Interactions: Pushes and Pulls**

- Forces and Motion
- Types of Interactions
- Relationship Between Energy and Forces
- Defining Engineering Problems

### **Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment**

- Organization for Matter and Energy Flow in Organisms
- Biogeology

### **Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment (continued)**

- Natural Resources
- Human Impacts on Earth Systems
- Developing Possible Solutions

### **Weather and Climate**

- Conservation of Energy and Energy Transfer
- Weather and Climate
- Natural Hazards

### **Defining and Delimiting an Engineering Problem**

*Students will demonstrate understanding through:*

- Planning and Carrying Out Investigations
- Analyzing and Interpreting Data
- Scientific Investigations Using a Variety of Data
- Developing and Using Models
- Engaging in Argument from Evidence
- Obtaining, Evaluating, and Communicating Information
- Scientific Knowledge Based on Empirical Evidence
- Asking Questions and Defining Problems
- Constructing Explanations and Designing Solutions

# 1

### **Waves: Light and Sound**

- Wave Properties
- Electromagnetic Radiation
- Information Technologies and Instrumentation

### **Structure, Function and Information Processing**

- Structure and Function
- Growth and Development of Organisms
- Information Processing
- Inheritance of Traits

### **Space Systems: Patterns and Cycles**

- The Universe and Its Stars
- Earth and the Solar System

*Students will demonstrate understanding through:*

- Planning and Carrying Out Investigations
- Constructing Explanations and Designing Solutions
- Scientific Investigations Using a Variety of Methods
- Obtaining, Evaluating, and Communicating Information
- Scientific Knowledge is Based on Empirical Evidence
- Analyzing and Interpreting Data

# 2

### **Structure and Properties of Matter**

- Structure and Properties of Matter
- Chemical Reactions

### **Interdependent Relationships in Ecosystems**

- Biodiversity in Humans
- Developing Possible Solutions

### **Earth's Systems: Processes that Shape the Earth**

- The History of Planet Earth
- Earth Materials and Systems
- Plate Tectonics and Large-Scale System Interactions
- Optimizing the Design Solution

*Students will demonstrate understanding through:*

- Planning and Carrying Out Investigations
- Analyzing and Interpreting Data
- Constructing Explanations and Designing Solutions
- Engaging in Argument from Evidence
- Using Science Models, Laws, Mechanisms, and Theories to Explain Natural Phenomena
- Developing and Using Models
- Scientific Knowledge Based on Empirical Evidence

# SCIENCE

## 3-5. Engineering Design

- Defining and Delimiting Engineering Problems
- Developing Possible Solutions
- Optimizing the Design Solution

*Students will demonstrate understanding through:*

- Asking Questions and Defining Problems
- Planning and Carrying Out Investigations
- Constructing Explanations and Designing Solutions

## 3

### Forces and Interactions

- Forces and Motion
- Types of Interactions

### Interdependent Relationships in Ecosystems

- Ecosystem Dynamics, Functioning, and Resilience
- Social Interactions and Group Behavior
- Evidence of Common Ancestry and Diversity
- Adaptation
- Biodiversity in Humans

### Inheritance and Variation of Traits: Life Cycles and Traits

- Growth and Development of Organisms
- Inheritance of Traits
- Variation of Traits
- Natural Selection

### Weather and Climate

- Weather and Climate
- Natural Hazards

*Students will demonstrate understanding through:*

- Asking Questions and Defining Problems
- Planning and Carrying Out Investigations
- Science Knowledge Based on Empirical Evidence
- Scientific Investigations Using a Variety of Methods
- Analyzing and Interpreting Data
- Engaging in Argument from Evidence
- Developing and Using Models
- Constructing Explanations and Designing Solutions
- Obtaining, Evaluating and Communicating Information

## 4

### Energy

- Definitions of Energy
- Conservation of Energy and Energy Transfer
- Relationship Between Energy and Forces
- Energy in Chemical Processes and Everyday Life
- Natural Resources
- Defining Engineering Problems

### Waves: Waves and Information

- Wave Properties
- Information Technologies and Instrumentation
- Optimizing the Design Solutions

### Structure, Function, and Information Processing

- Electromagnetic Radiation
- Structure and Function
- Information Processing

### Earth's Systems: Processes that Shape the Earth

- The History of Planet Earth
- Earth Materials and Systems
- Plate Tectonics and Large-Scale System Interactions
- Biogeology
- Natural hazards
- Designing Solutions to Engineering Problems
- Obtaining, Evaluating, and Communicating Information
- Developing and Using Models
- Engaging an Argument from Evidence
- Analyzing and Interpreting Data

*Students will demonstrate understanding through:*

- Asking Questions and Defining Problems
- Planning and Carrying Out Investigations
- Conducting Explanations and designing Solutions

# SCIENCE

## 3-5. Engineering Design

- Defining and Delimiting Engineering Problems
- Developing Possible Solutions
- Optimizing the Design Solution

*Students will demonstrate understanding through:*

- Asking Questions and Defining Problems
- Planning and Carrying Out Investigations
- Constructing Explanations and Designing Solutions

## 5

### Structures and Properties of Matter

- Structure and properties of Matter
- Chemical Reactions

### Matter and Energy in Organisms and Ecosystems

- Energy in Chemical Processes and Everyday Life
- Organization for Matter and Energy Flow in Organisms
- Interdependent Relationships in Ecosystems
- Cycles of matter and Energy Transfer in Ecosystems

### Earth's Systems

- Earth Materials and Systems
- The Roles of Water in Earth's Surface Processes
- Human Impacts on Earth Systems

### Space Systems: Stars and the Solar System

- Types of Interactions
- The Universe and Its Stars
- Earth and the Solar System

*Students will demonstrate understanding through*

- Developing and Using Models
- Planning and Carrying Out Investigations
- Using Mathematics and Computational Thinking
- Engaging in Argument from Evidence
- Obtaining, Evaluating, and Communicating Information
- Analyzing and Interpreting Data

## 6

### Matter and Energy in Organisms and Ecosystem

- Organization for Matter and Energy Flow in Organisms
- Interdependent relationships in Ecosystem
- Cycle of Matter and Energy Transfer in Ecosystems
- Ecosystem Dynamics, Functioning and Resilience
- Energy in Chemical processes and Everyday Life

### Interdependent Relationships in Ecosystems

- Biodiversity and Humans
- Developing Possible Solutions
- Ecosystems Dynamics, Functioning and Resilience

### Waves and Electromagnetic Radiation

- Wave properties
- Electromagnetic Radiation
- Information Technologies and Instrumentation

### Chemical Reactions

- Structure and Properties of Matter
- Chemical Reactions
- Developing Possible Solutions
- Optimizing the Design Solution

### Energy

- Definitions of Energy
- Conservation of Energy and Energy Transfer
- Relationship Between Energy and Forces
- Defining and Delimiting an Engineering Problem
- Developing Possible Solutions

### Structure and Properties of Matter

- Chemical Reactions
- Definitions of Energy

### Structure, Function, and Information Processing

- Structure and Function of Cells and Cellular Organisms
- Information Processing from Different Inputs

*Students will demonstrate understanding through*

- Developing and Using Models
- Planning and Carrying Out Investigations
- Engaging in Argument from Evidence
- Obtaining, Evaluating, and Communicating Information
- Analyzing and Interpreting Data
- Constructing Explanations and Designing Solutions
- Using Mathematics and Computational Thinking