

# **Parent Guide to the Standards-Based Report Card (SBRC)**

**Kingston Hill Academy  
Saunderstown, RI**

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Foreword:

Kingston Hill Academy is committed to providing parents with accurate and comprehensive information with regard to their child's academic progress.

With that goal in mind, the KHA staff designed a new report card that reflects Rhode Island State standards and provides consistency across all grades. It provides parents with an incredibly detailed summary of the student's skills in all of the core academic areas, particularly reading, mathematics, writing and oral communication. It also evaluates student progress toward each grade standard as well as providing information on student performance relative to their grade level. As you may be aware, State standards are written as end-of-year benchmarks. Therefore, as the year progresses, students are expected to achieve interim progress culminating in year-end achievement.

The attached guide is provided as a tool to assist parents in easily understanding the new format. After reviewing this guide and the initial report card, we hope that you agree that the revised format significantly benefits not only students but it also assists parents/guardians in providing supplementary support to their child.

We look forward to working together to provide your child with the knowledge and tools critical to future academic success.

Kingston Hill Academy Leadership & Staff

## **Standards-Based Grading Key Terms (items you will see on the SBRC):**

**Assessment:** The ongoing process of gathering data or giving feedback about a student's performance in order to determine a student's strengths and weaknesses, improve instruction, and document student progress.

**Benchmark:** A reachable target for student learning at various points of the year, as defined by samples of student work.

**Grade Level Expectation:** A stated objective representing specific knowledge or skills that is reasonable to teach and learn within the scope of one school year.

**Grade Span Expectation:** A stated objective representing specific knowledge or skills that is reasonable to teach and learn over the span of several school years.

**Learner Qualities:** A listing of work habits and social responsibilities that communicate to parents the social growth and work ethic of their child. These descriptors envelop the areas of: self-directed learner, collaborative worker, problem solver, responsible citizen, and quality producer.

**Learner Qualities Scale:** The ratings assigned to a student's individual performance in each of the learner quality areas. A more in depth description follows in the guide.

**Overall Effort in this area:** A rating given separately to each subject area that indicates how a student approaches and performs in the subject.

**Overall performance level:** An average of the progress ratings (based on the progress scale) in each academic area.

**Present Level of Functioning:** A rating that indicates a child's current level (above, at, or below grade level) as it relates to each standard. Please note that progress toward a standard can occur at many different levels, therefore an above grade level rating does not necessarily equate to a 4 on the progress scale, and a below grade level does not necessarily equate to a 1. Please be sure to discuss your questions with your child's teacher.

**Progress Scale:** Refers to the levels of student performance that will be used on student work and on the SBRC to indicate a student's level of progress toward achieving a certain standard by the end of the school year. (Please see next page).

**Standard:** A statement that identifies what all students should know and be able to do. Standards for the content areas of reading, writing, mathematics, oral communication, science, and civics are identified in the Rhode Island Grade Level Expectations (GLEs). These may be viewed online at the Rhode Island Department of Education web site: <http://www.ride.ri.gov/Instruction/gle.aspx>

### The Kingston Hill SBRC Performance Scale:

Teachers will assess student work and progress relative to the state standards. Each grade's report card is different due to differences in the GLEs for that particular grade. Teachers are assessing students on their progress toward meeting or exceeding a particular standard by the end of the school year.

The following performance scale will be used on the SBRC:

<p><b>4</b> Student is demonstrating outstanding progress toward exceeding this standard by the end of the year.</p> <p><i>Student is demonstrating skills and knowledge that indicate that this standard will not only be met, but that the student will perform beyond the grade level expectation as outlined by the State of Rhode Island</i></p>
<p><b>3</b> Student is demonstrating adequate progress toward meeting this standard by the end of the year.</p> <p><i>Student is demonstrating solid skills and knowledge that indicate that he or she is on track to meet this standard as outlined by the State of Rhode Island.</i></p>
<p><b>2</b> Student is demonstrating initial progress toward meeting the standard by the end of the year.</p> <p><i>Student is demonstrating emergent skills and knowledge that indicate that he or she may meet the standard by year's end</i></p>
<p><b>1</b> Student is not demonstrating progress toward meeting this standard by the end of the year.</p> <p>Student does not currently possess the skills necessary to meet this standard by the end of the year.</p>
<p><b>N/A</b> Not applicable at this time</p> <p><i>In most cases, the prerequisite knowledge and skills necessary to meet the standard have not yet been addressed in the classroom. It is likely that the second trimester assessment will include those standards not addressed in trimester 1.</i></p> <p><i>In subjects like science and social studies that are unit-based (rather than cyclical like literacy and numeracy) certain standards are addressed at different points in the year or at different grade levels.. For example, each classroom receives three science kits per year: one that covers physical science, one that covers life sciences, and one that covers earth sciences. Students will be assessed only on the skills relevant to the particular science kit being used at the time of assessment.</i></p>

## **KHA Learner Qualities:**

Learner Qualities are those behaviors which enhance a student's ability to learn. These behaviors are representative of a successful system of personal conduct. By emphasizing these qualities, we are helping students take responsibility for their own learning as they set goals and work to improve performance. A student who consistently works at demonstrating these Learner Qualities will often improve his/her academic achievement at the same time. Learner Qualities are essentially "life skills." These are the same qualities that are essential for success in the workplace and in everyday life.

The following scale will be used in rating each of the Learner Qualities on the SBRC:

<b>O- Outstanding</b>	The student demonstrates and applies the work habits and social responsibilities as appropriate to be successful at this grade level 95% or more of the time
<b>S - Satisfactory</b>	The student demonstrates and applies the work habits and social responsibilities as appropriate to be successful at this grade level 85-94% of the time
<b>B- Basic</b>	The student demonstrates and applies the work habits and social responsibilities as appropriate to be successful at this grade level 75-84% of the time.
<b>N - Needs Improvement</b>	The student demonstrates and applies the work habits and social responsibilities as appropriate to be successful at this grade level less than 75% of the time.

### **The Rhode Island State Standards:** ***A breakdown by Subject and Grade Level***

The following information outlines exactly what each State standard means for your child (in terms of explicit knowledge and skills) by the end of his or her grade level. Please note, specific grade-level expectations are outlined for literacy and numeracy, whereas expectations for science and social studies are outlined by grade span (K-2, 3-4, 5-6).

## Grade Level Expectations for Reading - End of Grade K

<b>Standard</b>	<b>Knowledge and Skills</b>
Demonstrates phonemic awareness and applies phonological knowledge and skills by...	<ul style="list-style-type: none"> <li>• Blending and segmenting syllables and onset-rimes (e.g., cup-cake, s-at)</li> <li>• Isolating phonemes in single syllable words (e.g., Tell me the first sound in "mop;" tell me the last sound in "mop")</li> <li>• Recognizing pairs of rhyming words</li> </ul>
Demonstrates understanding of concepts of print during shared or individual reading by...	<ul style="list-style-type: none"> <li>• Distinguishing between printed letters and words</li> <li>• Following text with finger-pointing (e.g., charts, simple books), demonstrating left-to right and top-to bottom directionality</li> <li>• Identifying the first and last parts of a word (beginning/end of the word)</li> <li>• 4 Identifying key parts of a book: front and back, print, illustrations (Local)</li> </ul>
Applies word identification and decoding strategies (leading to automaticity) by ...	<ul style="list-style-type: none"> <li>• Demonstrating a basic understanding of how the letters of phonetically regular words (going from left to right), represent their sounds</li> <li>• Reading high frequency words, including names, environmental print, sight words (as appropriate to the child's personal and classroom experiences)</li> <li>• Recognizing and naming all upper and lower case letters</li> <li>• Identifying the primary sounds represented by most letters (sound-symbol correspondence)</li> </ul>
Students identify the meaning of unfamiliar vocabulary by...	<ul style="list-style-type: none"> <li>• Using strategies to unlock meaning (e.g., activating prior knowledge, using cues, using context clues, or asking questions) (Local)</li> </ul>
Shows breadth of vocabulary knowledge, demonstrating understanding of word meanings or relationships by ...	<ul style="list-style-type: none"> <li>• Identifying synonyms and antonyms (e.g., big/large; hot/cold) to connect new words to known words</li> <li>• Demonstrating knowledge of basic concepts (i.e.: common words that describe position in space and time, such as: over, between, after, behind)</li> <li>• Organizing words by category (e.g., sorting pictures or objects into groups)</li> </ul>
Demonstrate initial understanding of elements of literary texts read aloud by...	<ul style="list-style-type: none"> <li>• Identifying characters in a story (Local)</li> <li>• Generating questions during read alouds</li> <li>• Responding to simple questions about a book's content</li> </ul>
Analyze and interpret elements of literary texts read aloud, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>• Making predictions about what might happen next</li> <li>• Identifying characteristics of main characters</li> </ul>
Generates a personal response to what is read aloud through a variety of means by...	<ul style="list-style-type: none"> <li>• Comparing stories or other texts to personal experience, prior knowledge, which might include other texts (Local)</li> </ul>
Demonstrate initial understanding of informational texts read aloud (expository and practical texts) by...	<ul style="list-style-type: none"> <li>• Obtaining information, using text features (e.g., title and illustrations)</li> <li>• Using explicitly stated information to answer questions</li> <li>• Generating questions during read alouds</li> </ul>

Analyze and interpret informational text read-aloud, citing evidence as appropriate by...	<ul style="list-style-type: none"> <li>• Telling what was learned (Local)</li> <li>• Making basic inferences (Local)</li> </ul>
Demonstrates ability to monitor comprehension and strategy use for different types of texts	<ul style="list-style-type: none"> <li>• Noticing when simple sentences fail to make sense (while listening to a read aloud or reading a simple text)</li> <li>• Using pictures, syntax or repetitive language patterns to help predict upcoming words</li> </ul>
Uses comprehension strategies (flexibly and as needed) while listening to literary or informational text	<ul style="list-style-type: none"> <li>• using prior knowledge; predicting and making simple text-based inferences; generating clarifying questions; constructing sensory images (e.g., making pictures in one's mind); or making connections (text to self, text to text, and text to world)</li> </ul>
Demonstrates participation in a literate community by...	<ul style="list-style-type: none"> <li>• Participating in discussions about text, ideas, and student "writing" by offering comments and supporting evidence, recommending books and other materials, and responding to the comments and recommendations of peers, librarians, teachers, and others (Local)</li> <li>• Self-selecting reading materials aligned with reading ability and personal interests</li> </ul>

## Grade Level Expectations for Reading - End of Grade 1

Standard	Knowledge and Skills
Demonstrates phonemic awareness and applies phonological knowledge and skills by...	<ul style="list-style-type: none"> <li>• Blending and segmenting syllables and onset-rimes (e.g., cup-cake, s-at) (Local)</li> <li>• Blending and segmenting phonemes in one syllable words (e.g., f-i-sh, r-u-n)</li> <li>• Isolating phonemes in single syllable words (e.g., Tell me the first sound in "mop;" tell me the last sound in "mop;" tell me the middle sound in "mop" )</li> <li>• Deleting phonemes in one-syllable words ("what is "crust" without the 'c'")</li> <li>• Producing pairs of rhyming words</li> <li>• Counting syllables in 1 to 4-syllable words</li> </ul>
Demonstrates understanding of concepts of print during shared or individual reading by...	<ul style="list-style-type: none"> <li>• Identifying title, author, illustrator</li> <li>• Identifying basic punctuation marks and their usage (e.g., question marks, periods, quotation marks)</li> <li>• Demonstrating 1-1 matching of words spoken to words in print</li> </ul>
Reads grade-level appropriate material with...	<ul style="list-style-type: none"> <li>• Accuracy: reading material appropriate for the end of grade 1 with at least 90-94% accuracy</li> <li>• Fluency: reading previously - introduced or previously read grade-appropriate text with oral fluency rates of at least 50-80 words correct per minute</li> <li>• Fluency: reading grade-appropriate text in a way that makes meaning clear, and demonstrates phrasing, expression, and attention to end punctuation</li> </ul>
Applies word identification and decoding strategies (leading to automaticity) by ...	<ul style="list-style-type: none"> <li>• Sounding out regularly spelled (decodable) one-syllable or two-syllable words using letter-sound correspondence knowledge</li> <li>• Reading regularly spelled one or two-syllable words using knowledge of sounds and letter patterns (including common endings - s, ed, ly, ing)</li> <li>• Reading grade-level appropriate words (in connected text)</li> <li>• Reading grade- appropriate, high-frequency words (that include irregularly spelled words - said; contractions - I'm)</li> </ul>
Students identify the meaning of unfamiliar vocabulary by...	<ul style="list-style-type: none"> <li>• Using strategies to unlock meaning (e.g., activating prior knowledge, using cues, using context clues, or asking questions during read-alouds or text reading)</li> </ul>
Shows breadth of vocabulary knowledge, demonstrating understanding of word meanings or relationships by ...	<ul style="list-style-type: none"> <li>• Identifying synonyms and antonyms to connect new words to known words</li> <li>• Selecting appropriate words to use in context</li> <li>• Describing words in terms of categories, (e.g., A mallard is a kind of duck.), functions (e.g., Scissors are used for cutting.), or features (e.g., A rectangle has four sides.)</li> </ul>
Demonstrate initial understanding of elements of literary texts (including text read aloud, reading independently, or in a guided manner) by...	<ul style="list-style-type: none"> <li>• Identifying characters or setting in a story</li> <li>• Responding to simple questions about a book's content (e.g., Where did Sylvester go?)</li> <li>• Retelling the beginning, middle, and end of a story (Local)</li> <li>• Generating questions before, during, and after reading</li> </ul>

	<ul style="list-style-type: none"> <li>• Distinguishing between literary and informational texts</li> <li>• Identifying literary devices as appropriate to genre: rhyme, repeated language (e.g., "teeny- tiny")</li> </ul>
Analyze and interpret elements of literary texts read aloud or read independently, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>• Making predictions about what might happen next, and telling why the prediction was made</li> <li>• Identifying physical characteristics, personality traits, or possible motives of main characters</li> <li>• Making basic inferences about the text</li> </ul>
Generates a personal response to what is read aloud through a variety of means by...	<ul style="list-style-type: none"> <li>• Comparing stories or other texts to personal experience, prior knowledge or to other texts</li> </ul>
Demonstrate initial understanding of informational texts read aloud (expository and practical texts) by...	<ul style="list-style-type: none"> <li>• Obtaining information, using text features (e.g., title and illustrations)</li> <li>• Using explicitly stated information to answer questions</li> <li>• Generating questions before, during, and after reading</li> <li>• Distinguishing between literary and informational texts</li> </ul>
Analyze and interpret informational text read-aloud or independently, citing evidence as appropriate by...	<ul style="list-style-type: none"> <li>• Telling what was learned</li> <li>• Identifying the topic of the text or explaining the title</li> <li>• Making basic inferences or drawing basic conclusions</li> <li>• Identifying facts presented in text</li> </ul>
Demonstrates ability to monitor comprehension and strategy use for different types of texts	<ul style="list-style-type: none"> <li>• Monitoring own reading for meaning and self-correcting when attempt to identify or predict words does not fit with cues provided by the print or the context (e.g., syntax/language structure, semantics/meaning, picture)</li> </ul>
Uses comprehension strategies (flexibly and as needed) while listening to literary or informational text	<ul style="list-style-type: none"> <li>• using prior knowledge; predicting and making simple text-based inferences; generating clarifying questions; constructing sensory images (e.g., making pictures in one's mind); or making connections (text to self, text to text, and text to world)</li> </ul>
Demonstrates the habit of reading widely and extensively by...	<ul style="list-style-type: none"> <li>• Reading with frequency, including in-school, out-of-school, and summer reading</li> <li>• Reading from a wide range of genres/kinds of text and a variety of authors (e.g., literary, informational, and practical texts)</li> </ul>
Demonstrates participation in a literate community by...	<ul style="list-style-type: none"> <li>• Self-selecting reading materials aligned with reading ability and personal interests</li> <li>• Participating in discussions about text, ideas, and student writing by offering comments and supporting evidence, recommending books and other materials, and responding to the comments and recommendations of peers, librarians, teachers, and others</li> </ul>

## Grade Level Expectations for Reading - End of Grade 2

Standard	Knowledge and Skills
Demonstrates phonemic awareness and applies phonological knowledge and skills by...	<ul style="list-style-type: none"> <li>Blending and segmenting phonemes in more complex one-syllable words (which may include combinations of blends and digraphs, as in th-i-ck, t-r-a-sh)</li> </ul>
Reads grade-level appropriate material with...	<ul style="list-style-type: none"> <li>Accuracy: reading material appropriate for the end of grade 2 with at least 90- 94% accuracy</li> <li>Fluency: reading grade-appropriate text with oral fluency rates of at least 80-100 words correct per minute</li> <li>Fluency: reading grade-appropriate text in a way that makes meaning clear, demonstrating phrasing, expression, and with attention to punctuation (including commas and quotation marks)</li> </ul>
Applies word identification and decoding strategies by ...	<ul style="list-style-type: none"> <li>Identifying regularly spelled multi-syllabic words, by using knowledge of sounds, syllable types, or word patterns (including most common spellings for consonants and vowels, e.g., knot, catch, float, fight; or common suffixes</li> <li>Reading regularly spelled one or two-syllable words using knowledge of sounds and letter patterns</li> <li>Reading grade-level appropriate words (in connected text) with automaticity</li> <li>Reading grade- appropriate, high-frequency words (including irregularly spelled words)</li> </ul>
Students identify the meaning of unfamiliar vocabulary by...	<ul style="list-style-type: none"> <li>Using strategies to unlock meaning (e.g., knowledge of word structure, including common base words and suffixes, such as "thick-est," "hope-ful;" or context clues, including illustrations and diagrams; or prior knowledge</li> </ul>
Shows breadth of vocabulary knowledge, demonstrating understanding of word meanings or relationships by ...	<ul style="list-style-type: none"> <li>Identifying synonyms or antonyms; or categorizing words</li> <li>Selecting appropriate words to use in context, including words specific to the content of the text</li> </ul>
Demonstrate initial understanding of elements of literary texts by...	<ul style="list-style-type: none"> <li>Identifying or describing character(s), setting, problem, solution, or major events, as appropriate to text</li> <li>Sequencing key events in order, as appropriate to text</li> <li>Retelling the key elements of a story</li> <li>Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>Distinguishing among a variety of types of text (e.g., literary texts: poetry, plays, realistic fiction, fairy tales, fables, tall tales, or fantasy)</li> <li>Identifying literary devices as appropriate to genre: rhyme, repeated language or dialogue (e.g., "When I was young in the mountains...")</li> </ul>
Analyze and interpret elements of literary texts, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>Making logical predictions</li> <li>Identifying relevant physical characteristics or personality traits of main characters</li> <li>Making basic inferences about problem or solution</li> <li>Identifying the author's basic message</li> <li>Identifying possible motives of main characters</li> </ul>

	<ul style="list-style-type: none"> <li>Recognizing explicitly stated causes or effects</li> </ul>
Generates a personal response to what is read aloud through a variety of means by...	<ul style="list-style-type: none"> <li>Comparing stories or other texts to related personal experience, prior knowledge, or to other texts</li> </ul>
Demonstrate initial understanding of informational texts (expository and practical texts) by...	<ul style="list-style-type: none"> <li>Obtaining information from text features (e.g., simple table of contents, glossary, charts, graphs, diagrams, or illustrations)</li> <li>Using explicitly stated information to answer questions</li> <li>Locating and recording information to show understanding, when given an organizational format (e.g., T-chart or Venn diagram)</li> <li>Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>Distinguishing among a variety of types of text (e.g., reference: beginning dictionaries, glossaries, children's magazines, content trade books, children's newspapers; and practical/functional texts: procedures/instructions, announcements, book orders, invitations)</li> </ul>
Analyze and interpret informational text read-aloud, citing evidence as appropriate by...	<ul style="list-style-type: none"> <li>Connecting information <i>within</i> a text</li> <li>Recognizing generalizations about text (e.g., identifying appropriate titles or main/central ideas)</li> <li>Making basic inferences or drawing basic conclusions</li> <li>Identifying facts presented in text</li> <li>Making inferences about causes or effects, when signal words are present</li> </ul>
Demonstrates ability to monitor comprehension and strategy use for different types of texts	<ul style="list-style-type: none"> <li>Using a range of self-monitoring and self-correction approaches (e.g., predicting upcoming text, monitoring, adjusting and confirming, through use of print, syntax/language structure, semantics/meaning, or other context cues [e.g., pictures])</li> </ul>
Uses comprehension strategies (flexibly and as needed) while listening to literary or informational text	<ul style="list-style-type: none"> <li>using prior knowledge; predicting and making text-based inferences; determining importance; generating literal and clarifying questions; constructing sensory images (e.g., making pictures in one's mind); or making connections (text to self, text to text, and text to world); or locating and using text features (e.g. headings, parts of the book)</li> </ul>
Demonstrates the habit of reading widely and extensively by...	<ul style="list-style-type: none"> <li>Reading with frequency, including in-school, out-of-school, and summer reading</li> <li>Reading from a wide range of genres/kinds of text and a variety of authors (e.g., literary, informational, and practical texts)</li> </ul>
Demonstrates participation in a literate community by...	<ul style="list-style-type: none"> <li>Self-selecting reading materials aligned with reading ability and personal interests (Local)</li> <li>Participating in discussions about text, ideas, and student writing by offering comments and supporting evidence, recommending books and other materials, and responding to the comments and recommendations of peers, librarians, teachers, and others</li> </ul>

### Grade Level Expectations for Reading - End of Grade 3

Standards	Knowledge and Skills
Reads grade-level appropriate material with...	<ul style="list-style-type: none"> <li>• Accuracy: reading material appropriate for grade 3 with at least 90-94% accuracy</li> <li>• Fluency: reading with oral fluency rates of at least 90- 120 words correct minute</li> <li>• Fluency: reading familiar text with phrasing and expression, and with attention to text features, such as punctuation, italics, and dialogue</li> </ul>
Applies word identification and decoding strategies by ...	<ul style="list-style-type: none"> <li>• Identifying multi-syllabic words, by using knowledge of sounds, syllable types, or word patterns (including prefixes, suffixes, or variant spellings for consonants or vowels, e.g., bought) (State)</li> <li>• Reading regularly spelled multi-syllabic words by using knowledge of sounds, syllable types, or word patterns</li> <li>• Reading grade-level appropriate words (in connected text) with automaticity</li> <li>• Reading grade- appropriate, high-frequency words (including irregularly spelled words)</li> </ul>
Students identify the meaning of unfamiliar vocabulary by...	<ul style="list-style-type: none"> <li>• Using strategies to unlock meaning (e.g., knowledge of word structure, including prefixes/suffixes and base words, such as "un-covered;" or context clues; or other resources, such as dictionaries, glossaries; or prior knowledge)</li> </ul>
Shows breadth of vocabulary knowledge, demonstrating understanding of word meanings or relationships by ...	<ul style="list-style-type: none"> <li>• Identifying synonyms, antonyms, or homonyms/homophones; or categorizing words</li> <li>• Selecting appropriate words to use in context, including content specific vocabulary (e.g., predator/prey, or words with multiple meanings)</li> </ul>
Demonstrate initial understanding of elements of literary texts by...	<ul style="list-style-type: none"> <li>• Identifying or describing character(s), setting, problem/solution, major events, or plot, as appropriate to text</li> <li>• Paraphrasing or summarizing key ideas/plot, with events sequenced, as appropriate to text</li> <li>• Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>• Identifying the characteristics of a variety of types of text (e.g., literary texts: poetry, plays, fairytales, fantasy, fables, tall tales, or realistic fiction)</li> <li>• Identifying literary devices as appropriate to genre: rhyme, alliteration, dialogue, or description</li> </ul>
Analyze and interpret elements of literary texts, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>• Making logical predictions</li> <li>• Describing main characters' physical characteristics or personality traits; or providing examples of thoughts, words or actions that reveal characters' personality traits</li> <li>• Describing main characters' physical characteristics or</li> </ul>

	<p>personality traits; or providing examples of thoughts, words or actions that reveal characters' personality traits</p> <ul style="list-style-type: none"> <li>• Making basic inferences about problem, conflict, or solution (e.g., cause-effect relationships)</li> <li>• Identifying who is telling the story</li> <li>• Identifying the author's basic message</li> <li>• Identifying possible motives of characters</li> <li>• Recognizing explicitly stated causes or effects</li> </ul>
Analyze and interpret author's craft, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>• Recognizing the use of literary elements and devices (i.e., imagery, exaggeration) to interpret intended meanings</li> </ul>
Generates a personal response to what is read aloud through a variety of means by...	<ul style="list-style-type: none"> <li>• Comparing stories or other texts to related personal experience, prior knowledge, or to other books</li> </ul>
Demonstrate initial understanding of informational texts (expository and practical texts) by...	<ul style="list-style-type: none"> <li>• Obtaining information from text features (e.g., table of contents, glossary, basic transition words, bold or italicized text, headings, graphic organizers, charts, graphs, or illustrations)</li> <li>• Using information from the text to answer questions related to explicitly stated main/central ideas or details</li> <li>• Organizing information to show understanding (e.g., representing main/central ideas or details within text through charting or mapping)</li> <li>• Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>• Identifying the characteristics of a variety of types of text (e.g., reference: dictionaries, glossaries, children's magazines, content trade books, textbooks, children's newspapers; and practical/functional texts: book orders, procedures, instructions, announcements, invitations)</li> </ul>
Analyze and interpret informational text read-aloud, citing evidence as appropriate by...	<ul style="list-style-type: none"> <li>• Connecting information <i>within</i> a text</li> <li>• Recognizing generalizations about text (e.g., identifying appropriate titles, assertions, or controlling ideas)</li> <li>• Recognizing generalizations about text (e.g., identifying appropriate titles, assertions, or controlling ideas)</li> <li>• Making basic inferences, drawing basic conclusions, or forming judgments/opinions about central ideas that are relevant</li> <li>• Distinguishing fact from opinion</li> <li>• Making inferences about causes or effects</li> </ul>
Demonstrates ability to monitor comprehension and strategy use for different types of texts	<ul style="list-style-type: none"> <li>• Using a range of self-monitoring and self-correction approaches (e.g., predicting upcoming text, monitoring, adjusting and confirming, through use of print, syntax/language structure, semantics/meaning, or other context cues)</li> </ul>
Uses comprehension strategies (flexibly and as needed) while listening to literary or informational text	<ul style="list-style-type: none"> <li>• using prior knowledge; predicting and making text-based inferences; determining importance; generating literal and clarifying questions; constructing sensory images (e.g., making pictures in one's mind); making connections (text to self, text to text, and text to world); or locating and using</li> </ul>

	text features (e.g. transition words, subheadings, bold/italicized print, parts of the book)
Demonstrates the habit of reading widely and extensively by...	<ul style="list-style-type: none"> <li>• Reading with frequency, including in-school, out-of-school, and summer reading</li> <li>• Reading from a wide range of genres/kinds of text and a variety of authors (e.g., literary, informational, and practical texts)</li> <li>• Reading multiple texts for depth of understanding an author or genre</li> </ul>
Demonstrates participation in a literate community by...	<ul style="list-style-type: none"> <li>• Self-selecting reading materials aligned with reading ability and personal interests</li> <li>• Participating in discussions about text, ideas, and student writing by offering comments and supporting evidence, recommending books and other materials, and responding to the comments and recommendations of peers, librarians, teachers, and others</li> </ul>

## Grade Level Expectations for Reading - End of Grade 4

<b>Standard</b>	<b>Knowledge and Skills</b>
Reads grade-level appropriate material with...	<ul style="list-style-type: none"> <li>• Accuracy: reading material appropriate for grade 4 with at least 90-94% accuracy</li> <li>• Fluency: reading with oral fluency rates of at least 115-140 words correct per minute (Students' rates of reading will and should vary in response to text difficulty, purpose of reading, and other factors.)</li> <li>• Fluency: reading familiar text with phrasing and expression, and with attention to text features, such as punctuation, italics, and dialogue</li> </ul>
Applies word identification and decoding strategies by ...	<ul style="list-style-type: none"> <li>• Identifying multi-syllabic words by using knowledge of sounds, six syllable types*/syllable division, or word patterns (including prefixes, and suffixes)</li> <li>• Reading multi-syllabic words, by using knowledge of sounds, syllable types, or word patterns</li> <li>• Reading grade-level appropriate words (in connected text) with automaticity</li> <li>• Reading grade- appropriate words (including irregularly spelled words)</li> </ul>
Students identify the meaning of unfamiliar vocabulary by...	<ul style="list-style-type: none"> <li>• Using strategies to unlock meaning (e.g., knowledge of word structure, including prefixes/suffixes and base words; or context clues; or other resources, such as dictionaries, glossaries; or prior knowledge)</li> </ul>
Shows breadth of vocabulary knowledge, demonstrating understanding of word meanings or relationships by ...	<ul style="list-style-type: none"> <li>• Identifying synonyms, antonyms, homonyms/homophones, or shades of meaning</li> <li>• Selecting appropriate words to use in context, including content specific vocabulary, words with multiple meanings, or precise vocabulary</li> </ul>
Demonstrate initial understanding of elements of literary texts by...	<ul style="list-style-type: none"> <li>• Identifying or describing character(s), setting, problem/ solution, major events, or plot, as appropriate to text; or identifying any significant changes in character(s) over time</li> <li>• Paraphrasing or summarizing key ideas/plot, with major events sequenced, as appropriate to text</li> <li>• Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>• Identifying the characteristics of a variety of types of text (e.g., literary texts: poetry, plays, fairytales, fantasy, fables, realistic fiction, folktales, historical fiction) (Local)</li> <li>• Identifying literary devices as appropriate to genre: rhyme, alliteration, simile, description, or dialogue</li> <li>•</li> </ul>
Analyze and interpret elements of literary texts, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>• Making logical predictions</li> <li>• Describing main characters' physical characteristics or personality traits; or providing examples of thoughts, words, or actions that reveal characters' personality traits</li> <li>• Making inferences about problem, conflict, or solution</li> <li>• Identifying who is telling the story</li> </ul>

	<ul style="list-style-type: none"> <li>Identifying author's message or theme</li> <li>Identifying causes or effects, including possible motives of characters</li> </ul>
Analyze and interpret author's craft, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>Demonstrating knowledge of use of literary elements and devices (i.e., imagery, exaggeration) to interpret intended meanings</li> </ul>
Generates a personal response to what is read aloud through a variety of means by...	<ul style="list-style-type: none"> <li>Comparing stories or other texts to related personal experience, prior knowledge, or to other books</li> </ul>
Demonstrate initial understanding of informational texts (expository and practical texts) by...	<ul style="list-style-type: none"> <li>Obtaining information from text features (e.g., table of contents, glossary, index, transition words/phrases, bold or italicized text, headings, subheadings, graphic organizers, charts, graphs, or illustrations)</li> <li>Using information from the text to answer questions related to explicitly stated main/central ideas or key details</li> <li>Organizing information to show understanding (e.g., representing main/central ideas or details within text through charting, mapping, paraphrasing, or summarizing)</li> <li>Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>Identifying the characteristics of a variety of types of text (e.g., reference: dictionaries, glossaries, encyclopedias, children's magazines, content trade books, textbooks, student newspapers; and practical/functional texts: procedures, instructions, book orders, announcements)</li> </ul>
Analyze and interpret informational text read-aloud, citing evidence as appropriate by...	<ul style="list-style-type: none"> <li>Connecting information <i>within</i> a text or <i>across</i> texts (State)</li> <li>Synthesizing information within or across text(s) (e.g., constructing appropriate titles; or formulating assertions or controlling ideas)</li> <li>Drawing inferences about text, including author's purpose (e.g., to inform, explain, entertain) or message; or drawing basic conclusions; or forming judgments/opinions about central ideas that are relevant</li> <li>Distinguishing fact from opinion</li> <li>Making inferences about causes or effects</li> </ul>
Demonstrates ability to monitor comprehension and strategy use for different types of texts	<ul style="list-style-type: none"> <li>Using a range of self-monitoring and self-correction approaches (e.g., predicting upcoming text, monitoring, adjusting and confirming, through use of print, syntax/language structure, semantics/meaning, or other context cues)</li> </ul>
Uses comprehension strategies (flexibly and as needed) while listening to literary or informational text	<ul style="list-style-type: none"> <li>using prior knowledge; sampling a page for readability; summarizing; predicting and making text-based inferences; determining importance; generating literal and clarifying questions; constructing sensory images (e.g., making pictures in one's mind); making connections (text to self, text to text, and text to world); locating and using text features (e.g. transition words, subheadings, bold/italicized print, parts of the book); or using text structure clues (e.g. chronological, cause/effect, compare/contrast, proposition and support, description, classification)</li> </ul>

<p>Demonstrates the habit of reading widely and extensively by...</p>	<ul style="list-style-type: none"><li>• Reading with frequency, including in-school, out-of-school, and summer reading</li><li>• Reading from a wide range of genres/kinds of text and a variety of authors (e.g., literary, informational, and practical texts)</li><li>• Reading multiple texts for depth of understanding an author or genre</li></ul>
<p>Demonstrates participation in a literate community by...</p>	<ul style="list-style-type: none"><li>• Self-selecting reading materials aligned with reading ability and personal interests</li><li>• Participating in discussions about text, ideas, and student writing by offering comments and supporting evidence, recommending books and other materials, and responding to the comments and recommendations of peers, librarians, teachers, and others</li></ul>

## Grade Level Expectations for Reading - End of Grade 5

Standard	Knowledge and Skills
Reads grade-level appropriate material with...	<ul style="list-style-type: none"> <li>• Accuracy: reading material appropriate for grade 5 with 90-94% accuracy</li> <li>• Fluency: reading with appropriate silent and oral reading fluency rates as determined by text demands and purpose for reading</li> <li>• Fluency: reading familiar text with phrasing and expression, and with attention to text features, such as punctuation, italics, and dialogue</li> </ul>
Applies word identification and decoding strategies by ...	<ul style="list-style-type: none"> <li>• Identifying multi-syllabic words by using knowledge of sounds, six syllable types/ syllable division, and word patterns (including prefixes, and suffixes)</li> <li>• Reading multi-syllabic words, by using knowledge of sounds, syllable types, or word patterns</li> <li>• Reading grade-level appropriate words (in connected text) with automaticity</li> <li>• Reading grade-appropriate words</li> </ul>
Students identify the meaning of unfamiliar vocabulary by...	<ul style="list-style-type: none"> <li>• Using strategies to unlock meaning (e.g., knowledge of word structure, including prefixes/suffixes and base words; or context clues; or other resources, such as dictionaries, glossaries; or prior knowledge)</li> </ul>
Shows breadth of vocabulary knowledge, demonstrating understanding of word meanings or relationships by ...	<ul style="list-style-type: none"> <li>• Identifying synonyms, antonyms, homonyms/homophones, or shades of meaning (State)</li> <li>• Selecting appropriate words or explaining the use of words in context, including, content specific vocabulary, words with multiple meanings, or precise vocabulary</li> </ul>
Demonstrate initial understanding of elements of literary texts by...	<ul style="list-style-type: none"> <li>• Identifying or describing character(s), setting, problem/solution, major events, or plot, as appropriate to text; or identifying any significant changes in character(s) over time</li> <li>• Paraphrasing or summarizing key ideas/plot, with major events sequenced, as appropriate to text</li> <li>• Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>• Identifying the characteristics of a variety of types of text (e.g., literary texts: poetry, plays, fairytales, fantasy, fables, realistic fiction, folktales, historical fiction, mysteries)</li> <li>• Identifying literary devices as appropriate to genre: rhyme, alliteration, simile, dialogue, imagery, or simple metaphors</li> </ul>
Analyze and interpret elements of literary texts, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>• Making logical predictions</li> <li>• Describing characters' physical characteristics, personality traits, or interactions; or providing examples of thoughts, words, or actions that reveal characters' personality traits or their changes over time</li> <li>• Making inferences about problem, conflict, solution, or the relationship among elements (plot, character, setting) within</li> </ul>

	<p>text (e.g., how the setting affects a character or plot development)</p> <ul style="list-style-type: none"> <li>• Identifying the narrator</li> <li>• Identifying author's message or theme (implied or stated, as in a fable)</li> <li>• 6 Identifying causes or effects, including possible motives of character</li> </ul>
Analyze and interpret author's craft, citing evidence where appropriate by...	<ul style="list-style-type: none"> <li>• Demonstrating knowledge of use of literary elements and devices (i.e., imagery, exaggeration) to analyze literary works</li> </ul>
Generates a personal response to what is read aloud through a variety of means by...	<ul style="list-style-type: none"> <li>• Comparing stories or other texts to related personal experience, prior knowledge, or to other books</li> <li>• Providing relevant details to support the conclusions made</li> </ul>
Demonstrate initial understanding of informational texts (expository and practical texts) by...	<ul style="list-style-type: none"> <li>• Obtaining information from text features (e.g., table of contents, glossary, index, transition words /phrases, bold or italicized text, headings, subheadings, graphic organizers, charts, graphs, or illustrations)</li> <li>• Using information from the text to answer questions related to main/central ideas or key details</li> <li>• Organizing information to show understanding (e.g., representing main/central ideas or details within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting)</li> <li>• Generating questions before, during, and after reading to enhance recall, expand understanding and/or gain new information</li> <li>• Identifying the characteristics of a variety of types of text (e.g., reference: dictionaries, glossaries, reports, encyclopedias, children's magazines, content trade books, textbooks, student newspapers, Internet websites, biographies; and practical/functional texts: procedures, instructions, book orders, announcements, invitations, recipes, menus)</li> </ul>
Analyze and interpret informational text read-aloud, citing evidence as appropriate by...	<ul style="list-style-type: none"> <li>• Connecting information within a text or across texts</li> <li>• Synthesizing information within or across text(s) (e.g., constructing appropriate titles; or formulating assertions or controlling ideas)</li> <li>• Drawing inferences about text, including author's purpose (e.g., to inform, explain, entertain, persuade) or message; or forming and supporting opinions/judgments and assertions about central ideas that are relevant</li> <li>• Distinguishing fact from opinion</li> <li>• Making inferences about causes or effects</li> </ul>
Demonstrates ability to monitor comprehension and strategy use for different types of texts	<ul style="list-style-type: none"> <li>• Using a range of self-monitoring and self-correction approaches (e.g., predicting upcoming text, monitoring, adjusting, and confirming through use of print, syntax/ language structure, semantics/ meaning, or other context cues)</li> </ul>
Uses comprehension strategies (flexibly and as needed) while listening to literary or informational	<ul style="list-style-type: none"> <li>• using prior knowledge; sampling a page for readability; summarizing; predicting and making text-based inferences;</li> </ul>

text	determining importance; generating literal, clarifying, and inferential questions; constructing sensory images (e.g., making pictures in one's mind); making connections (text to self, text to text, and text to world); taking notes; locating, using, and analyzing text features (e.g. transition words, subheadings, bold/italicized print, parts of the book); or using text structure clues (e.g. chronological, cause/effect, compare/contrast, proposition and support, description classification, and logical/ sequential)
Demonstrates the habit of reading widely and extensively by...	<ul style="list-style-type: none"> <li>• Reading with frequency, including in-school, out-of-school, and summer reading</li> </ul>
Demonstrates participation in a literate community by...	<ul style="list-style-type: none"> <li>• Reading from a wide range of genres/kinds of text and a variety of authors (e.g., literary, informational, and practical texts)</li> <li>• Reading multiple texts for depth of understanding an author, subject, theme, or genre</li> </ul>

## Grade Level Expectations for Written and Oral Communication – End of Grade K

<b>Standard (Grade Level Expectation)</b>	<b>Knowledge and Skills</b>
Students use prewriting, drafting, revising, editing, and critiquing to produce final drafts of written products.	<ul style="list-style-type: none"> <li>At this level, students will only be prewriting and drafting</li> </ul>
Students demonstrate command of the structures of sentences, paragraphs, and text by:	<ul style="list-style-type: none"> <li>Express an idea by using pictures and letters</li> </ul>
In response to literary or informational text, students show understanding of plot/ideas/concepts by:	<ul style="list-style-type: none"> <li>Representing understanding of text through pictures (pictures may include labels, which might only include beginning sounds and/or ending sounds)</li> </ul>
In response to literary or informational text read aloud, students make and support analytical judgments about text by:	<ul style="list-style-type: none"> <li>Using prior knowledge or reference to text to respond to a question using pictures (pictures may include labels, which might only include beginning sounds and/or ending sounds)</li> </ul>
Students organize and relate a story line/plot/series of events by....	<ul style="list-style-type: none"> <li>Using pictures to create an understandable story line, when given a structure (pictures may include labels)</li> </ul>
Students demonstrate use of narrative strategies by....	<ul style="list-style-type: none"> <li>Expressing ideas and recognizing that experiences and stories can be written about</li> <li>Using pictures to create character(s)</li> </ul>
In informational writing (reports or procedures), students organize ideas/concepts by...	<ul style="list-style-type: none"> <li>Naming or labeling objects or parts</li> <li>Representing facts through pictures</li> </ul>
In informational Writing (reports or procedures only), students demonstrate use of a range of elaboration strategies by...	<ul style="list-style-type: none"> <li>Using pictures to illustrate details/information related to topic (pictures may include labels)</li> </ul>
In independent writing, students demonstrate command of appropriate English spelling conventions by...	<ul style="list-style-type: none"> <li>Using phonemic awareness and letter knowledge to spell independently (using phonemic or temporary spelling) and logically represent consonant sounds (e.g., initial or final sounds)</li> </ul>
In oral communication, students demonstrate interactive listening by...	<ul style="list-style-type: none"> <li>Following simple verbal instructions and directions</li> <li>Listening and responding to stories, songs, or poems</li> <li>Participating in large group discussions</li> <li>Understanding that communicating is verbal and nonverbal</li> <li>Waiting for appropriate turn to speak</li> </ul>
In oral communication, students make oral presentations by...	<ul style="list-style-type: none"> <li>Speaking clearly and distinctly, orally sharing information and experiences</li> <li>Demonstrating an awareness of options of language (e.g., imitating speech patterns and identifying source of sounds, interpreting nonverbal messages through pictures)</li> <li>Telling stories about pictures, books or experiences</li> <li>Providing feedback to audience</li> <li>Recognizing role of audience</li> </ul>

## Grade Level Expectations for Written and Oral Communication - End of Grade 1

Standard (Grade Level Expectation)	Knowledge and Skills
Students use prewriting, drafting, revising, editing, and critiquing to produce final drafts of written products.	<ul style="list-style-type: none"> <li>At this level, students will only be prewriting and drafting</li> </ul>
Students demonstrate command of the structures of sentences, paragraphs, and text by:	<ul style="list-style-type: none"> <li>Writing recognizable short sentences</li> <li>Distinguishing between letters, words, and sentences</li> <li>Applying directionality as appropriate to text (e.g. left to right, top to bottom)</li> </ul>
In response to literary or informational text, students show understanding of plot/ideas/concepts by:	<ul style="list-style-type: none"> <li>Representing understanding of text through pictures, words, sentences, or some combination</li> </ul>
In response to literary or informational text read aloud <u>or independently</u> , students make and support analytical judgments about text by:	<ul style="list-style-type: none"> <li>Using prior knowledge or reference to text to respond to a question (evidence may take the form of pictures, words, sentences, or some combination)</li> </ul>
Students organize and relate a story line/plot/series of events by...	<ul style="list-style-type: none"> <li>Creating an understandable story line, when given a structure (may take form of words or pictures or some combination)</li> </ul>
Students demonstrate use of narrative strategies by....	<ul style="list-style-type: none"> <li>Creating character(s) (may take form of words or pictures or some combination)</li> <li>Writing about observations and experiences</li> <li>Extending ideas</li> </ul>
In informational writing (reports or procedures), students organize ideas/concepts by...	<ul style="list-style-type: none"> <li>Sorting and classifying facts</li> <li>Representing facts through pictures, words, sentences, or some combination</li> <li>Listing steps of a procedure in a logical order, with instructional support</li> </ul>
In informational writing (reports or procedures), students effectively convey purpose by...	<ul style="list-style-type: none"> <li>Uses picture to create meaning</li> </ul>
In informational Writing (reports or procedures only), students demonstrate use of a range of elaboration strategies by...	<ul style="list-style-type: none"> <li>Identifying details/information related to topic and/or given focus (details/information may take the form of pictures with captions, words, sentences, or some combination)</li> </ul>
In independent writing, students demonstrate command of appropriate English spelling conventions by...	<ul style="list-style-type: none"> <li>Using phonemic awareness and letter knowledge to spell independently (using phonemic or temporary spelling when needed)</li> <li>Correctly spelling many common words (e.g., had, can)</li> </ul>
In oral communication, students demonstrate interactive listening by ...	<ul style="list-style-type: none"> <li>Following simple verbal instructions and directions</li> <li>Responding to or reacting to stories, songs or poems by using simple words, phrases, and sentences</li> <li>Participating in large group discussions to show understanding</li> <li>Understanding that communicating is verbal and nonverbal</li> <li>Attending to speaker and waiting for appropriate turn to speak</li> </ul>
In oral communication, students make oral	<ul style="list-style-type: none"> <li>Orally ordering ideas in a sequence or telling a familiar</li> </ul>

presentations by...

story

- Using various forms of linguistic elements and structures (e.g., saying "Please" in a command, asking about the weather as a form of polite address, stating a question in affirmative form)
- Telling/retelling stories using details
- Providing appropriate feedback to audience
- Recognizing role of audience

## Grade Level Expectations for Written and Oral Communication - End of Grade 2

Standard (Grade Level Expectation)	Knowledge and Skills
Students demonstrate command of the structures of sentences, paragraphs, and text by:	<ul style="list-style-type: none"> <li>• Writing short sentences</li> <li>• Distinguishing between letters, words, sentences, and paragraphs</li> <li>• Applying directionality as appropriate to text (e.g. left to right, top to bottom, front and back)</li> </ul>
In response to literary or informational text, students show understanding of plot/ideas/concepts by:	<ul style="list-style-type: none"> <li>• Selecting information to set context/background</li> </ul>
In response to literary or informational text, students make and support analytical judgments about text by:	<ul style="list-style-type: none"> <li>• Stating a focus (purpose), when responding to a given question</li> <li>• Using details or references to text to support a given focus (Note: support may include prior knowledge)</li> <li>• Organizing ideas by using a beginning, middle, and concluding statement/sentence given a structure</li> </ul>
In written narratives, students organize and relate a story line/plot/series of events by....	<ul style="list-style-type: none"> <li>• Creating a clear, understandable story line, with a beginning, middle, and end, when given a structure</li> </ul>
Students demonstrate use of narrative strategies by....	<ul style="list-style-type: none"> <li>• Writing about observations and experiences</li> <li>• Extending and elaborating ideas</li> <li>• Creating character(s) through description</li> </ul>
In informational writing (reports or procedures), students organize ideas/concepts by...	<ul style="list-style-type: none"> <li>• Using a given organizational structure for grouping facts (e.g., template, frame, graphic organizer), with instructional support</li> <li>• Selecting facts to set context/background</li> </ul>
In informational writing (reports or procedures), students organize ideas/concepts by ...	<ul style="list-style-type: none"> <li>• Listing steps of a procedure in a logical order</li> <li>• Providing a list of resources (e.g. materials to be used in a task)</li> </ul>
In informational writing (reports or procedures), students effectively convey purpose by...	<ul style="list-style-type: none"> <li>• Establishing a topic</li> <li>• Restating a given focus/controlling idea on a topic (purpose)</li> </ul>
In informational Writing (reports or procedures only), students demonstrate use of a range of elaboration strategies by....	<ul style="list-style-type: none"> <li>• Including details/information related to topic or given focus</li> <li>• Using sufficient details/pictures to illustrate facts</li> </ul>
In independent writing, students demonstrate command of appropriate English conventions by...	<ul style="list-style-type: none"> <li>• Using capital letters for the beginning of sentences and names</li> <li>• Using correct <i>end</i> punctuation in simple sentences (e.g., period)</li> <li>• Correctly spelling grade-appropriate high frequency words</li> <li>• Correctly spelling most words with regularly spelled patterns (e.g., consonant-vowel-consonant, CVC with silent e, one syllable words with blends)</li> <li>• Giving a readable and accurate phonetic spelling for words that have not been taught</li> </ul>
In oral communication, students demonstrate interactive listening by...	<ul style="list-style-type: none"> <li>• Following multi-step verbal instructions and directions to answer questions or perform tasks</li> <li>• Conversing, and asking questions about content (e.g.,</li> </ul>

	<p>stories, songs or poems)</p> <ul style="list-style-type: none"> <li>• Participating in large group discussions to show understanding</li> <li>• Understanding that meaning can be conveyed by facial expressions</li> <li>• Attending to speaker and waiting for appropriate turn to speak</li> </ul>
<p>In oral communication, students make oral presentations by...</p>	<ul style="list-style-type: none"> <li>• Orally ordering ideas in a sequence, carrying on a conversation, asking and answering questions</li> <li>• Using various linguistic elements and structures to convey meaning</li> <li>• Telling stories or giving information using details</li> <li>• Providing appropriate feedback to audience</li> <li>• Using strategies to engage audience (e.g., using eye-contact and adjustment of rate and volume)</li> </ul>

## Grade Level Expectations for Written and Oral Communication - End of Grade 3

<b>Standard (Grade Level Expectation)</b>	<b>Knowledge and Skills</b>
Demonstrates the habit of writing extensively by:	<ul style="list-style-type: none"> <li>• Writing with frequency including in-school, out-of-school, and during the summer</li> <li>• Sharing thoughts, observations, or impressions</li> <li>• Generating topics for writing</li> </ul>
Students demonstrate command of the structures of sentences, paragraphs, and text by:	<ul style="list-style-type: none"> <li>• Writing a variety of complete simple sentences</li> <li>• Recognizing indentations for new paragraphs</li> <li>• Recognizing complete sentences</li> <li>• Applying directionality as appropriate to text</li> </ul>
In response to literary or informational text, students show understanding of plot/ideas/concepts by:	<ul style="list-style-type: none"> <li>• Selecting appropriate information to set context/background</li> <li>• Selecting ideas that support the development of a summary</li> <li>• Connecting what has been read (plot/ideas/concepts) to prior knowledge, which might include other texts</li> </ul>
In response to literary or informational text, students make and support analytical judgments about text by:	<ul style="list-style-type: none"> <li>• Stating a focus (purpose), when responding to a given question</li> <li>• Making inferences about content, events, characters, or setting</li> <li>• Using details or references to text to support focus (Note: support may include prior knowledge)</li> <li>• Organizing ideas, using basic transitional words (e.g., first, next, then, finally) and having a concluding statement</li> </ul>
In written narratives, students organize and relate a story line/plot/series of events by....	<ul style="list-style-type: none"> <li>• Creating a clear, understandable story line with a beginning, middle, and end</li> <li>• Using basic transition words, when appropriate</li> </ul>
Students demonstrate use of narrative strategies by....	<ul style="list-style-type: none"> <li>• Creating character(s) through description of physical attributes</li> <li>• Writing about observations and experiences</li> <li>• Extending and elaborating ideas with purpose</li> </ul>
In informational writing (reports or procedures), students organize ideas/concepts by...	<ul style="list-style-type: none"> <li>• Using a given organizational structure for grouping facts and ideas (e.g., template, frame, graphic organizer)</li> <li>• Selecting appropriate facts to set context/background</li> <li>• Using basic transition words, when appropriate</li> <li>• Using numbering or words to arrange the steps in a logical manner</li> <li>• Providing a concluding statement</li> <li>• Providing a list of resources (e.g. materials to be used in a task)</li> </ul>
In informational writing (reports or procedures), students effectively convey purpose by...	<ul style="list-style-type: none"> <li>• Establishing a topic</li> <li>• Stating a focus/controlling idea on a topic</li> </ul>
In informational Writing (reports or procedures only), students demonstrate use of a range of elaboration strategies by....	<ul style="list-style-type: none"> <li>• Including details/information relevant to topic and/or focus</li> <li>• Including sufficient details for appropriate depth of</li> </ul>

	information: naming, describing, explaining, comparing, use of visual images
In independent writing, students demonstrate command of appropriate English conventions by...	<ul style="list-style-type: none"> <li>• Using capital letters for the beginning of sentences and names</li> <li>• Using <i>end</i> punctuation correctly in simple sentences (i.e., period, question mark, exclamation point)</li> <li>• Correctly spelling grade-appropriate, high frequency words and using within-word patterns to correct spelling</li> </ul>
In oral communication, students demonstrate interactive listening by	<ul style="list-style-type: none"> <li>• Following multi-step verbal instructions and directions to answer questions, perform tasks, or solve problems</li> <li>• Conversing, and asking questions about content (e.g., stories, songs, or poems)</li> <li>• Participating in large group discussions to show understanding of how other group members think</li> <li>• Attending to speaker and waiting for appropriate turn to speak</li> </ul>
In oral communication, students make oral presentations by...	<ul style="list-style-type: none"> <li>• Using standards for good speaking in different kinds of small groups and cultural settings</li> <li>• Using various linguistic elements and structures to convey meaning</li> <li>• Telling stories, giving information using details and providing a conclusion</li> <li>• Providing appropriate feedback to audience</li> <li>• Using strategies to engage audience (e.g., eye-contact and adjustment of rate and volume)</li> </ul>

## Grade Level Expectations for Written and Oral Communication - End of Grade 4

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates the habit of writing extensively by...	<ul style="list-style-type: none"> <li>• Writing with frequency including in-school, out-of-school, and during the summer</li> <li>• Sharing thoughts, observations, or impression</li> <li>• Generating topics for writing</li> </ul>
Students demonstrate command of the structures of sentences, paragraphs, and text by...	<ul style="list-style-type: none"> <li>• Writing a variety of complete simple and compound sentences</li> <li>• Recognizing indentations for new paragraphs</li> <li>• Applying directionality as appropriate to text</li> </ul>
In response to literary or informational text, students show understanding of plot/ideas/concepts by...	<ul style="list-style-type: none"> <li>• Selecting appropriate information to set context/background</li> <li>• Writing an introduction that sets context/background</li> <li>• Summarizing ideas</li> <li>• Connecting what has been read (plot/ideas/concepts) to prior knowledge, which might include other texts</li> </ul>
In response to literary or informational text, students make and support analytical judgments about text by...	<ul style="list-style-type: none"> <li>• Stating and maintaining a focus (purpose), when responding to a given question</li> <li>• Making inferences about content, events, characters, setting, or common themes</li> <li>• Using specific details and references to text to support focus</li> <li>• Organizing ideas, using basic transitional words/phrases and writing a conclusion</li> </ul>
In written narratives, students organize and relate a story line/plot/series of events by...	<ul style="list-style-type: none"> <li>• Creating a clear, understandable story line with a beginning, middle, and end</li> <li>• Establishing a problem and solution</li> <li>• Establishing transitions by using signal words/phrases</li> </ul>
Students demonstrate use of narrative strategies by...	<ul style="list-style-type: none"> <li>• Using relevant and descriptive details</li> <li>• Identifying character(s)</li> <li>• Creating character(s) through description of physical attributes and behaviors</li> <li>• Writing about observations and experiences</li> <li>• Selecting and elaborating important ideas</li> </ul>
In informational writing (reports or procedures), students organize ideas/concepts by...	<ul style="list-style-type: none"> <li>• Grouping ideas logically (e.g., predictable categories, steps of a procedure, reasons/arguments)</li> <li>• Writing an introduction that sets the context (includes materials list in procedures)</li> <li>• Selecting appropriate information to set context/background</li> <li>• Using transition words or phrases</li>   <li>• Using numbering or words to arrange the steps in a logical manner</li> <li>• Writing a conclusion</li> <li>• Providing a list of resources (e.g. materials used in a task; sources used for reference)</li> </ul>
In informational writing (reports or	<ul style="list-style-type: none"> <li>• Establishing a topic</li> </ul>

procedures), students effectively convey purpose by...	<ul style="list-style-type: none"> <li>• Stating and maintaining a focus/controlling idea on a topic</li> </ul>
In informational Writing (reports or procedures only), students demonstrate use of a range of elaboration strategies by....	<ul style="list-style-type: none"> <li>• Including facts and details relevant to focus/controlling idea</li> <li>• Including sufficient details or facts for appropriate depth of information: naming, describing, explaining, comparing, use of visual images</li> </ul>
In independent writing, students demonstrate command of appropriate English conventions by...	<ul style="list-style-type: none"> <li>• Identifying grammatical errors, when given examples</li> <li>• Applying basic capitalization rules</li> <li>• Using commas correctly in dates and in a series (Note: either form is correct <i>x, y, and z</i> or <i>x, y and z</i>)</li> <li>• Using <i>end</i> punctuation correctly in a variety of sentence structures</li> <li>• Correctly spelling grade-appropriate, high frequency words and recognizing syllables and affix patterns/rules that are characteristic of the English spelling system</li> </ul>
In oral communication, students demonstrate interactive listening by...	<ul style="list-style-type: none"> <li>• Following verbal instructions to answer questions, to perform tasks, or to solve problems</li> <li>• Paraphrasing and asking questions about content</li> <li>• Participating in large and small group discussions to show understanding how other group members think</li> <li>• Identifying choices, alternatives and consequences for problem solving</li> <li>• Attending to speaker and waiting for appropriate turn to speak</li> </ul>
In oral communication, students make oral presentations by...	<ul style="list-style-type: none"> <li>• Using rules that regulate social conventions in small groups (e.g., interviews, small group discussions)</li> <li>• Identifying how different verbal and nonverbal choices alter the meanings conveyed to others</li> <li>• Telling stories, giving information using details, providing conclusions that include inflectional tone to convey meaning</li> <li>• Providing effective and appropriate feedback to audience</li> <li>• Using a variety of strategies to engage audience (e.g., eye contact, voice tone, and gestures)</li> </ul>

## Grade Level Expectations for Written and Oral Communication - End of Grade 5

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates the habit of writing extensively by...	<ul style="list-style-type: none"> <li>• Writing with fluency including in-school, out-of-school, and during the summer</li> <li>• Sharing thoughts, observations, or impressions</li> <li>• Generating topics for writing</li> <li>• Writing in a variety of genres</li> </ul>
Students demonstrate command of the structures of sentences, paragraphs, and text by...	<ul style="list-style-type: none"> <li>• Using varied sentence length and structure to enhance meaning (e.g. including phrases and clauses)</li> <li>• Using the paragraph form: indenting, main idea, supporting details</li> <li>• Recognizing organizational structure within paragraphs</li> <li>• Applying directionality as appropriate to text</li> </ul>
In response to literary or informational text, students show understanding of plot/ideas/concepts by...	<ul style="list-style-type: none"> <li>• Selecting appropriate information to set context/background</li> <li>• Writing an introduction that sets context/background</li> <li>• Summarizing key ideas</li> <li>• Connecting what has been read (plot/ideas/concepts) to prior knowledge, which might include other texts</li> </ul>
In response to literary or informational text, students make and support analytical judgments about text by...	<ul style="list-style-type: none"> <li>• Stating and maintaining a focus (purpose), when responding to a given question</li> <li>• Making inferences about content, events, characters, setting, or common themes</li> <li>• Using specific details and references to text or citations to support focus</li> <li>• Organizing ideas, using basic transitional words/phrases and writing a conclusion that provides closure</li> </ul>
In written narratives, students organize and relate a story line/plot/series of events by...	<ul style="list-style-type: none"> <li>• Creating a clear and coherent (logically consistent) story line</li> <li>• Establishing context (setting or background information) problem/conflict/challenge, and resolution</li> <li>• Using transition word/phrases to establish clear chronology and to enhance meaning</li> </ul>
Students demonstrate use of narrative strategies by...	<ul style="list-style-type: none"> <li>• Using relevant and descriptive details to advance the plot/story line</li> <li>• Using dialogue to advance the plot/story line</li> <li>• Developing characters through description</li> <li>• Establishing a focus when writing about observations and experiences</li> <li>• Selecting and elaborating important ideas; and excluding extraneous details</li> </ul>
In informational writing (reports or procedures), students organize ideas/concepts by...	<ul style="list-style-type: none"> <li>• Using an organizational text structure appropriate to focus/controlling idea</li> <li>• Selecting appropriate information to set the context</li> <li>• Using transition words or phrases appropriate to organizing text structure</li> <li>• Writing a conclusion that provides closure</li> <li>• Providing a list of resources (e.g. materials used in a</li> </ul>

	task; sources used for reference)
In informational writing (reports or procedures), students effectively convey purpose by...	<ul style="list-style-type: none"> <li>• Establishing a topic</li> <li>• Stating and maintaining a focus/controlling idea on a topic</li> </ul>
In informational Writing (reports or procedures only), students demonstrate use of a range of elaboration strategies by....	<ul style="list-style-type: none"> <li>• Including facts and details relevant to focus/controlling idea, and excluding extraneous information</li> <li>• Including sufficient details or facts for appropriate depth of information: naming, describing, explaining, comparing, use of visual images</li> </ul>
In independent writing, students demonstrate command of appropriate English conventions by...	<ul style="list-style-type: none"> <li>• Identifying or correcting grammatical errors</li> <li>• Applying basic capitalization rules</li> <li>• Using punctuation to clarify meaning</li> <li>• Correctly spelling grade-appropriate, high frequency words including homophones and homonyms and applying syllables and affix patterns/ rules</li> </ul>
In oral communication, students demonstrate interactive listening by	<ul style="list-style-type: none"> <li>• Following verbal instructions to perform specific tasks, to answer questions, or to solve problems</li> <li>• Summarizing, paraphrasing, questioning, or contributing to information presented</li> <li>• Participating in large and small group discussions showing respect for a range of individual ideas</li> <li>• Reaching consensus to solve a problem, make a decision, or achieve a goal</li> </ul>
In oral communication, students make oral presentations by...	<ul style="list-style-type: none"> <li>• Demonstrating skills required in interpersonal, small group, and public exchanges (e.g., discussions, interviews)</li> <li>• Using verbal and nonverbal choices to convey consistent focus</li> <li>• Telling stories, giving information using details and providing a coherent conclusion</li> <li>• Providing effective and appropriate feedback to audience and small groups</li> <li>• Using a variety of strategies to engage audience (e.g., eye contact, voice tone, and gestures)</li> </ul>

## Grade Level Expectations for Mathematics - End of Grade K

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates conceptual understanding of rational numbers	<ul style="list-style-type: none"> <li>• Identifies and represents value of whole numbers from 0 to 12</li> <li>• apply the concepts of equivalency</li> </ul>
Demonstrates understanding of the relative magnitude of numbers from 0 to 20	<ul style="list-style-type: none"> <li>• one-to-one correspondence</li> <li>• compare whole numbers to each other or to benchmark whole numbers (5, 10)</li> <li>• uses "1 more" or "1 less"</li> <li>• uses models, representations, or number lines.</li> </ul>
Demonstrates conceptual understanding of mathematical operations	<ul style="list-style-type: none"> <li>• addition and subtraction of whole numbers (from 0 to 10)</li> <li>• joining actions, separating actions, part-part whole relationships, and comparison situations;</li> <li>• addition of multiple one-digit whole numbers</li> </ul>
Demonstrates understanding of monetary value	<ul style="list-style-type: none"> <li>• knows the names and values for coins (penny, nickel and dime).</li> </ul>
Mentally adds and subtracts whole numbers	<ul style="list-style-type: none"> <li>• names the number that is one more or one less than the original number</li> </ul>
Makes estimates	<ul style="list-style-type: none"> <li>• logically guesses the number of objects in a set (up to 20)</li> <li>• makes and revises estimates by counting</li> </ul>
Uses properties, attributes, composition, or decomposition to sort or classify polygons	<ul style="list-style-type: none"> <li>• Identifies triangles, squares, rectangles, rhombi, trapezoids, and hexagons or objects by using one non-measurable or measurable attribute</li> <li>• recognizes, names, and builds polygons and circles in the environment.</li> </ul>
Demonstrates conceptual understanding of measurable attributes	<ul style="list-style-type: none"> <li>• uses comparative language to describe and compare attributes of objects (length [longer, shorter], height [taller, shorter], weight [heavier, lighter], temperature [warmer, cooler], and capacity [more, less]);</li> <li>• compares objects visually and with direct comparison.</li> </ul>
Determines elapsed and accrued time	<ul style="list-style-type: none"> <li>• calendar patterns (days of the week, yesterday, today, and tomorrow),</li> <li>• the sequence of events in a day</li> <li>• identifies a clock and calendar as measurement tools (days of week, months of the year).</li> </ul>
Demonstrates understanding of spatial relationships	<ul style="list-style-type: none"> <li>• uses location and position by using positional words to locate and describe where an object is found in the environment.</li> </ul>
Identifies and extends to specific cases a variety of patterns	<ul style="list-style-type: none"> <li>• extending the pattern to the next one, two or three elements, or by translating AB patterns</li> </ul>

	<ul style="list-style-type: none"> <li>across formats</li> <li>identifying number patterns in the environment.</li> </ul>
Interprets a given representation created by the class	<ul style="list-style-type: none"> <li>answer questions related to the data, or to analyze the data to formulate conclusions using words, diagrams, or verbal/scribed responses to express answers.</li> </ul>
Analyzes patterns, trends, or distributions in data in a variety of contexts	<ul style="list-style-type: none"> <li>determining or using more, less, or equal</li> </ul>
Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content	<ul style="list-style-type: none"> <li>Formulate and solve multi-step problems from everyday and mathematical situations.</li> <li>Solve problems using a variety of strategies (e.g., working backwards, looking for patterns and relationships; guess and check; making tables, charts, or organized lists; solving a simpler version of a problem, drawing a diagram; or creating a model)</li> <li>Verify and interpret results with respect to the original problem.</li> <li>Determine if the solution of a problem is reasonable.</li> <li>Solve problems using manipulatives, graphs, charts, diagrams, and calculators.</li> <li>Demonstrate that a problem may be solved in more than one way.</li> <li>Exhibit confidence in their ability to solve problems independently and in groups.</li> <li>Display increasing perseverance, and persistence in problem solving</li> </ul>
Students will use mathematical reasoning and proof	<ul style="list-style-type: none"> <li>Use models, known facts, properties, and relationships to explain their thinking.</li> <li>Justify solution processes and answers (e.g., "I chose this method to solve the problem because...").</li> <li>Draw conclusions using inductive reasoning.</li> <li>Identify the missing information needed to find a solution to a given story problem.</li> <li>Use patterns and relationships to analyze mathematical situations (e.g., count by fives).</li> </ul>
Students will communicate their understanding of mathematics	<ul style="list-style-type: none"> <li>Demonstrate mathematical communication through discussion, reading, writing, listening, and responding, individually and in groups.</li> <li>Discuss relationships between everyday language and mathematical language and symbols (e.g., words that mean something different in mathematics and in everyday life).</li> <li>Explain conclusions, thought processes, and strategies in problem-solving situations.</li> <li>Discuss, illustrate, and write about mathematical concepts and relationships.</li> </ul>

	<ul style="list-style-type: none"> <li>• Draw pictures and use objects to illustrate mathematical concepts.</li> </ul>
<p>Students will create and use representations to communicate mathematical ideas and to solve problems</p>	<ul style="list-style-type: none"> <li>• Create and use age level appropriate representations to organize, record, and communicate mathematical ideas (e.g., students should recognize the relationship among seven counters, seven tally marks, and the symbol 7).</li> <li>• Select, apply, and translate among mathematical representations to solve problems (e.g., representing fractions with circles, with geoboards, and with pattern blocks).</li> <li>• Link different representations.</li> <li>• Use representations to model and interpret physical, social, and mathematical phenomena.</li> <li>• Use conventional and self-generated (invented) representations and connect them.</li> <li>• Realize that any representation is subject to multiple interpretations (e.g., drawings and graphs can be read in a different way).</li> </ul>
<p>Students will recognize, explore, and develop mathematical connections</p>	<ul style="list-style-type: none"> <li>• Link conceptual and procedural knowledge (e.g., they will know that when they "regroup," they are simply changing the representation of the minuend, but not its value).</li> <li>• Recognize and use mathematics in other curriculum areas (e.g., science, social studies).</li> <li>• Recognize and use mathematics in their daily lives (e.g., graphs, tables, or maps).</li> <li>• Identify mathematical situations occurring in literature for children.</li> <li>• Identify examples of geometry in nature, art, and architecture.</li> </ul>

## Grade Level Expectations for Mathematics - End of Grade 1

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates conceptual understanding of rational numbers	<ul style="list-style-type: none"> <li>• Identifies and represents value of whole numbers from 0 to 100</li> <li>• apply the concepts of equivalency</li> <li>• uses models, explanations, or other representations; and positive fractional numbers</li> </ul>
Demonstrates understanding of the relative magnitude of numbers from 0 to 199	<ul style="list-style-type: none"> <li>• ordering whole numbers</li> <li>• compare whole numbers to each other or to benchmark whole numbers (5, 10, 25, 50, 75, 100)</li> <li>• demonstrating an understanding of the relation of inequality when comparing whole numbers by using "1 more", "1 less", "5 more", "5 less", "10 more", "10 less"</li> <li>• connecting number words (from 0 to 20) and numerals (from 0 to 100) to the quantities and positions that they represent using investigations, models, representations, or number lines</li> </ul>
Demonstrates conceptual understanding of mathematical operations	<ul style="list-style-type: none"> <li>• addition and subtraction of whole numbers (from 0 to 30)</li> <li>• joining actions, separating actions, part-part whole relationships, and comparison situations; addition of multiple one-digit whole numbers</li> </ul>
Demonstrates understanding of monetary value	<ul style="list-style-type: none"> <li>• knowing the names and values for coins (penny, nickel and dime, quarter)</li> <li>• adding collections of like coins together to a sum no greater than \$1.00</li> </ul>
Mentally adds and subtracts whole numbers	<ul style="list-style-type: none"> <li>• naming the number that is two more or two less than the original number</li> <li>• adds and subtracts whole number facts to ten</li> </ul>
Makes estimates	<ul style="list-style-type: none"> <li>• logically guesses the number of objects in a set (up to 30)</li> <li>• makes and revises estimates by counting</li> </ul>
Applies properties of numbers	<ul style="list-style-type: none"> <li>• odd, even, composition, and decomposition [e.g., 5 is the same as <math>2 + 3</math>]</li> <li>• properties (commutative and identity for addition)</li> <li>• solve problems and to simplify computations involving whole numbers.</li> </ul>
Uses properties, attributes, composition, or decomposition to sort or classify polygons	<ul style="list-style-type: none"> <li>• Identifies triangles, squares, rectangles, rhombi, trapezoids, and hexagons or objects by using two non-measurable or measurable attributes</li> <li>• recognizes, names, builds, and draws polygons and circles in the environment.</li> </ul>

Demonstrates conceptual understanding of congruency	<ul style="list-style-type: none"> <li>making mirror images and creating shapes that have line symmetry</li> </ul>
conceptual understanding of the length/height of a two-dimensional object	<ul style="list-style-type: none"> <li>using non-standard units (e.g. comparing objects to trains of small cubes, using iterations of a small unit to measure an object).</li> </ul>
Demonstrates conceptual understanding of measurable attributes	<ul style="list-style-type: none"> <li>using comparative language to describe and compare attributes of objects (length [longer, shorter], height [taller, shorter], weight [heavier, lighter], temperature [warmer, cooler], and capacity [more, less]);</li> <li>compares objects visually and with direct comparison.</li> </ul>
Determines elapsed and accrued time	<ul style="list-style-type: none"> <li>calendar patterns (days of the week, yesterday, today, and tomorrow),</li> <li>the sequence of events in a day</li> <li>identifies a clock and calendar as measurement tools (days of week, months of the year).</li> <li>recognizes an hour and "on the <math>\frac{1}{2}</math> hour".</li> </ul>
Demonstrates understanding of spatial relationships	<ul style="list-style-type: none"> <li>uses positional words (e.g., close by, on the right, underneath, above, beyond) to describe one location in reference to another on a map, in a diagram, and in the environment</li> </ul>
Identifies and extends to specific cases a variety of patterns	<ul style="list-style-type: none"> <li>repeating and growing [numeric and non-numeric] patterns represented in models, tables, or sequences by extending the pattern to the next one, two, or three elements, finding a missing element (e.g., 2, 4, 6, ____, 10), or</li> <li>translating repeating patterns across formats (e.g., an abb pattern can be represented as snap, clap, clap; or red, yellow, yellow; or 1,2,2).</li> </ul>
Demonstrates conceptual understanding of equality	<ul style="list-style-type: none"> <li>finding the value that will make an open sentence true (e.g., <math>2 + W = 7</math>)</li> <li>using models, verbal explanations, or written equations.(limited to one operation and limited to use addition or subtraction)</li> </ul>
Interprets a given representation created by the class	<ul style="list-style-type: none"> <li>answer questions related to the data, or to analyze the data to formulate conclusions using words, diagrams, or verbal/scribed responses to express answers.</li> </ul>
Analyzes patterns, trends, or distributions in data in a variety of contexts	<ul style="list-style-type: none"> <li>determining or using more, less, or equal</li> </ul>
Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content	<ul style="list-style-type: none"> <li>Solve problems using a variety of strategies (e.g., working backwards, looking for patterns and relationships; guess and check; making tables,</li> </ul>

	<p>charts, or organized lists; solving a simpler version of a problem, drawing a diagram; or creating a model)</p> <ul style="list-style-type: none"> <li>• Verify and interpret results with respect to the original problem.</li> <li>• Determine if the solution of a problem is reasonable.</li> <li>• Solve problems using manipulatives, graphs, charts, diagrams, and calculators.</li> <li>• Demonstrate that a problem may be solved in more than one way.</li> <li>• Exhibit confidence in their ability to solve problems independently and in groups.</li> <li>• Display increasing perseverance, and persistence in problem solving.</li> <li>•</li> </ul>
<p>Students will use mathematical reasoning and proof</p>	<ul style="list-style-type: none"> <li>• Use models, known facts, properties, and relationships to explain their thinking.</li> <li>• Justify solution processes and answers (e.g., "I chose this method to solve the problem because...").</li> <li>• Draw conclusions using inductive reasoning.</li> <li>• Identify the missing information needed to find a solution to a given story problem.</li> <li>• Use patterns and relationships to analyze mathematical situations (e.g., count by fives).</li> </ul>
<p>Students will communicate their understanding of mathematics</p>	<ul style="list-style-type: none"> <li>• Demonstrate mathematical communication through discussion, reading, writing, listening, and responding, individually and in groups.</li> <li>• Discuss relationships between everyday language and mathematical language and symbols (e.g., words that mean something different in mathematics and in everyday life).</li> <li>• Explain conclusions, thought processes, and strategies in problem-solving situations.</li> <li>• Discuss, illustrate, and write about mathematical concepts and relationships.</li> <li>• Draw pictures and use objects to illustrate mathematical concepts.</li> </ul>
<p>Students will create and use representations to communicate mathematical ideas and to solve problems</p>	<ul style="list-style-type: none"> <li>• Create and use age level appropriate representations to organize, record, and communicate mathematical ideas (e.g., students should recognize the relationship among seven counters, seven tally marks, and the symbol 7).</li> <li>• Select, apply, and translate among mathematical representations to solve problems (e.g., representing fractions with circles, with geoboards, and with</li> </ul>

	<p>pattern blocks).</p> <ul style="list-style-type: none"> <li>• Link different representations.</li> <li>• Use representations to model and interpret physical, social, and mathematical phenomena.</li> <li>• Use conventional and self-generated (invented) representations and connect them.</li> <li>• Realize that any representation is subject to multiple interpretations (e.g., drawings and graphs can be read in a different way).</li> </ul>
<p>Students will recognize, explore, and develop mathematical connections</p>	<ul style="list-style-type: none"> <li>• Link conceptual and procedural knowledge (e.g., they will know that when they “regroup,” they are simply changing the representation of the minuend, but not its value).</li> <li>• Recognize and use mathematics in other curriculum areas (e.g., science, social studies).</li> <li>• Recognize and use mathematics in their daily lives (e.g., graphs, tables, or maps).</li> <li>• Identify mathematical situations occurring in literature for children.</li> <li>• Identify examples of geometry in nature, art, and architecture.</li> </ul>

## Grade Level Expectations for Mathematics - End of Grade 2

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates conceptual understanding of rational numbers	<ul style="list-style-type: none"> <li>• Identifies and represents value of whole numbers from 0 to 199</li> <li>• uses place value</li> <li>• apply the concepts of equivalency</li> <li>• uses models, explanations, or other representations; and positive fractional numbers</li> </ul>
Demonstrates understanding of the relative magnitude of numbers from 0 to 199	<ul style="list-style-type: none"> <li>• ordering whole numbers</li> <li>• compare whole numbers to each other or to benchmark whole numbers (5, 10, 25, 50, 75, 100, 125, 150, 175)</li> <li>• demonstrating an understanding of the relation of inequality when comparing whole numbers by using "1 more", "1 less", "5 more", "5 less", "10 more", "10 less", "100 more", "100 less.</li> <li>• connecting numerals to the quantities and positions that they represent using investigations, models, number lines, or explanations</li> </ul>
Demonstrates conceptual understanding of mathematical operations	<ul style="list-style-type: none"> <li>• addition and subtraction of whole numbers</li> <li>• joining actions, separating actions, part-part whole relationships, and comparison situations;</li> <li>• addition of multiple one-digit whole numbers</li> </ul>
Demonstrates understanding of monetary value	<ul style="list-style-type: none"> <li>• adding coins together to a value no greater than \$1.99 and representing the result in dollar notation;</li> <li>• making change from \$1.00 or less,</li> <li>• recognizing equivalent coin representations of the same value (values up to \$1.99).</li> </ul>
Mentally adds and subtracts whole numbers	<ul style="list-style-type: none"> <li>• adds and subtracts whole number facts to twenty</li> <li>• names the number that is 10 more or less than the original number</li> <li>• mentally adds and subtracts two-digit multiples of ten</li> </ul>
Makes estimates	<ul style="list-style-type: none"> <li>• logically guesses the number of objects in a set (up to 50) by selecting an appropriate method of estimation</li> </ul>
Applies properties of numbers	<ul style="list-style-type: none"> <li>• identifies odd, even</li> <li>• properties (commutative and identity for addition)</li> <li>• solve problems and to simplify computations involving whole numbers.</li> </ul>

Uses properties, attributes, composition, or decomposition to sort or classify polygons	<ul style="list-style-type: none"> <li>Identifies triangles, squares, rectangles, rhombi, trapezoids, and hexagons or objects by using two non-measurable or measurable attributes</li> </ul>
Demonstrates conceptual understanding of congruency	<ul style="list-style-type: none"> <li>composing and decomposing two-dimensional objects using models or explanations</li> <li>uses line symmetry to demonstrate congruent parts within a shape.</li> </ul>
Demonstrates conceptual understanding of perimeter and area	<ul style="list-style-type: none"> <li>using models or manipulatives to surround and cover polygons</li> </ul>
Demonstrates conceptual understanding of measurable attributes	<ul style="list-style-type: none"> <li>Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands</li> </ul>
Demonstrates understanding of spatial relationships	<ul style="list-style-type: none"> <li>uses positional language in two- and three-dimensional situations to describe and interpret relative positions.</li> </ul>
Identifies and extends (to specific cases) a variety of patterns	<ul style="list-style-type: none"> <li>(linear and non-numeric) represents in models, tables, or sequences by extending the pattern to the next element, or finding a missing element</li> </ul>
Demonstrates conceptual understanding of equality	<ul style="list-style-type: none"> <li>finding the value that will make an open sentence true</li> </ul>
Interprets a given representation	<ul style="list-style-type: none"> <li>answer questions related to the data, or to analyze the data to formulate conclusions.</li> </ul>
Analyzes patterns, trends, or distributions in data in a variety of contexts	<ul style="list-style-type: none"> <li>determines or using more, less, or equal</li> </ul>
Solve problems involving combinations using a variety of strategies	<ul style="list-style-type: none"> <li>Uses counting techniques to solve problems</li> </ul>
Determine probability of an event in which the sample space may or may not contain equally likely outcomes	<ul style="list-style-type: none"> <li>uses experiments to describe the likelihood or chance of an event using "more likely," "less likely," "equally likely," certain or impossible.</li> </ul>
In response to a teacher or student generated question or hypothesis, decides the most effective method to collect the data (numerical or categorical) necessary to answer the question	<ul style="list-style-type: none"> <li>collects, organizes, and appropriately displays the data; analyzes the data to draw conclusions about the question or hypothesis being tested, and when appropriate makes predictions.</li> </ul>
Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content	<ul style="list-style-type: none"> <li>Formulate and solve multi-step problems from everyday and mathematical situations.</li> <li>Solve problems using a variety of strategies</li> <li>Verify and interpret results with respect to the original problem.</li> <li>Determine if the solution of a problem is reasonable.</li> <li>Solve problems using manipulatives, graphs, charts, diagrams, and calculators.</li> <li>Demonstrate that a problem may be solved in</li> </ul>

	<p>more than one way.</p> <ul style="list-style-type: none"> <li>• Exhibit confidence in their ability to solve problems independently and in groups.</li> <li>• Display increasing perseverance, and persistence in problem solving.</li> </ul>
<p>Students will use mathematical reasoning and proof Use models, known facts, properties, and relationships to explain their thinking</p>	<ul style="list-style-type: none"> <li>• Justify solution processes and answers</li> <li>• Draw conclusions using inductive reasoning.</li> <li>• Identify the missing information needed to find a solution to a given story problem.</li> <li>• Use patterns and relationships to analyze mathematical situations</li> </ul>
<p>Students will communicate their understanding of mathematics</p>	<ul style="list-style-type: none"> <li>• Demonstrate mathematical communication through discussion, reading, writing, listening, and responding, individually and in groups.</li> <li>• Discuss relationships between everyday language and mathematical language and symbols</li> <li>• Explain conclusions, thought processes, and strategies in problem-solving situations.</li> <li>• Discuss, illustrate, and write about mathematical concepts and relationships.</li> <li>• Draw pictures and use objects to illustrate mathematical concepts.</li> </ul>
<p>Students will create and use representations to communicate mathematical ideas and to solve problems</p>	<ul style="list-style-type: none"> <li>• Create and use age level appropriate representations to organize, record, and communicate mathematical ideas</li> <li>• Select, apply, and translate among mathematical representations to solve problems</li> <li>• Link different representations.</li> <li>• Use representations to model and interpret physical, social, and mathematical phenomena.</li> <li>• Use conventional and self-generated (invented) representations and connect them.</li> <li>• Realize that any representation is subject to multiple interpretations</li> </ul>
<p>Students will recognize, explore, and develop mathematical connections</p>	<ul style="list-style-type: none"> <li>• Link conceptual and procedural knowledge</li> <li>• Recognize and use mathematics in other curriculum areas</li> <li>• Recognize and use mathematics in their daily lives</li> <li>• Identify mathematical situations occurring in literature for children.</li> <li>• Identify examples of geometry in nature, art, and architecture</li> </ul>

### Grade Level Expectations for Mathematics - End of Grade 3

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates conceptual understanding of rational numbers	<ul style="list-style-type: none"> <li>• Identifies and represents value of whole numbers from 0 to 999</li> <li>• uses place value</li> <li>• apply the concepts of equivalency</li> <li>• uses models, explanations, or other representations; and positive fractional numbers</li> </ul>
Demonstrates understanding of the relative magnitude of numbers from 0 to 999	<ul style="list-style-type: none"> <li>• ordering whole numbers</li> <li>• compare whole numbers to each other or to benchmark whole numbers (100, 250, 500, 750)</li> <li>• identify and compare positive fractional numbers</li> </ul>
Demonstrates conceptual understanding of mathematical operations	<ul style="list-style-type: none"> <li>• describing or illustrating the inverse relationship between addition and subtraction of whole numbers</li> <li>• describing or illustrating the relationship between repeated addition and multiplication using models, number lines, or explanations.</li> </ul>
Demonstrates understanding of monetary value	<ul style="list-style-type: none"> <li>• Accurately solves problems involving addition and subtraction with regrouping</li> <li>• the concept of multiplication; and addition or subtraction of decimals</li> </ul>
Mentally adds and subtracts whole numbers	<ul style="list-style-type: none"> <li>• adds and subtracts whole number facts to twenty</li> <li>• adds two-digit and one-digit whole numbers</li> <li>• adds combinations of two-digit and three-digit whole numbers that are multiples of ten (e.g., <math>60 + 50</math>, <math>300 + 400</math>, <math>320 + 90</math>)</li> <li>• subtracts a one-digit whole number from a two-digit whole number (e.g., <math>37 - 5</math>)</li> <li>• subtracts two-digit whole numbers that are multiples of ten and three-digit whole numbers that are multiples one hundred (e.g., <math>50 - 20</math>, <math>500 - 200</math>).</li> </ul>
Makes estimates	<ul style="list-style-type: none"> <li>• identifies when estimation is appropriate, selecting the appropriate method of estimation, and evaluating the reasonableness of solutions appropriate to grade level</li> </ul>
Applies properties of numbers to solve problems and to simplify computations involving whole numbers.	<ul style="list-style-type: none"> <li>• identifies odd, even</li> <li>• uses multiplicative property of zero for single-digit whole numbers [<math>6 \times 0 = 0</math>]</li> <li>• uses field properties (commutative for addition, associative for addition, identity for multiplication, and commutative for multiplication for single-digit whole numbers [e.g., <math>3 \times 4 = 4 \times 3</math>])</li> </ul>

<p>Uses properties, attributes, composition, or decomposition to sort or classify polygons</p>	<ul style="list-style-type: none"> <li>• Uses properties or attributes of angles (number of angles) or sides (number of sides or length of sides) or composition or decomposition of shapes to identify, describe, or distinguish among triangles, squares, rectangles, rhombi, trapezoids, hexagons, or circles</li> </ul>
<p>Demonstrates conceptual understanding of congruency</p>	<ul style="list-style-type: none"> <li>• matches congruent figures using reflections, translations, and rotations (flips, slides, and turns)</li> <li>• creates composing and decomposing two- and three-dimensional objects using models or explanations (e.g., Given a cube, students use blocks to construct a congruent cube.);</li> <li>• uses line symmetry to demonstrate congruent parts within a shape.</li> </ul>
<p>Demonstrates conceptual understanding of similarity</p>	<ul style="list-style-type: none"> <li>• identifies similar shapes</li> </ul>
<p>Demonstrates conceptual understanding of perimeter of polygons, and the area of rectangles</p>	<ul style="list-style-type: none"> <li>• Demonstrates concept on grids using a variety of models or manipulatives</li> <li>• Expresses all measures using appropriate units</li> </ul>
<p>Demonstrates conceptual understanding of measurable attributes</p>	<ul style="list-style-type: none"> <li>• Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands</li> </ul>
<p>Demonstrates understanding of spatial relationships</p>	<ul style="list-style-type: none"> <li>• interprets and gives directions from one location to another (e.g., classroom to the gym, from school to home) using positional words; and between locations on a map or coordinate grid (first quadrant) using positional words or compass directions.</li> </ul>
<p>Demonstrates conceptual understanding of spatial reasoning and visualization</p>	<ul style="list-style-type: none"> <li>• copies, compares, and draws models of triangles, squares, rectangles, rhombi, trapezoids, hexagons, and circles; and builds models of rectangular prisms from three-dimensional representations.</li> </ul>
<p>Identifies and extends (to specific cases) a variety of patterns</p>	<ul style="list-style-type: none"> <li>• (linear and non-numeric) represents in models, tables, or sequences by extending the pattern to the next one, two, or three elements, or finding missing elements</li> </ul>
<p>Demonstrates conceptual understanding of equality</p>	<ul style="list-style-type: none"> <li>• showing equivalence between two expressions using models or different representations of the expressions</li> <li>• finding the value that will make an open sentence true (e.g., <math>2 + W = 7</math>). (addition, subtraction, or multiplication)</li> </ul>

Interprets a given representation	<ul style="list-style-type: none"> <li>answer questions related to the data, or to analyze the data to formulate conclusions. (line plots, tally charts, tables, or bar graphs) to answer questions related to the data, to analyze the data to formulate conclusions, or to make predictions.</li> </ul>
Organizes and displays data	<ul style="list-style-type: none"> <li>uses tables, tally charts, and bar graphs, to answer questions related to the data, to analyze the data to formulate conclusions, to make predictions, or to solve problems.</li> <li></li> </ul>
Identifies or describes representations or elements of representations that best display a given set of data or situation	<ul style="list-style-type: none"> <li>uses data to make representations</li> </ul>
Uses counting techniques to solve problems	<ul style="list-style-type: none"> <li>using a variety of strategies (e.g., student diagrams, organized lists, tables, tree diagrams, or others), solves problems involving combinations, etc.</li> </ul>
Determines probability for an event in which the sample space may or may not contain equally likely outcomes,	<ul style="list-style-type: none"> <li>predicts the likelihood of an event using "more likely," "less likely," "equally likely," certain, or impossible</li> <li>tests the prediction through experiments; and determines if a game is fair</li> </ul>
In response to a teacher or student generated question or hypothesis, decides the most effective method to collect the data (numerical or categorical) necessary to answer the question	<ul style="list-style-type: none"> <li>collects, organizes, and appropriately displays the data</li> <li>analyzes the data to draw conclusions about the question or hypothesis being tested,</li> <li>when appropriate makes predictions</li> </ul>
Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content and be able to:	<ul style="list-style-type: none"> <li>Determine the reasonableness of solutions to real-world problems.</li> <li>Generalize solutions and apply strategies to new problem situations.</li> <li>Add to the repertoire of problem-solving strategies (e.g., looking for similar problems) and use those strategies in more sophisticated ways.</li> <li>Solve problems with multiple solutions, recognize when a problem has no solution, and recognize problems where more information is needed.</li> <li>Translate results of a computation into solutions that fit the real-world problem (e.g., when a computation shows that one needs 3.2 gallons of paint to paint a room, how much paint do you buy?).</li> </ul>
Students will use mathematical reasoning and proof	<ul style="list-style-type: none"> <li>Draw conclusions and solve problems Using elementary deductive reasoning and reasoning by analogy.</li> <li>Make and defend conjectures and generalizations.</li> <li>Use models, known facts, properties, and relationships to explain thinking and to justify answers and solutions to processes.</li> </ul>

	<ul style="list-style-type: none"> <li>• Recognize the pervasive use and power of reasoning as a part of mathematics.</li> </ul>
<p>Students will communicate their understanding of mathematics</p>	<ul style="list-style-type: none"> <li>• Discuss mathematical ideas and write convincing arguments.</li> <li>• Understand, explain, analyze, and evaluate mathematical arguments and conclusions presented by others.</li> <li>• Ask clarifying and extending question related to mathematics they have heard or read about.</li> <li>• Understand and appreciate the economy and power of mathematical symbolism and its role in the development of mathematics.</li> <li>• Demonstrate an understanding of mathematical concepts and relationships through a variety of methods (e.g., writing, graphing, charts, diagrams, number sentences, or symbols).</li> <li>• Use a variety of technologies (e.g., computers, calculators, video, probes) to represent and communicate mathematical ideas.</li> </ul>
<p>Students will create and use representations to communicate mathematical ideas and to solve problems</p>	<ul style="list-style-type: none"> <li>• Use physical models and diagrams to represent important mathematical ideas (e.g., multiplication).</li> <li>• Use appropriate representations to solve problems or to portray, clarify, or extend mathematical idea.</li> <li>• Recognize equivalent representations of concepts and procedures and translate among them as appropriate (for example, understand how the addition of whole numbers, fractions, and decimals are related).</li> </ul>
<p>Students will recognize, explore, and develop mathematical connections</p>	<ul style="list-style-type: none"> <li>• See mathematics as an integrated whole.</li> <li>• Recognize relationships among different topics in mathematics.</li> <li>• Recognize and use mathematics in other curriculum areas and in their daily lives.</li> <li>• Link concepts and procedures.</li> <li>• Use mathematical skills, concepts, and applications in other disciplines(e.g., graphs in social studies, patterns in art, or music and geometry in technology education).</li> </ul>

## Grade Level Expectations for Mathematics - End of Grade 4

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates conceptual understanding of rational numbers	<ul style="list-style-type: none"> <li>• Identifies and represents value of whole numbers from 0 to 999,999 using equivalency, composition, decomposition, or place value using models, explanations, or other representations; and positive fractional numbers</li> <li>• uses part to whole relationship in area, set, or linear models where the number of parts in the whole are equal to, and a multiple or factor of the denominator;</li> <li>• uses decimals as hundredths within the context of money, or tenths within the context of metric measurements</li> <li>• using models, explanations, or other representations.</li> </ul>
Demonstrates understanding of the relative magnitude of numbers from 0 to 999,999	<ul style="list-style-type: none"> <li>• ordering whole numbers</li> <li>• compare whole numbers</li> <li>• ordering, comparing, or identifying equivalent proper positive fractional numbers or decimals using models, number lines, or explanations.</li> </ul>
Demonstrates conceptual understanding of mathematical operations	<ul style="list-style-type: none"> <li>• describing or illustrating the relationship between repeated subtraction and division (no remainders); the inverse relationship between multiplication and division of whole numbers; or the addition or subtraction of positive fractional numbers with like denominators.</li> </ul>
Accurately solves problems	<ul style="list-style-type: none"> <li>• Uses multiple operations on whole numbers</li> <li>• Uses properties of factors and multiples; and addition or subtraction of decimals and positive proper fractions with like denominators.</li> </ul>
Mentally adds and subtracts whole numbers	<ul style="list-style-type: none"> <li>• adds and subtracts whole number facts to twenty</li> <li>• multiplies whole number facts to a product of 100, and calculates related division facts;</li> <li>• adds two-digit whole numbers, combinations of two-digit and 3-digit whole numbers that are multiples of ten, and 4-digit whole numbers that are multiples of 100</li> <li>• subtracts a one-digit whole number from a two-digit whole number (e.g., <math>67 - 9</math>) and subtracts combinations of two-digit and three-digit whole numbers that are multiples of ten (e.g., <math>50 - 20</math>, <math>230 - 80</math>, <math>520 - 200</math>).</li> </ul>
Makes estimates	<ul style="list-style-type: none"> <li>• identifies when estimation is appropriate, selects the appropriate method of estimation, and evaluates the reasonableness of solutions</li> </ul>

	appropriate to grade level
Applies properties of numbers to solve problems and to simplify computations involving whole numbers.	<ul style="list-style-type: none"> <li>Identifies odd, even,</li> <li>Uses multiplicative property of zero, and remainders)</li> <li>Uses field properties (commutative, associative, and identity)</li> </ul>
Determines properties or attributes of angles (number of angles) or sides of polygons	<ul style="list-style-type: none"> <li>identifies, describes, or distinguishes among triangles, squares, rectangles, rhombi, trapezoids, hexagons, or octagons; or classify angles relative to <math>90^\circ</math> as more than, less than, or equal to.</li> </ul>
Determines properties or attributes (shape of bases or number of lateral faces) of three dimensional objects	<ul style="list-style-type: none"> <li>identifies, compares, or describes three-dimensional shapes (rectangular prisms, triangular prisms, cylinders, or spheres).</li> </ul>
Demonstrates conceptual understanding of congruency	<ul style="list-style-type: none"> <li>matches congruent figures using reflections, translations, or rotations (flips, slides, or turns), or as the result of composing or decomposing shapes using models or explanations.</li> </ul>
Demonstrates conceptual understanding of similarity	<ul style="list-style-type: none"> <li>Applies scales on maps, or applying characteristics of similar figures (same shape but not necessarily the same size) to identify similar figures, or to solve problems involving similar figures.</li> <li>Describes relationships using models or explanations.</li> </ul>
Demonstrates conceptual understanding of perimeter of polygons, and the area of rectangles irregular shapes on grids	<ul style="list-style-type: none"> <li>using a variety of models, manipulatives, or formulas.</li> <li>Expresses all measures using appropriate units</li> </ul>
Demonstrates conceptual understanding of measurable attributes	<ul style="list-style-type: none"> <li>Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands</li> </ul>
Demonstrates understanding of spatial relationships	<ul style="list-style-type: none"> <li>interprets and gives directions from one location to another (e.g., classroom to the gym, from school to home) using positional words; and between locations on a map or coordinate grid (first quadrant) using positional words or compass directions.</li> </ul>
Demonstrates conceptual understanding of spatial reasoning and visualization	<ul style="list-style-type: none"> <li>copies, compares, and draws models of triangles, squares, rectangles, rhombi, trapezoids, hexagons, and circles; and builds models of rectangular prisms from three-dimensional representations.</li> </ul>
Identifies and extends (to specific cases) a variety of patterns	<ul style="list-style-type: none"> <li>Represents in models, tables or sequences; and writes a rule in words or symbols to find the next case.</li> </ul>

Demonstrates conceptual understanding of linear relationships ( $y = kx$ ) as a constant rate of change	<ul style="list-style-type: none"> <li>by identifying, describing, or comparing situations that represent constant rates of change</li> </ul>
Demonstrates conceptual understanding of algebraic expressions by	<ul style="list-style-type: none"> <li>using letters or symbols to represent unknown quantities to write simple linear algebraic expressions involving any one of the four operations; or by evaluating simple linear algebraic expressions using whole numbers</li> </ul>
Demonstrates conceptual understanding of equality	<ul style="list-style-type: none"> <li>showing equivalence between two expressions using models or different representations of the expressions</li> <li>simplifying numerical expressions</li> <li>solving one-step linear equations</li> </ul>
Interprets a given representation	<ul style="list-style-type: none"> <li>answers questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems</li> </ul>
Analyzes patterns, trends, or distributions in data in a variety of contexts	<ul style="list-style-type: none"> <li>determines or uses median, mode, range.</li> </ul>
Organizes and displays data	<ul style="list-style-type: none"> <li>uses tables, line plots, bar graphs, and pictographs to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems.</li> </ul>
Uses counting techniques to solve problems	<ul style="list-style-type: none"> <li>using a variety of strategies (e.g., student diagrams, organized lists, tables, tree diagrams, or others), solves problems involving combinations, etc</li> </ul>
Determines probability for an event in which the sample space may or may not contain equally likely outcomes	<ul style="list-style-type: none"> <li>predicts the likelihood of an event as a part to whole relationship (e.g., two out of five, zero out of five, five out of five)</li> <li>tests the prediction through experiments; and determines if a game is fair.</li> <li>determines the theoretical probability of an event and expresses the result as part to whole (e.g., two out of five).</li> </ul>
Responds to a teacher or student generated question or hypotheses	<ul style="list-style-type: none"> <li>collects, organizes, and appropriately displays the data;</li> <li>analyzes the data to draw conclusions about the question or hypothesis being tested, and when appropriate makes predictions;</li> <li>asks new questions and makes connections to real world situations.</li> </ul>
Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content and be able to:	<ul style="list-style-type: none"> <li>Determine the reasonableness of solutions to real-world problems.</li> <li>Generalize solutions and apply strategies to new problem situations.</li> </ul>

	<ul style="list-style-type: none"> <li>• Add to the repertoire of problem-solving strategies (e.g., looking for similar problems) and use those strategies in more sophisticated ways.</li> <li>• Solve problems with multiple solutions, recognize when a problem has no solution, and recognize problems where more information is needed.</li> <li>• Translate results of a computation into solutions that fit the real-world problem (e.g., when a computation shows that one needs 3.2 gallons of paint to paint a room, how much paint do you buy?).</li> </ul>
<p>Students will use mathematical reasoning and proof</p>	<ul style="list-style-type: none"> <li>• Draw conclusions and solve problems Using elementary deductive reasoning and reasoning by analogy.</li> <li>• Make and defend conjectures and generalizations.</li> <li>• Use models, known facts, properties, and relationships to explain thinking and to justify answers and solutions to processes.</li> <li>• Recognize the pervasive use and power of reasoning as a part of mathematics.</li> </ul>
<p>Students will communicate their understanding of mathematics</p>	<ul style="list-style-type: none"> <li>• Discuss mathematical ideas and write convincing arguments.</li> <li>• Understand, explain, analyze, and evaluate mathematical arguments and conclusions presented by others.</li> <li>• Ask clarifying and extending question related to mathematics they have heard or read about.</li> <li>• Understand and appreciate the economy and power of mathematical symbolism and its role in the development of mathematics.</li> <li>• Demonstrate an understanding of mathematical concepts and relationships through a variety of methods (e.g., writing, graphing, charts, diagrams, number sentences, or symbols).</li> <li>• Use a variety of technologies (e.g., computers, calculators, video, probes) to represent and communicate mathematical ideas.</li> </ul>
<p>Students will create and use representations to communicate mathematical ideas and to solve problems</p>	<ul style="list-style-type: none"> <li>• Use physical models and diagrams to represent important mathematical ideas (e.g., multiplication).</li> <li>• Use appropriate representations to solve problems or to portray, clarify, or extend a mathematical idea.</li> <li>• Recognize equivalent representations of concepts and procedures and translate among them as appropriate (for example, understand how the addition of whole numbers, fractions, and decimals are related).</li> </ul>

<p>Students will recognize, explore, and develop mathematical connections</p>	<ul style="list-style-type: none"><li>• See mathematics as an integrated whole.</li><li>• Recognize relationships among different topics in mathematics.</li><li>• Recognize and use mathematics in other curriculum areas and in their daily lives.</li><li>• Link concepts and procedures.</li><li>• Use mathematical skills, concepts, and applications in other disciplines(e.g., graphs in social studies, patterns in art, or music and geometry in technology education).</li></ul>

## Grade Level Expectations for Mathematics - end of Grade 5

Standard (Grade Level Expectation)	Knowledge and Skills
Demonstrates conceptual understanding of rational numbers	<ul style="list-style-type: none"> <li>• Identifies and represents value of whole numbers from 0 to 9,999,999 using equivalency, composition, decomposition, or place value using models, explanations, or other representations; and positive fractional numbers, decimals, benchmark percents (10, 25, 50, 75, 100)</li> <li>• uses part to whole relationship in area, set, or linear models where the number of parts in the whole are equal to, and a multiple or factor of the denominator;</li> <li>• using models, explanations, or other representations.</li> </ul>
Demonstrates understanding of the relative magnitude of numbers from 0 to 9,999,999	<ul style="list-style-type: none"> <li>• ordering whole numbers</li> <li>• compare whole numbers</li> <li>• ordering, comparing, or identifying equivalent proper positive fractional numbers, decimals, benchmark percents, or integers using models, number lines, or explanations.</li> </ul>
Demonstrates conceptual understanding of mathematical operations	<ul style="list-style-type: none"> <li>• adding and subtracting decimals and positive proper fractions with unlike denominators.</li> </ul>
Accurately solves problems	<ul style="list-style-type: none"> <li>• using multiple operations on whole numbers or the use of the properties of factors, multiples, prime, or composite numbers;</li> <li>• addition or subtraction of fractions (proper) and decimals to the hundredths place.</li> </ul>
Mentally calculates	<ul style="list-style-type: none"> <li>• Makes change from \$1.00, \$5.00, and \$10.00</li> <li>• calculates multiplication and related division facts to a product of 144;</li> <li>• multiplies a two-digit whole number number (e.g., <math>45 \times 5</math>), two-digit whole numbers that are multiples of ten (e.g., <math>50 \times 60</math>), a three-digit whole number that is a multiple of 100 by a two- or three-digit number which is a multiple of 10 or 100, respectively (e.g., <math>400 \times 50</math>, <math>400 \times 600</math>)</li> <li>• divides 3- and 4-digit multiples of powers of ten by their compatible factors</li> </ul>
Makes estimates	<ul style="list-style-type: none"> <li>• identifies when estimation is appropriate, selects the appropriate method of estimation, and evaluates the reasonableness of solutions appropriate to grade level</li> <li>• analyzes the effect of the estimation method on the accuracy of results</li> </ul>

Applies properties of numbers to solve problems and to simplify computations involving whole numbers.	<ul style="list-style-type: none"> <li>Identifies odd, even,</li> <li>Uses multiplicative property of zero, and remainders)</li> <li>Uses field properties (commutative, associative, and identity)</li> </ul>
Uses properties or attributes of angles	<ul style="list-style-type: none"> <li>identifies, describes, or distinguishes among different types of triangles and quadrilaterals</li> </ul>
Determines properties or attributes (shape of bases or number of lateral faces) of three dimensional objects	<ul style="list-style-type: none"> <li>identifies, compares, or describes three-dimensional shapes (rectangular prisms, triangular prisms, cylinders, or spheres).</li> </ul>
Demonstrates conceptual understanding of similarity	<ul style="list-style-type: none"> <li>describes the proportional effect on the linear dimensions of triangles and rectangles when scaling up or down while preserving angle measures,</li> <li>solves related problems (including applying scales on maps).</li> <li>Describes effects using models or explanations</li> </ul>
Demonstrates conceptual understanding of perimeter of polygons or irregular figures on grids, and the area	<ul style="list-style-type: none"> <li>Calculates perimeter of polygons</li> <li>Calculates area of right triangles</li> <li>Finds volume of rectangular prisms (cubes),</li> <li>Expresses all measures using appropriate units</li> </ul>
Demonstrates conceptual understanding of measurable attributes	<ul style="list-style-type: none"> <li>Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands</li> </ul>
Demonstrates understanding of spatial relationships	<ul style="list-style-type: none"> <li>interprets and giving directions between locations on a map or coordinate grid (all four quadrants)</li> <li>plots points in four quadrants in context (e.g., games, mapping, identifying the vertices of polygons as they are reflected, rotated, and translated)</li> <li>determines horizontal and vertical distances between points on a coordinate grid in the first quadrant.</li> </ul>
Demonstrates conceptual understanding of spatial reasoning and visualization	<ul style="list-style-type: none"> <li>builds models of rectangular and triangular prisms, cones, cylinders, and pyramids from two- or three-dimensional representations</li> </ul>
Identifies and extends (to specific cases) a variety of patterns	<ul style="list-style-type: none"> <li>Represents in models, tables or sequences; and writes a rule in words or symbols to find the next case.</li> </ul>
Demonstrates conceptual understanding of linear relationships ( $y = kx$ ) as a constant rate of change	<ul style="list-style-type: none"> <li>identifies, describes, or compares situations that represent constant rates of change</li> </ul>

Demonstrates conceptual understanding of algebraic expressions by	<ul style="list-style-type: none"> <li>using letters or symbols to represent unknown quantities to write simple linear algebraic expressions involving any one of the four operations; or by evaluating simple linear algebraic expressions using whole numbers</li> </ul>
Demonstrates conceptual understanding of equality	<ul style="list-style-type: none"> <li>showing equivalence between two expressions using models or different representations of the expressions</li> <li>simplifying numerical expressions</li> <li>solving one-step linear equations</li> </ul>
Interprets a given representation	<ul style="list-style-type: none"> <li>answers questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems</li> </ul>
Analyzes patterns, trends, or distributions in data in a variety of contexts	<ul style="list-style-type: none"> <li>determines or uses median, mode, range</li> <li>uses the above to analyzes situations or solve problems</li> </ul>
Organizes and displays data	<ul style="list-style-type: none"> <li>uses tables, bar graphs, and line graphs to answer questions related to the data, to analyze the data to formulate or justify conclusions, to make predictions, or to solve problems.</li> </ul>
Identifies or describes representations or elements of representations that best display a given set of data or situation for a probability event in which the sample space may or may not contain equally likely outcomes,	<ul style="list-style-type: none"> <li>predicts the likelihood of an event as a fraction and tests the prediction through experiments; and determines if a game is fair.</li> </ul>
Determines probability for an event in which the sample space may or may not contain equally likely outcomes	<ul style="list-style-type: none"> <li>determines the experimental or theoretical probability of an event and expresses the result as a fraction.</li> </ul>
Responds to a teacher or student generated question or hypothesis	<ul style="list-style-type: none"> <li>decides the most effective method (e.g., survey, observation, experimentation) to collect the data (numerical or categorical) necessary to answer the question;</li> <li>collects, organizes, and appropriately displays the data;</li> <li>analyzes the data to draw conclusions about the question or hypothesis being tested</li> <li>when appropriate makes predictions; and asks new questions makes connections to real world situations.</li> </ul>
Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content and be able to:	<ul style="list-style-type: none"> <li>Determine the reasonableness of solutions to real-world problems.</li> <li>Generalize solutions and apply strategies to new problem situations.</li> <li>Add to the repertoire of problem-solving strategies (e.g., looking for similar problems) and use those strategies in more sophisticated ways.</li> <li>Solve problems with multiple solutions, recognize when a problem has no solution, and recognize</li> </ul>

	<p>problems where more information is needed.</p> <ul style="list-style-type: none"> <li>• Translate results of a computation into solutions that fit the real-world problem (e.g., when a computation shows that one needs 3.2 gallons of paint to paint a room, how much paint do you buy?).</li> </ul>
Students will use mathematical reasoning and proof	<ul style="list-style-type: none"> <li>• Draw conclusions and solve problems Using elementary deductive reasoning and reasoning by analogy.</li> <li>• Make and defend conjectures and generalizations.</li> <li>• Use models, known facts, properties, and relationships to explain thinking and to justify answers and solutions to processes.</li> <li>• Recognize the pervasive use and power of reasoning as a part of mathematics.</li> </ul>
Students will communicate their understanding of mathematics	<ul style="list-style-type: none"> <li>• Discuss mathematical ideas and write convincing arguments.</li> <li>• Understand, explain, analyze, and evaluate mathematical arguments and conclusions presented by others.</li> <li>• Ask clarifying and extending question related to mathematics they have heard or read about.</li> <li>• Understand and appreciate the economy and power of mathematical symbolism and its role in the development of mathematics.</li> <li>• Demonstrate an understanding of mathematical concepts and relationships through a variety of methods (e.g., writing, graphing, charts, diagrams, number sentences, or symbols).</li> <li>• Use a variety of technologies (e.g., computers, calculators, video, probes) to represent and communicate mathematical ideas.</li> </ul>
Students will create and use representations to communicate mathematical ideas and to solve problems	<ul style="list-style-type: none"> <li>• Use physical models and diagrams to represent important mathematical ideas (e.g., multiplication).</li> <li>• Use appropriate representations to solve problems or to portray, clarify, or extend a mathematical idea.</li> <li>• Recognize equivalent representations of concepts and procedures and translate among them as appropriate (for example, understand how the addition of whole numbers, fractions, and decimals are related).</li> </ul>
Students will recognize, explore, and develop mathematical connections	<ul style="list-style-type: none"> <li>• See mathematics as an integrated whole.</li> <li>• Recognize relationships among different topics in mathematics.</li> <li>• Recognize and use mathematics in other</li> </ul>

curriculum areas and in their daily lives.

- Link concepts and procedures.
- Use mathematical skills, concepts, and applications in other disciplines (e.g., graphs in social studies, patterns in art, or music and geometry in technology education).

## Grade Span Expectations for Social Studies - Grades K-2

<b>Standard</b>	<b>Knowledge and Skills</b>
Students demonstrate an understanding of origins, forms and purposes of government by...	<ul style="list-style-type: none"> <li>• identifying rules and consequences for them in different settings (e.g., home, bus, classroom, cafeteria, etc.) and explaining why we need rules and who makes the rules</li> <li>• evaluating the rules in different settings (e.g., <i>Is this a good rule and why/why not?</i>)</li> <li>• exploring examples of services (e.g., post office, police, fire, garbage collection) provided in their own community</li> </ul>
Students demonstrate an understanding of sources of authority and use of power, and how they are/can be changed by...	<ul style="list-style-type: none"> <li>• identifying authority figures who make, apply, and enforce rules (e.g., family, school, police, firefighters, etc.) and how these people help to meet the needs of the common good</li> <li>• recognizing and describing the characteristics of leadership and fair decision making, and explaining how they affect others (e.g., line leader, team captain)</li> </ul>
Students demonstrate an understanding of United States government (local, state, national) by...	<ul style="list-style-type: none"> <li>• identifying elected leadership titles/basic roles at different levels of government (e.g., mayor is the leader of a city, governor is the leader of the state, president is the leader of the country)</li> </ul>
Students demonstrate an understanding of the democratic values and principles underlying the U.S. government by ...	<ul style="list-style-type: none"> <li>• identifying symbols and national holidays used to depict Americans' shared democratic values, principles, and beliefs (e.g., American flag, Pledge of Allegiance, Presidents' Day, Independence Day)</li> <li>• using a variety of sources (e.g., trade books, picture books, songs, artwork) to illustrate the basic values and principles of democracy (e.g., Statue of Liberty represents freedom, Independent Man on State House represents individual rights, <i>Grand Old Flag</i> represents national unity, <i>This Land is Your Land</i> represents respect for diversity)</li> <li>• identifying individual roles in a group and acting as a productive member of a group</li> </ul>
Students demonstrate an understanding of citizens' rights and responsibilities by...	<ul style="list-style-type: none"> <li>• exhibiting respect (e.g., waiting one's turn, respecting differences, sharing, etc.) for self, parents, teachers, authority figures (police, fire, doctors, community leaders), and others</li> </ul>
Students demonstrate an understanding of how individuals and groups exercise (or are denied) their rights and responsibilities by...	<ul style="list-style-type: none"> <li>• demonstrating personal and group rights and responsibility (e.g., self-managing behavior, time, space, and materials)</li> <li>• working cooperatively in a group, sharing responsibilities or individual roles within a group</li> <li>• identifying feelings and situations that lead to conflict and describing ways people solve problems</li> </ul>

	effectively
Students demonstrate an understanding of political systems and political processes by...	<ul style="list-style-type: none"> <li>identifying forms of civic participation (e.g., voting, conducting a survey)</li> </ul>
Students demonstrate their participation in political processes by...	<ul style="list-style-type: none"> <li>experiencing a variety of forms of participation (e.g., voting, conducting a survey, writing a class letter about an issue of concern)</li> </ul>
Students participate in a civil society by...	<ul style="list-style-type: none"> <li>identifying problems, planning and implementing solutions in the classroom, school, and community (e.g., problem of litter/solutions-each picks up one piece of trash, recycle, plan a clean-up day, etc.)</li> </ul>
Students demonstrate an understanding of the many ways earth's people are interconnected by...	<ul style="list-style-type: none"> <li>exploring and discussing ways we interact with others around the world (e.g., food, clothing, transportation, tourism, news)</li> </ul>
Students demonstrate an understanding of the benefits and challenges of an interconnected world by...	<ul style="list-style-type: none"> <li>using a variety of print and non-print sources to explore other people and places</li> </ul>
Students demonstrate an understanding of how the choices we make impact, and are impacted by an interconnected world, by...	<ul style="list-style-type: none"> <li>listing the pros and cons of personal decisions (e.g., littering, recycling)</li> </ul>
Students <i>act as historians</i> , using a variety of tools (e.g., artifacts and primary and secondary sources) by...	<ul style="list-style-type: none"> <li>identifying and categorizing the kinds of information obtained from a variety of artifacts and documents (e.g., <i>What would this artifact tell us about how people lived?</i>)</li> <li>distinguishing objects, artifacts, and symbols from long ago and today (e.g., passage of time documented through family photos, evolution of household appliances)</li> </ul>
Students interpret history as a series of connected events with multiple cause-effect relationships, by...	<ul style="list-style-type: none"> <li>describing and organizing a sequence of various events in personal, classroom, or school life (e.g., organizing and interpreting data in timelines)</li> <li>explaining how a sequence of events affected people in home, classroom, or school (e.g., getting a new student in the classroom)</li> </ul>
Students connect the past with the present by...	<ul style="list-style-type: none"> <li>recognizing the origin, name, or significance of local geographic and human-made features (e.g., school, street, park, city, river, monuments)</li> </ul>
Students chronicle events and conditions by...	<ul style="list-style-type: none"> <li>describing, defining, and illustrating a sequence of events from personal, classroom, school, or community life (e.g., timeline or self-made informational text showing key events)</li> </ul>
Students show understanding of change over time by...	<ul style="list-style-type: none"> <li>exploring and describing similarities and differences in objects, artifacts, and technologies from the past and present (e.g., transportation, communication, school and home life)</li> </ul>
Students demonstrate an understanding of how the past frames the present by...	<ul style="list-style-type: none"> <li>identifying how events and people shape family and school life (e.g., <i>How would your life change if you moved to another place? What would happen if your school closed? What would happen if there were no</i></li> </ul>

	<i>school buses?)</i>
Students make personal connections in an historical context (e.g., source-to-source, source-to-self, source-to-world) by...	<ul style="list-style-type: none"><li>• using a variety of sources (e.g., photographs, written text, clothing, oral history) to reconstruct their past and understand the present.</li></ul>

## Grade Span Expectations for Social Studies - Grade 3 and 4

<b>Standard</b>	<b>Knowledge and Skills</b>
Students demonstrate an understanding of origins, forms and purposes of government by...	<ul style="list-style-type: none"> <li>• making, applying, and enforcing rules (home, school, community)</li> <li>• comparing similarities between a rule and a law</li> <li>• citing examples of services that local and state governments provide for the common good</li> </ul>
Students demonstrate an understanding of sources of authority and use of power, and how they are/can be changed by...	<ul style="list-style-type: none"> <li>• identifying authority figures who make, apply, and enforce rules (e.g., family, school, police, firefighters, etc.) and explaining how there are limits to their power (e.g., What are police not allowed to do?)</li> <li>• recognizing, describing, and demonstrating the characteristics of leadership and fair decision making, and explaining how they affect others</li> </ul>
Students demonstrate an understanding of United States government (local, state, national) by...	<ul style="list-style-type: none"> <li>• identifying the levels (local, state, national) and three branches of government, as defined by the <i>U.S. Constitution</i>, and the roles and purposes of each (e.g., checks and balances)</li> <li>• describing the <i>U.S. Constitution</i> and <i>Bill of Rights</i> and explaining why they are important</li> </ul>
Students demonstrate an understanding of the democratic values and principles underlying the U.S. government by ...	<ul style="list-style-type: none"> <li>• identifying and explaining the meaning of symbols and national holidays used to depict Americans shared democratic values, principles, and beliefs (e.g., colors of the American flag, Pledge of Allegiance, bald eagle, Presidents' Day, Independence Day)</li> <li>• using a variety of sources (e.g., <i>Bill of Rights</i>, <i>Declaration of Independence</i>, trade books, picture books, songs, artwork) to illustrate the basic values and principles of democracy (e.g., Statue of Liberty represents freedom, Independent Man on State House represents individual rights, <i>E Pluribus Unum</i> represents national unity, <i>This Land is Your Land</i> represents respect for diversity)</li> <li>• exhibiting and explaining what it means to be a responsible member of a group to achieve a common goal (e.g., problem solving, task completion, etc.) and self-monitoring effectiveness in a group</li> </ul>
Students demonstrate an understanding of citizens' rights and responsibilities by...	<ul style="list-style-type: none"> <li>• exhibiting respect for self, parents, teachers, authority figures (police, fire, doctors, community leaders), and others, and demonstrating an understanding of others' points of view</li> <li>• using a variety of sources (e.g., primary sources, secondary sources, literature, videos) to provide examples of individuals' and groups' rights and responsibilities (e.g., justice, equality, and diversity)</li> </ul>
Students demonstrate an understanding of how individuals and groups exercise (or are denied) their rights and responsibilities by...	<ul style="list-style-type: none"> <li>• demonstrating personal and group rights and responsibility (e.g., self-managing behavior, time, space, and materials)</li> <li>• identifying feelings and situations that lead to conflict</li> </ul>

	and describing ways people solve problems effectively
Students demonstrate an understanding of political systems and political processes by...	<ul style="list-style-type: none"> <li>identifying forms and levels (e.g., voting vs. running for office, organizing a meeting vs. attending a meeting) of civic participation and how it affects the common good (local, state, national, world)</li> </ul>
Students demonstrate their participation in political processes by...	<ul style="list-style-type: none"> <li>engaging in a variety of forms of participation (e.g., voting, petition, survey) and explaining the purpose of each form</li> </ul>
Students participate in a civil society by...	<ul style="list-style-type: none"> <li>identifying problems, planning and implementing solutions, and evaluating the outcomes in the classroom, school, community, state, nation, or world (e.g., problem of global warming/solutions-recycling, energy conservation)</li> <li>explaining how individuals can take responsibility for their actions and how their actions impact the community</li> </ul>
Students demonstrate an understanding of the many ways earth's people are interconnected by...	<ul style="list-style-type: none"> <li>explaining how current events around the world affect our lives (e.g., trade, war, conflict-resolution, global warming)</li> <li>locating where different nations are in the world in relation to the United States (e.g., related to current events, literature, trade books)</li> </ul>
Students demonstrate an understanding of the benefits and challenges of an interconnected world by...	<ul style="list-style-type: none"> <li>exploring current issues using a variety of print and non-print sources (e.g., <i>Where does our food come from and what happens if there is a drought?</i>)</li> </ul>
Students demonstrate an understanding of how the choices we make impact, and are impacted by an interconnected world, by...	<ul style="list-style-type: none"> <li>listing and explaining the pros and cons of personal and organizational (e.g., businesses, governments, other groups) decisions (e.g., donations to global charities)</li> </ul>
Students <i>act as historians</i> , using a variety of tools (e.g., artifacts and primary and secondary sources) by...	<ul style="list-style-type: none"> <li>describing the difference between primary and secondary sources and interpreting information from each (e.g., asking and answering questions, making predictions)</li> <li>classifying objects, artifacts, and symbols from long ago and today and describing how they add to our understanding of the past</li> <li>organizing information obtained to answer historical questions</li> </ul>
Students interpret history as a series of connected events with multiple cause-effect relationships, by...	<ul style="list-style-type: none"> <li>describing and organizing a sequence of significant events in Rhode Island history (e.g., interpreting and analyzing data in timelines)</li> <li>explaining and inferring how a sequence of events affected people of Rhode Island (e.g., settlement or changes in community/ Rhode Island, Hurricane Katrina)</li> </ul>
Students connect the past with the present by...	<ul style="list-style-type: none"> <li>investigating and explaining the origin, name, or significance of local and Rhode Island geographic and human-made features</li> </ul>
Students chronicle events and conditions by...	<ul style="list-style-type: none"> <li>describing, defining, and illustrating by example Rhode Island historical individuals, groups and events (e.g., Roger Williams, Native Americans, immigrant groups) and how they relate to the context (e.g., conditions of the time, events before and after)</li> </ul>
Students show understanding of change over time	<ul style="list-style-type: none"> <li>interpreting and explaining similarities and differences in</li> </ul>

by...	objects, artifacts, technologies, ideas, or beliefs (e.g., religious, economic, education, self-government) from the past and present (e.g., transportation or communication in the community, RI, U.S.)
Students demonstrate an understanding of how the past frames the present by...	<ul style="list-style-type: none"> <li>recognizing and interpreting how events, people, problems, and ideas shape life in the community and in Rhode Island</li> </ul>
Students make personal connections in an historical context (e.g., source-to-source, source-to-self, source-to-world) by...	<ul style="list-style-type: none"> <li>using a variety of sources (e.g., photographs, written text, clothing, oral history) to reconstruct the past, understand the present, and make predictions for the future</li> </ul>

## Grade Span Expectations for Social Studies - Grades 5 and 6

<b>Standard</b>	<b>Knowledge and Skills</b>
Students demonstrate an understanding of origins, forms and purposes of government by...	<ul style="list-style-type: none"> <li>• identifying the basic functions of government</li> <li>• listing and defining various forms of government (e.g., dictatorship, democracy, parliamentary, monarchy)</li> <li>• citing examples of when major changes in governments have occurred (e.g., American Revolution, Hammurabi's Code, Rhode Island Royal Charter/ RI Constitution)</li> </ul>
Students demonstrate an understanding of sources of authority and use of power, and how they are/can be changed by...	<ul style="list-style-type: none"> <li>• identifying and summarizing the rule of law, using various enduring/ significant documents (e.g., <i>Magna Carta</i>, <i>Preamble of U.S. Constitution</i>, <i>U.N. Rights of the Child</i>, "I Have A Dream" speech)</li> <li>• identifying and describing the role of individuals (e.g., Thomas Jefferson, George Washington, Thomas Paine) as authority figures/ leaders in the creation of government</li> </ul>
Students demonstrate an understanding of United States government (local, state, national) by...	<ul style="list-style-type: none"> <li>• identifying and describing the function of the three branches (i.e., checks and balances, separation of powers)</li> <li>• identifying how power is divided and shared among the levels of the United States government</li> <li>• explaining how a bill becomes a law</li> </ul>
Students demonstrate an understanding of the democratic values and principles underlying the U.S. government by ...	<ul style="list-style-type: none"> <li>• exploring democratic values such as: respect, property, compromise, liberty, self-government, and self-determination</li> <li>• identifying enduring documents (e.g., <i>Bill of Rights</i>, <i>U.S. Constitution</i>) that reflect the underlying principles of the United States</li> <li>• exhibiting and explaining what it means to be a responsible citizen in the community</li> </ul>
Students demonstrate an understanding of citizens' rights and responsibilities by...	<ul style="list-style-type: none"> <li>• defining the concepts: "civic"(<i>adj.</i>), "civics"(<i>n</i>), "civil," and "citizen"</li> <li>• identifying citizen's rights in a democratic society (personal, economic, legal, and civic) . identifying a citizen's responsibilities in a democratic society (personal, economic, legal, and civic)</li> <li>• identifying conflicts between individual rights and the common good (e.g. Eminent domain, airport expansion, Scituate Reservoir, Coastal Access)</li> </ul>
Students demonstrate an understanding of how individuals and groups exercise (or are denied) their rights and responsibilities by...	<ul style="list-style-type: none"> <li>• identifying and explaining specific ways rights may or may not be exercised (e.g., civil rights)</li> <li>• recognizing potential conflicts within or among groups, brainstorming possible solutions, and reaching compromises (e.g. discrimination, bullying)</li> <li>• explaining the judicial process - due process - local, state, and federal (e.g. school discipline policy, truancy court, appeals process)</li> </ul>

<p>Students demonstrate an understanding of political systems and political processes by...</p>	<ul style="list-style-type: none"> <li>• explaining how leaders are selected or elected (e.g., election process, appointment process, political parties, campaigns)</li> <li>• the "labels" that individuals may give themselves within a political process (e.g., radical, liberal, conservative, environmentalist, Democrat, Republican)</li> <li>• identifying, comparing, and contrasting different "political systems" (e.g., monarchy, democracy, feudal)</li> </ul>
<p>Students demonstrate their participation in political processes by...</p>	<ul style="list-style-type: none"> <li>• using a variety of sources to form, substantiate, and communicate an opinion and presenting their opinion to an audience beyond the classroom (e.g., letter to the editor, student exhibition, persuasive essay, article in school newspaper)</li> <li>• describing the voting process for a local, state, or national election</li> <li>• engaging in the political process (e.g., voting in school elections)</li> </ul>
<p>Students participate in a civil society by...</p>	<ul style="list-style-type: none"> <li>• demonstrating respect for the opinions of others (e.g., listening to and asking relevant questions, taking turns, considering alternative perspectives)</li> <li>• demonstrating the ability to compromise (e.g., offering solutions, persisting to resolve issues)</li> <li>• taking responsibility for one's own actions (anticipating and accepting consequences)</li> <li>• identifying and accessing reliable sources to answer questions about current important issues (e.g. news media, children's news magazines)</li> </ul>
<p>Students demonstrate an understanding of the many ways earth's people are interconnected by...</p>	<ul style="list-style-type: none"> <li>• identifying, describing, and explaining how people are socially, technologically, geographically, economically, or culturally connected to others</li> <li>• locating where different nations are in the world in relation to the U.S</li> </ul>
<p>Students demonstrate an understanding of the benefits and challenges of an interconnected world by...</p>	<ul style="list-style-type: none"> <li>• identifying and discussing factors that lead to the breakdown of order among societies (e.g., natural disasters, wars, plagues, population shifts, natural resources)</li> <li>• citing a social, technological, geographical, economical, or cultural issue that provides an example of both benefits and challenges</li> </ul>
<p>Students demonstrate an understanding of how the choices we make impact, and are impacted by an interconnected world, by...</p>	<ul style="list-style-type: none"> <li>• identifying and analyzing the effects of consumer choice (environmental, communication, political)</li> <li>• explaining how actions taken or not taken impact societies (e.g., natural disasters, incidences of social injustice or genocide)</li> </ul>
<p>Students <i>act as historians</i>, using a variety of tools (e.g., artifacts and primary and secondary sources) by...</p>	<ul style="list-style-type: none"> <li>• identifying appropriate sources (e.g., historical maps, diaries, photographs) to answer historical questions</li> <li>• using sources to support the stories of history (<i>How do we know what we know?</i>)</li> </ul>

	<ul style="list-style-type: none"> <li>• asking and answering historical questions, organizing information, and evaluating information in terms of relevance</li> <li>• identifying the point of view of a historical source (e.g. media sources)</li> </ul>
Students interpret history as a series of connected events with multiple cause-effect relationships, by...	<ul style="list-style-type: none"> <li>• investigating and summarizing historical data in order to draw connections between two events and to answer related historical questions</li> </ul>
Students connect the past with the present by...	<ul style="list-style-type: none"> <li>• identifying sequential events, people, and societies that have shaped RI today</li> <li>• comparing and contrasting the development of RI ethnic history to the nation's history (e.g., <i>What historical factors makes RI unique?</i>, immigration, settlement patterns, religion, resources, geography)</li> <li>• identifying and describing how national and world events have impacted RI and how RI has impacted world events (e.g., China Trade, WWII, Industrial Revolution)</li> </ul>
Students chronicle events and conditions by...	<ul style="list-style-type: none"> <li>• placing key events and people of a particular historical era in chronological sequence</li> <li>• summarizing key events and explaining the historical contexts of those events</li> </ul>
Students show understanding of change over time by...	<ul style="list-style-type: none"> <li>• establishing a chronological order by working backward from some issue, problem, or event to explain its origins and its development over time</li> </ul>
Students demonstrate an understanding of how the past frames the present by...	<ul style="list-style-type: none"> <li>• identifying historical conditions and events that relate to contemporary issues (e.g., separation of church state, treatment of Native Americans, immigration, gender issues)</li> <li>• answering "what if" questions and using evidence to explain how history might have been different (e.g., <i>How might history be different if Anne Hutchinson hadn't dissented?</i>)</li> </ul>
Students make personal connections in an historical context (e.g., source-to-source, source-to-self, source-to-world) by...	<ul style="list-style-type: none"> <li>• explaining how the similarities of human issues across time periods influence their own personal histories (e.g., <i>How does this relate to me?</i>)</li> <li>• identifying the cultural influences that shape individuals and historical events</li> </ul>

## Grade Span Expectations for Science - Grade K-2

<b>Standards</b>	<b>Knowledge and Skills</b>
Students demonstrate an understanding of classification of organisms by....	<ul style="list-style-type: none"> <li>• distinguishing between living and non-living things</li> <li>• identifying and sorting based on similar or different external features</li> <li>• observing and recording the external features that make up living things (e.g., roots, stems, leaves, flowers, legs, antennae, tail, shell).</li> </ul>
Students demonstrate understanding of structure and function-survival requirements by...	<ul style="list-style-type: none"> <li>• observing that plants need water, air, food, and light to grow; observing that animals need water, air, food, and shelter to grow.</li> </ul>
Students demonstrate an understanding of reproduction by....	<ul style="list-style-type: none"> <li>• observing and scientifically drawing (e.g., recording shapes, prominent features, relative proportions, organizes and differentiates significant parts observed) and labeling the stages in the life cycle of a familiar plant and animal.</li> <li>• sequencing the life cycle of a plant or animal when given a set of pictures.</li> </ul>
Students demonstrate understanding of structure and function-survival requirements by...	<ul style="list-style-type: none"> <li>• identifying the specific functions of the physical structures of a plant or an animal (e.g., roots for water, webbed feet for swimming).</li> </ul>
Students demonstrate an understanding of energy flow in an ecosystem by...	<ul style="list-style-type: none"> <li>• caring for plants and/or animals by identifying and providing for their needs experimenting with a plant's growth under different conditions, including light and no light</li> </ul>
Students demonstrate an understanding of food webs in an ecosystem by....	<ul style="list-style-type: none"> <li>• acting out or constructing simple diagrams (pictures or words) that shows a simple food web</li> <li>• using information about a simple food web to determine how basic needs (e.g., shelter and water) are met by the habitat/environment.</li> </ul>
Students demonstrate an understanding of human body systems by...	<ul style="list-style-type: none"> <li>• identifying the five senses and using senses to identify objects in the environment</li> <li>• observing, identifying, and recording external features of humans and other animals</li> <li>• identifying the senses needed to meet survival needs for a given situation</li> </ul>
Students demonstrate an understanding of human heredity by....	<ul style="list-style-type: none"> <li>• observing and comparing their physical features with those of parents, classmates, and other organisms</li> <li>• identifying that some behaviors are learned</li> </ul>
Students demonstrate an understanding of characteristic properties of matter by....	<ul style="list-style-type: none"> <li>• identifying, comparing, and sorting objects by similar or different physical properties (e.g., size, shape, color, texture, small, weight).</li> <li>• recording observations/data about physical properties</li> </ul>

	<ul style="list-style-type: none"> <li>using attributes of properties to state why objects are grouped together (e.g., things that roll, things that are rough)</li> </ul>
Students demonstrate an understanding of states of matter by...	<ul style="list-style-type: none"> <li>describing properties of solids and liquids</li> <li>identifying and comparing solids and liquids</li> <li>making logical predictions about changes in the state of matter when adding or taking away heat (e.g., ice melting, water freezing).</li> </ul>
Students demonstrate an understanding of conservation of matter by...	<ul style="list-style-type: none"> <li>using simple tools (e.g., balance scale, see-saw) to explore the property of weight</li> </ul>
Students demonstrate an understanding of energy by...	<ul style="list-style-type: none"> <li>describing observable effects of light using a variety of light sources</li> <li>experimenting and describe how vibrating objects make sound (e.g., guitar strings, seeing salt bounce on a drum skin).</li> <li>identifying the sun as a source of heat energy</li> <li>demonstrate when a shadow can be created using sunny versus cloudy days describing that the sun warms land and water</li> <li>describing that objects change in temperature by adding or subtracting heat</li> </ul>
Students demonstrate an understanding of motion by....	<ul style="list-style-type: none"> <li>show how pushing/pulling moves or does not move an object.</li> <li>predicting the direction an object will or will not move if a force is applied to it.</li> </ul>
Students demonstrate an understanding of force by...	<ul style="list-style-type: none"> <li>showing that different objects fall to earth unless something is holding them up</li> </ul>
Students demonstrate an understanding of magnetic force by...	<ul style="list-style-type: none"> <li>observing and sorting objects that are and are not attracted to magnets.</li> </ul>
Students demonstrate an understanding of earth materials by....	<ul style="list-style-type: none"> <li>describing, comparing, and sorting rocks and soils by similar or different physical properties (e.g., size, shape, color, texture, smell, weight</li> <li>recording data/observations about physical properties</li> <li>using attributes of properties to state why objects are grouped together (e.g., rocks that are shiny or not shiny)</li> </ul>
Students demonstrate an understanding of process and change over time within earth systems by...	<ul style="list-style-type: none"> <li>conducting tests on how different soils retain water (e.g., how fast does the water drain through?)</li> </ul>
Students demonstrate an understanding of how the use of scientific tools helps to extend senses and gather data by....	<ul style="list-style-type: none"> <li>using scientific tools to extend senses and gather data about weather (e.g., weather/water vane: direction; wind sock: wind intensity; anemometer: speed; thermometer: temperature; meter sticks/rulers: snow depth; rain gauges: rain</li> </ul>
Students demonstrate an understanding of processes and change over time within earth systems by...	<ul style="list-style-type: none"> <li>observing and recording seasonal and weather changes throughout the school year.</li> <li>observing, recording, and summarizing local weather</li> </ul>

	<p>data.</p> <ul style="list-style-type: none"> <li>observing how clouds are related to forms of precipitation (e.g., rain, sleet, snow)</li> </ul>
Students demonstrate an understanding of properties of earth materials by...	<ul style="list-style-type: none"> <li>identifying which materials are best used for different uses (e.g., soils for growing plants, sand for the sand box).</li> </ul>
Students demonstrate an understanding of temporal or positional relationships between or among the Earth, sun, and moon by...	<ul style="list-style-type: none"> <li>observing that the sun can only be seen in the daytime, but the moon can be seen sometimes at night and sometimes during the day.</li> <li>observing that the sun and moon appear to move slowly across the sky.</li> <li>observing that the moon looks slightly different from day to day.</li> </ul>
Students demonstrate understanding of processes and change over time within the system of the universe (Scale, Distances, Star Formation, Theories, Instrumentation) by...	<ul style="list-style-type: none"> <li>observing that there are more stars in the sky than can easily be counted, but they are not all the same in brightness.</li> </ul>

## Grade Span Expectations for Science - Grade 3 and 4

Standards	Knowledge and Skills
Students demonstrate an understanding of classification of organisms by....	<ul style="list-style-type: none"> <li>• citing evidence to distinguish between living and non-living things</li> <li>• identifying, sorting, and comparing based on similar and/or different external features</li> <li>• recording and analyzing observations/data external features (e.g., within a grouping, which characteristics are the same and which are different</li> <li>• citing evidence (e.g., prior knowledge, data) to draw conclusions explaining why organisms are grouped/not grouped together (e.g., mammal, bird, and fish).</li> </ul>
Students demonstrate understanding of structure and function-survival requirements by....	<ul style="list-style-type: none"> <li>• observing that plants need water, air, food, light, and space to grow and reproduce; observing that animals need water, air, food, and shelter/space to grow and reproduce.</li> </ul>
Students demonstrate an understanding of reproduction by....	<ul style="list-style-type: none"> <li>• observing changes and recording data to scientifically draw and label stages in the life cycle of a familiar plant and animal.</li> <li>• sequencing the life cycle of a plant or animal when given a set of data/pictures.</li> <li>• comparing the life cycles of 2 plants or 2 animals when given a set of data/pictures.</li> </ul>
Students demonstrate understanding of structure and function-survival requirements by...	<ul style="list-style-type: none"> <li>• identifying and explaining how the physical structures/characteristics of an organism allows it to survive and defend itself</li> <li>• analyzing the structures need for survival of populations of plants and animals in a particular habitat/environment</li> </ul>
Students demonstrate an understanding of energy flow in an ecosystem by...	<ul style="list-style-type: none"> <li>• identifying sources of energy for survival of organisms (e.g., light or food).</li> </ul>
Students demonstrate an understanding of food webs in an ecosystem by...	<ul style="list-style-type: none"> <li>• demonstrating in a food web all animals' food begins with the sun</li> <li>• using information about organisms to design and explain how the habitat provides for the needs of the organisms that live there</li> <li>• explaining the way that plants and animals in that habitat depend on each other</li> </ul>
Students demonstrate an understanding of equilibrium in an ecosystem by...	<ul style="list-style-type: none"> <li>• explaining what plants or animals might do if their environment changes</li> <li>• explaining how the balance of an ecosystem can be</li> </ul>

	<p>disturbed (e.g., how does overpopulation of a species affect the rest of the ecosystem).</p>
<p>Students demonstrate an understanding of human body systems by...</p>	<ul style="list-style-type: none"> <li>• showing connections between external and internal body structures and how they help humans survive.</li> <li>• comparing and analyzing external features and characteristics of humans and other animals</li> </ul>
<p>Students demonstrate an understanding of human heredity by...</p>	<ul style="list-style-type: none"> <li>• identifying similarities that are inherited from a biological parent</li> <li>• identifying that some behaviors are learned and some behaviors are instinctive</li> </ul>
<p>Students demonstrate an understanding of conservation of matter by...</p>	<ul style="list-style-type: none"> <li>• identifying, comparing, and sorting objects by similar or different physical properties (e.g., size, shape, color, texture, mass, weight, temperature, flexibility).</li> <li>• citing evidence (e.g., prior knowledge, data) to support conclusions about why objects are grouped/not grouped together.</li> </ul>
<p>Students demonstrate an understanding of physical changes by...</p>	<ul style="list-style-type: none"> <li>• observing and describing physical changes (e.g., freezing, thawing, torn piece of paper).</li> </ul>
<p>Students demonstrate an understanding of states of matter by...</p>	<ul style="list-style-type: none"> <li>• describing properties of solids, liquids, and gases.</li> <li>• identifying and comparing solids, liquids, and gases.</li> <li>• making logical predictions about changes in the state of matter when adding or taking away heat (e.g., ice melting, water boiling or freezing, condensation/evaporation).</li> </ul>
<p>Students demonstrate an understanding of conservation of matter by...</p>	<ul style="list-style-type: none"> <li>• measuring the weight of objects to prove that all matter has weight</li> <li>• using measures of weight to prove that the whole equals the sum of its parts</li> <li>• Showing that the weight of an object remains the same despite a change in its shape</li> </ul>
<p>Students demonstrate an understanding of energy by...</p>	<ul style="list-style-type: none"> <li>• experimenting to identify and classify different pitches and volumes of sounds produced by different objects</li> <li>• using data to explain what causes sound to have different pitch or volume</li> <li>• describing or showing that heat can be produced in many ways (e.g., electricity, friction, burning).</li> <li>• drawing, diagramming, building and explaining a complete electrical circuit.</li> <li>• using experimental data to classify a variety of materials as conductors or insulators.</li> </ul>

	<ul style="list-style-type: none"> <li>investigating observable effects of light sources</li> <li>predicting, describing, and investigating how light rays are reflected, refracted, or absorbed.</li> <li>describing how heat moves from warm objects to cold objects until both objects are the same temperature</li> <li>showing that heat moves from one object to another causing temperature change (e.g., when land heats up it warms the air).</li> </ul>
Students demonstrate an understanding of motion by...	<ul style="list-style-type: none"> <li>predicting the direction and describing the motion (of objects of different weights, shapes, sizes, etc.) if a force is applied to it.</li> <li>describing change in position relative to other objects or background</li> </ul>
Students demonstrate an understanding of force by	<ul style="list-style-type: none"> <li>investigating and describing that different amounts of force can change direction/speed of an object in motion.</li> <li>Conducting experiments to demonstrate that different objects fall to earth unless something is holding them up</li> </ul>
Students demonstrate an understanding of magnetic force by....	<ul style="list-style-type: none"> <li>using prior knowledge and investigating to predict whether or not an object will be attracted to a magnet.</li> <li>describing what happens when like and opposite poles of a magnet are placed near each other.</li> <li>exploring relative strength of magnets (e.g., size of magnets, number of magnets, properties of materials).</li> </ul>
Students demonstrate an understanding of earth materials by....	<ul style="list-style-type: none"> <li>describing, comparing, and sorting rocks and soils and minerals by similar or different physical properties (e.g., size, shape, color, texture, smell, weight)</li> <li>recording and analyzing data/observations about physical properties</li> <li>citing evidence (e.g., prior knowledge, data) to support why rocks, soils, or minerals are classified /non-classified together.</li> <li>identifying the four basic materials of the earth (water, soil, rocks, air).</li> </ul>
Students demonstrate an understanding of process and change over time within earth systems by...	<ul style="list-style-type: none"> <li>conducting investigations and using observational data to describe how water moves rocks and soils.</li> </ul>
Students demonstrate an understanding of how the use of scientific tools helps to extend senses and gather data by....	<ul style="list-style-type: none"> <li>explaining using scientific tools to extend senses and gather data about weather (e.g., weather/water vane: direction; wind sock: wind intensity; anemometer: speed; thermometer: temperature; meter sticks/rulers: snow depth;</li> </ul>

	<p>rain gauges: rain amount in inches)</p> <ul style="list-style-type: none"> <li>• selecting appropriate tools for a given task and describing the information they will provide.</li> <li>• investigating local landforms and how wind, water, or ice have shaped and reshaped them (e.g., severe weather).</li> <li>• using or building models to simulate the effects of how wind, and water shape and reshape the land (e.g., erosion, sedimentation, deposition, glaciation).</li> <li>• identify sudden and gradual changes that affect the earth (e.g., sudden change = flood; gradual change = erosion caused by oceans).</li> <li>• observing, recording, comparing, analyzing weather data to describe weather changes or weather patterns.</li> <li>• describing water as it changes into vapor in the air and reappears as a liquid when it is cooled</li> <li>• explaining how this cycle of water relates to weather and the formation of clouds.</li> </ul>
<p>Students demonstrate an understanding of properties of earth materials by</p>	<ul style="list-style-type: none"> <li>• determining and supporting explanations of their uses</li> </ul>
<p>Students demonstrate an understanding of temporal or positional relationships between or among the Earth, sun, and moon by...</p>	<ul style="list-style-type: none"> <li>• observing that the sun and moon, and stars appear to move slowly across the sky.</li> <li>• observing that the moon looks slightly different from day to day, but looks the same again in about four weeks.</li> <li>• recognizing that the rotation of the Earth on its axis every 24 hours produces the earth/night cycle.</li> </ul>
<p>Students demonstrate understanding of processes and change over time within the system of the universe (Scale, Distances, Star Formation, Theories, Instrumentation) by...</p>	<ul style="list-style-type: none"> <li>• recognizing that throughout the history people have identified patterns of stars that we call constellations.</li> </ul>
<p>Students demonstrate an understanding of characteristics of the solar system by...</p>	<ul style="list-style-type: none"> <li>• recognizing that: the sun is the center of our solar system; the Earth is one of several planets that orbits the sun; and the moon orbits the Earth. recognizing that it takes approximately 365 days for the Earth to orbit the sun.</li> </ul>

## Grade Span Expectations for Science - Grade 5 and 6

<b>Standards</b>	<b>Knowledge and Skills</b>
Students demonstrate understanding of biodiversity by...	<ul style="list-style-type: none"> <li>recognizing that organisms have different features and behaviors for meeting their needs to survive</li> </ul>
Students demonstrate understanding of structure and function-survival requirements by....	<ul style="list-style-type: none"> <li>describing structures of behavior that help organisms survive in their environment (e.g., defense, obtaining nutrients, reproduction, and eliminating waste).</li> </ul>
Students demonstrate an understanding of reproduction by....	<ul style="list-style-type: none"> <li>defining reproduction as a process through which organisms produce offspring.</li> <li>describing reproduction as being essential for the continuation of a species.</li> <li>investigating and comparing a variety of plant and animal life cycles.</li> </ul>
Students demonstrate understanding of differentiation by....	<ul style="list-style-type: none"> <li>identifying cells as the building blocks of organisms</li> <li>recognizing and illustrating (e.g., flow chart) the structural organization of an organism from a cell to tissue to organs to organ systems to organisms.</li> </ul>
Students demonstrate an understanding of equilibrium in an ecosystem by....	<ul style="list-style-type: none"> <li>identifying and defining an ecosystem and the variety of relationships within it</li> </ul>
Students demonstrate an understanding of energy flow in an ecosystem by....	<ul style="list-style-type: none"> <li>identifying the sun as the major source of energy for life on earth and sequencing the energy flow in an ecosystem.</li> <li>describing the basic processes and recognizing the substances involved in photosynthesis and respiration</li> </ul>
Students demonstrate an understanding of recycling in an ecosystem by....	<ul style="list-style-type: none"> <li>explaining the processes of precipitation, evaporation, condensation as parts of the water cycle.</li> <li>completing a basic food web for a given ecosystem.</li> </ul>
Use a model, classification system, or dichotomy\us key to illustrate, compare, or interpret possible relationships among groups of organisms (e.g., internal and external structures, anatomical features).	<ul style="list-style-type: none"> <li>stating the value of, or reasons for, classification systems</li> <li>following a taxonomic key to identify a given organism (e.g. flowering and non-flowering plants).</li> </ul>

Students demonstrate an understanding of Natural Selection/evolution by....	<ul style="list-style-type: none"> <li>explaining how a population's or specie's traits affect their ability to survive over time.</li> <li>researching or reporting on possible causes from the extinction of an animal or plant</li> <li>explaining how fossil evidence can be useful to understanding the history of life on Earth.</li> </ul>
Students demonstrate an understanding of human body systems by...	<ul style="list-style-type: none"> <li>identifying the biotic factors (e.g., microbes, parasites, food availability, aging process) that have an effect on the human body systems</li> <li>identifying the abiotic factors (e.g., drugs, altitude, weather, pollution) that have an effect on the human body systems</li> </ul>
Students demonstrate an understanding of patterns of human health/disease by...	<ul style="list-style-type: none"> <li>identifying the biotic (e.g. microbes, parasites, food availability, aging process) and abiotic (e.g., radiation, toxic materials, carcinogens) factors that cause disease and affect human health.</li> </ul>
Students demonstrate an understanding of characteristic properties of matter by...	<ul style="list-style-type: none"> <li>comparing the masses of objects of equal volume made of different shapes</li> <li>recognizing that different substances have properties, which allow them to be identified regardless of the size of the sample.</li> <li>classifying and comparing substances using characteristic properties (e.g., solids, liquids, gas).</li> </ul>
Students demonstrate an understanding of conservation of matter by...	<ul style="list-style-type: none"> <li>explaining that regardless of how parts of an object are arranged, the mass of the whole is always the same as the sum of the masses of its parts.</li> </ul>
Students demonstrate an understanding of the states of matter by....	<ul style="list-style-type: none"> <li>differentiating among the characteristics of solids, liquids, and gases.</li> <li>predicting the effects of heating and cooling on the physical state, volume and mass of a substance</li> </ul>
Students demonstrate an understanding of the structure of matter by....	<ul style="list-style-type: none"> <li>distinguishing between solutions, mixtures, and "pure" substances, i.e., compounds and elements</li> </ul>
Students demonstrate an understanding of energy by...	<ul style="list-style-type: none"> <li>differentiating among the properties of various forms of energy</li> <li>explaining how energy may be stored in various ways (e.g. batteries, springs, height in terms of potential energy)</li> <li>describing sound as the transfer of energy through various materials (e.g., solids, liquids, gases).</li> </ul>
Students demonstrate an understanding of heat energy by....	<ul style="list-style-type: none"> <li>identifying real-world applications where heat energy is transferred and showing the direction</li> </ul>

	that the heat energy flows.
Students demonstrate an understanding of motion by....	<ul style="list-style-type: none"> <li>• using graphs or data to compare the relative speed of objects</li> </ul>
Students demonstrate an understanding of force (i.e., friction, Gravitational, magnetic) by....	<ul style="list-style-type: none"> <li>• recognizing that a force is a push or a pull</li> <li>• explaining that changes in speed or direction of motion are caused by force</li> <li>• showing that electric currents and magnets can exert a force on each other.</li> </ul>
Students demonstrate an understanding of processes and change over time within earth systems by....	<ul style="list-style-type: none"> <li>• identifying and describing layers of the earth.</li> <li>• plotting location of volcanoes and earthquakes and explaining the relationship between the location of these phenomena and faults.</li> <li>• diagramming, labeling, and explaining the processes of the water cycle including evaporation, precipitation, and run-off, condensation, transpiration, and groundwater</li> <li>• explaining how condensation of water vapor forms clouds which affects climate and weather</li> <li>• developing models to explain how humidity, temperature, and altitude affect air pressure and how this affects local weather.</li> <li>• identifying composition and layers of the earth's atmosphere</li> <li>• describing events and the effect they may have on climate (e.g., El Nino, deforestation, glacial melting, and an increase in the greenhouse gasses).</li> <li>• explaining how differential heating and convection affect Earth's weather patterns</li> <li>• describing how differential heating of the oceans affects ocean currents which in turn influence weather and climate</li> <li>• explaining the relationship between differential heating/convection and the production of winds</li> <li>• analyzing global patterns of atmospheric movements to explain effects on water</li> <li>• predicting temperature and precipitation changes associated with the passing of various fronts</li> </ul>
Students demonstrate an understanding of processes and change over time by....	<ul style="list-style-type: none"> <li>• representing the processes of the rock cycle in words, diagrams, or models.</li> <li>• citing evidence and developing a logical argument to explain the formation of a rock, given its</li> </ul>

	<p>characteristics and location (e.g. classifying rock type using identification resources).</p>
<p>Students demonstrate an understanding of the characteristics of the solar system by....</p>	<ul style="list-style-type: none"> <li>identifying and comparing the size, location, distances, and movement (e.g. orbit of the planets, paths of the meteors) of the objects in our solar system.</li> <li>comparing the composition, atmosphere, and surface features of objects in our solar system</li> </ul>
<p>Students demonstrate an understanding of temporal or positional relationships between or among the Earth, sun, and moon by....</p>	<ul style="list-style-type: none"> <li>using models to describe the relative motion/position of the Earth, sun and moon.</li> <li>explaining night/day, seasons, year, and tides as a result of the regular and predictable motion of the earth, sun and moon.</li> <li>using a model of the Earth, sun, and moon to recreate the phases of the moon</li> <li>defining the Earth's gravity as a force that pulls any object on or near the Earth toward its center without touching it.</li> </ul>
<p>Students demonstrate an understanding of the universe by...</p>	<ul style="list-style-type: none"> <li>describing the apparent motion/position of the objects in the sky (e.g., constellations, planets)</li> <li>identifying the sun as a medium-sized star located near the edge of a disc shaped galaxy of stars.</li> </ul>