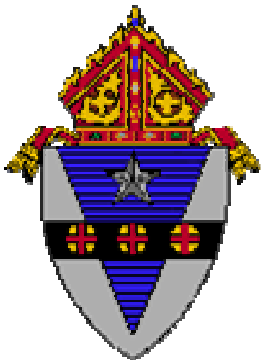
Archdiocese of Philadelphia



Curriculum Standards

English Language Arts and Mathematics

Grade Two

INTRODUCTION

The mission statement of the Office of Catholic Education boldly proclaims that:

Catholic Schools form Catholic students to be full and practicing members of the Church, are centers of evangelization that call all to live fully the message of Jesus Christ, and are centers of academic excellence that rigorously prepare students to be life-long learners and contributing members of the global community.

From this we draw our primary focus, the faith formation of our students. Of major importance, too, is the academic preparation our students receive which will enable them to be college- and career-ready upon commencement from their experience in archdiocesan schools.

This document is a response to the call to prepare our students to become "contributing members of the global community." It is the product of an in-depth study of the data related to existing curriculum, current research, input from respected professional organizations and hours of intense work and dialogue on the part of teachers and administrators from throughout the archdiocese.

Our data study encouraged us to build on the patterns of excellence which have been a hallmark of education in Archdiocesan schools. A review of the existing curriculum and input from many teachers called us to re-focus curriculum content so that instruction and learning would incorporate higher-level thinking and in-depth teaching. At the recommendation of the National Governors' Association, we are moving forward with the adoption of the Common Core State Standards as the basis for curriculum content.

Included in this document are the Common Core State Standards for this level as well as the implementation guides prepared by the curriculum committee members who spent a great deal of time working on them.

As we move forward in the period of transition to full adoption of the Standards and to assessing archdiocesan students using national assessments, we feel confident that our teachers will continue to move forward with the same dedication that will prepare our students to stand shoulder-to-shoulder with the best students both nationally and internationally.

ACKNOWLEDGEMENTS

We would like to acknowledge the following curriculum committee members for their tireless efforts in the preparation of this document:

English Language Arts	**Mathematics**	
Mary Tremper, Chairperson	Kate Reardon, Chairperson	
Mary Battson	Diane Brown	Jane Ries-Jacoby
Mary Finnegan	Mary Anne Corcoran	Donna Scully
Mary Katz	Karen Dorneman	Bridget Tigue
Celie Magee	Elizabeth Dowling	Andrea Triner
Mary McFillin	Mary Gill	Lynne Wlodarczyk
Sister Joan Felicia O'Reilly	Sue Macrone	
Early Childhood – Kathleen Smith	**Assessment** – Debbie Jaster	

We are also grateful to the **Elementary Technology Committee** for preparing web links to these guidelines.

CONTENTS

NOTE:

The English Language Arts and Mathematics content are intentionally contained in the same document. With research indicating that skills should be presented in an integrated context, it is the hope that teachers will be more aware of the total curriculum at this level rather than isolated subject matter and make deliberate connections between skills presented in each area.

Also included at each level (with the exception of Kindergarten) are the Common Core State Standards for the grade below and the grade above each level. These are placed here so that, during the transition period leading up to full implementation of the Standards, the teacher is aware of skills that should have been presented at an earlier level and makes plans to incorporate these skills in the event that they have not been presented. It is important, too, that skills designated for higher levels are not anticipated at the current instructional level.

English Language Arts

Grade 2

Common Core State Standards – English Language Arts – Grade One
Common Core State Standards – English Language Arts – Grade 2
Common Core Standards – English Language Arts – Grade 3
Archdiocesan Implementation Guides – Grade 2

Key Points In English Language Arts

Reading

- The standards establish a "staircase" of increasing complexity in what students must be able to read so that all students are ready for the demands of college- and career-level reading no later than the end of high school. The standards also require the progressive development of reading comprehension so that students advancing through the grades are able to gain more from whatever they read.
- Through reading a diverse array of classic and contemporary literature as well as challenging informational texts in a range of subjects, students are expected to build knowledge, gain insights, explore possibilities, and broaden their perspective. Because the standards are building blocks for successful classrooms, but recognize that teachers, school districts and states need to decide on appropriate curriculum, they intentionally do not offer a reading list. Instead, they offer numerous sample texts to help teachers prepare for the school year and allow parents and students to know what to expect at the beginning of the year.
- The standards mandate certain critical types of content for all students, including classic myths and stories from around the world, foundational U.S. documents, seminal works of American literature, and the writings of Shakespeare. The standards appropriately defer the many remaining decisions about what and how to teach to states, districts, and schools.

Writing

- The ability to write logical arguments based on substantive claims, sound reasoning, and relevant evidence is a cornerstone of the writing standards, with opinion writing---a basic form of argument---extending down into the earliest grades.
- Research---both short, focused projects (such as those commonly required in the workplace) and longer term in depth research---"is emphasized throughout the standards but most prominently in the writing strand since a written analysis and presentation of findings is so often critical.
- Annotated samples of student writing accompany the standards and help establish adequate performance levels in writing arguments, informational/explanatory texts, and narratives in the various grades.

Speaking and Listening

- The standards require that students gain, evaluate, and present increasingly complex information, ideas, and evidence through listening and speaking as well as through media.
- An important focus of the speaking and listening standards is academic discussion in one-on-one, small-group, and whole-class settings. Formal presentations are one important way such talk occurs, but so is the more informal discussion that takes place as students collaborate to answer questions, build understanding, and solve problems.

Language

- The standards expect that students will grow their vocabularies through a mix of conversations, direct instruction, and reading. The standards will help students determine word meanings, appreciate the nuances of words, and steadily expand their repertoire of words and phrases.
- The standards help prepare students for real life experience at college and in 21st century careers. The standards recognize that students must be able to use formal English in their writing and speaking but that they must also be able to make informed, skillful choices among the many ways to express themselves through language.
- Vocabulary and conventions are treated in their own strand not because skills in these areas should be handled in isolation but because their use extends across reading, writing, speaking, and listening.

Media and Technology

- Just as media and technology are integrated in school and life in the twenty-first century, skills related to media use (both critical analysis and production of media) are integrated throughout the standards.

Key Features of the Standards

Reading: Text complexity and the growth of comprehension

The Reading standards place equal emphasis on the sophistication of what students read and the skill with which they read. Standard 10 defines a grade-by-grade "staircase" of increasing text complexity that rises from beginning reading to the college and career readiness level. Whatever they are reading, students must also show a steadily growing ability to discern more from and make fuller use of text, including making an increasing number of connections among ideas and between texts, considering a wider range of textual evidence, and becoming more sensitive to inconsistencies, ambiguities, and poor reasoning in texts.

Writing: Text types, responding to reading, and research

The Standards acknowledge the fact that whereas some writing skills, such as the ability to plan, revise, edit, and publish, are applicable to many types writing, other skills are more properly defined in terms of specific writing types: arguments, informative/explanatory texts, and narratives. Standard 9 stresses the importance of the writing-reading connection by requiring students to draw upon and write about evidence from literary and informational texts. Because of the centrality of writing to most forms of inquiry, research standards are prominently included in this strand, though skills important to research are infused throughout the document.

Speaking and Listening: Flexible communication and collaboration

Including but not limited to skills necessary for formal presentations, the Speaking and Listening standards require students to develop a range of broadly useful oral communication and interpersonal skills. Students must learn to work together, express and listen carefully to ideas, integrate information from oral, visual, quantitative, and media sources, evaluate what they hear, use media and visual displays strategically to help achieve communicative purposes, and adapt speech to context and task.

Language: Conventions, effective use, and vocabulary

The Language standards include the essential "rules" of standard written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives. The vocabulary standards focus on understanding words and phrases, their relationships, and their nuances and on acquiring new vocabulary, particularly general academic and domain-specific words and phrases.

Appendices A, B, and C

- Appendix A contains supplementary material on reading, writing, speaking and listening, and language as well as a glossary of key terms.
- Appendix B consists of text exemplars illustrating the complexity, quality, and range of reading appropriate for various grade levels with accompanying sample performance tasks.
- Appendix C includes annotated samples demonstrating at least adequate performance in student writing at various grade levels

Anchor Standards for Reading

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.[1]
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Anchor Standards for Writing

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Note on range and content in student writing

To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying real and imagined experiences and events. They learn to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and they begin to adapt the form and content of their writing to accomplish a particular task and purpose. They develop the capacity to build knowledge on a subject through research projects and to respond analytically to literary and informational sources. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and extended time frames throughout the year.

Anchor Standards for Speaking and Listening

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations—as part of a whole class, in small groups, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio.

Anchor Standards for Language

The K–5 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of word relationships and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Note on range and content of student language use

To build a foundation for college and career readiness in language, students must gain control over many conventions of standard English grammar, usage, and mechanics as well as learn other ways to use language to convey meaning effectively. They must also be able to determine or clarify the meaning of grade-appropriate words encountered through listening, reading, and media use; come to appreciate that words have nonliteral meanings, shadings of meaning, and relationships to other words; and expand their vocabulary in the course of studying content. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions, effective language use, and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

ELA Standards for Grade One

Reading: Literature

Key Ideas and Details

RL.1.1. Ask and answer questions about key details in a text.

RL.1.2. Retell stories, including key details, and demonstrate understanding of their central message or lesson.

RL.1.3. Describe characters, settings, and major events in a story, using key details.

Craft and Structure

RL.1.4. Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.

RL.1.5. Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of text types.

RL.1.6. Identify who is telling the story at various points in a text.

Integration of Knowledge and Ideas

RL.1.7. Use illustrations and details in a story to describe its characters, setting, or events.

RL.1.8. (Not applicable to literature)

RL.1.9. Compare and contrast the adventures and experiences of characters in stories.

Range of Reading and Level of Text Complexity

RL.1.10. With prompting and support, read prose and poetry of appropriate complexity for grade 1.

Reading: Informational Text

Key Ideas and Details

RI.1.1. Ask and answer questions about key details in a text.

RI.1.2. Identify the main topic and retell key details of a text.

RI.1.3. Describe the connection between two individuals, events, ideas, or pieces of information in a text.

Craft and Structure

RI.1.4. Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

RI.1.5. Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.

RI.1.6. Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

Integration of Knowledge and Ideas

RI.1.7. Use the illustrations and details in a text to describe its key ideas.

RI.1.8. Identify the reasons an author gives to support points in a text.

RI.1.9. Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

Range of Reading and Level of Text Complexity

RI.1.10. With prompting and support, read informational texts appropriately complex for grade 1.

Reading: Foundational Skills

Print Concepts

RF.1.1. Demonstrate understanding of the organization and basic features of print.

- Recognize the distinguishing features of a sentence (e.g., first word, capitalization, ending punctuation).

Phonological Awareness

RF.1.2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

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

Phonics and Word Recognition

RF.1.3. Know and apply grade-level phonics and word analysis skills in decoding words.

- Know the spelling-sound correspondences for common consonant digraphs (two letters that represent one sound).
- Decode regularly spelled one-syllable words.
- Know final -e and common vowel team conventions for representing long vowel sounds.
- Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.
- Decode two-syllable words following basic patterns by breaking the words into syllables.
- Read words with inflectional endings.
- Recognize and read grade-appropriate irregularly spelled words.

Fluency

RF.1.4. Read with sufficient accuracy and fluency to support comprehension.

- Read grade-level text with purpose and understanding.
- Read grade-level text orally with accuracy, appropriate rate, and expression.
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Writing

Text Types and Purposes

W.1.1.. Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.

W.1.2. Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

W.1.3. Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

Production and Distribution of Writing

W.1.4. (Begins in grade 3)

W.1.5. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.

W.1.6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

Research to Build and Present Knowledge

W.1.7. Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions).

W.1.8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

W.1.9. (Begins in grade 4)

Range of Writing

W.1.10. (Begins in grade 3)

Speaking and Listening

Comprehension and Collaboration

SL.1.1. Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.

- Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
- Build on others' talk in conversations by responding to the comments of others through multiple exchanges.
- Ask questions to clear up any confusion about the topics and texts under discussion.

SL.1.2. Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

SL.1.3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

Presentation of Knowledge and Ideas

SL.1.4. Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

SL.1.5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

SL.1.6. Produce complete sentences when appropriate to task and situation.

Language

Conventions of Standard English

L.1.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

- Print all upper- and lowercase letters.
- Use common, proper, and possessive nouns.
- Use singular and plural nouns with matching verbs in basic sentences (e.g., He hops; We hop).
- Use personal, possessive, and indefinite pronouns (e.g., I, me, my; they, them, their, anyone, everything).
- Use verbs to convey a sense of past, present, and future (e.g., Yesterday I walked home; Today I walk home; Tomorrow I will walk home).
- Use frequently occurring adjectives.
- Use frequently occurring conjunctions (e.g., *and, but, or, so, because*).
- Use determiners (e.g., articles, demonstratives).
- Use frequently occurring prepositions (e.g., *during, beyond, toward*).
- Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts

.

L.1.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

- Capitalize dates and names of people.
- Use end punctuation for sentences.
- Use commas in dates and to separate single words in a series.
- Use conventional spelling for words with common spelling patterns and for frequently occurring irregular words.
- Spell untaught words phonetically, drawing on phonemic awareness and spelling conventions.

Knowledge of Language

L.1.3. (Begins in grade 2)

Vocabulary Acquisition and Use

L.1.4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grade 1 reading and content*, choosing flexibly from an array of strategies.

- Use sentence-level context as a clue to the meaning of a word or phrase.
- Use frequently occurring affixes as a clue to the meaning of a word.
- Identify frequently occurring root words (e.g., *look*) and their inflectional forms (e.g., *looks, looked, looking*).

L.1.5. With guidance and support from adults, demonstrate understanding of figurative language, word relationships and nuances in word meanings.

- Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent.
- Define words by category and by one or more key attributes (e.g., a *duck* is a bird that swims; a *tiger* is a large cat with stripes).
- Identify real-life connections between words and their use (e.g., note places at home that are *cozy*).
- Distinguish shades of meaning among verbs differing in manner (e.g., *look, peek, glance, stare, glare, scowl*) and adjectives differing in intensity (e.g., large, gigantic) by defining or choosing them or by acting out the meanings.

L.1.6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., *because*).

ELA Standards for Grade 2

Reading Standards for Literature

Key Ideas and Details

RL.2.1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

RL.2.2. Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.

RL.2.3. Describe how characters in a story respond to major events and challenges.

Craft and Structure

RL.2.4. Describe how words and phrases (e.g., regular beats, alliteration, rhymes, repeated lines) supply rhythm and meaning in a story, poem, or song.

RL.2.5. Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.

RL.2.6. Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud.

Integration of Knowledge and Ideas

RL.2.7. Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

RL.2.8 Not applicable at this level.

RL.2.9. Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.

Range of Reading and Level of Text Complexity

RL.2.10. By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading Standards for Informational Text

Key Ideas and Details

RI.2.1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

RI.2.2. Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text.

RI.2.3. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

Craft and Structure

RI.2.4. Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

RI.2.5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

RI.2.6. Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

Integration of Knowledge and Ideas

RI.2.7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

RI.2.8. Describe how reasons support specific points the author makes in a text.

RI.2.9. Compare and contrast the most important points presented by two texts on the same topic.

Range of Reading and Level of Text Complexity

RI.2.10. By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Reading Standards: Foundational Skills

Phonics and Word Recognition

RF.2.3. Know and apply grade-level phonics and word analysis skills in decoding words.

- Distinguish long and short vowels when reading regularly spelled one-syllable words.
- Know spelling-sound correspondences for additional common vowel teams.
- Decode regularly spelled two-syllable words with long vowels.
- Decode words with common prefixes and suffixes.
- Identify words with inconsistent but common spelling-sound correspondences.
- Recognize and read grade-appropriate irregularly spelled words.

Fluency

RF.2.4. Read with sufficient accuracy and fluency to support comprehension.

- Read on-level text with purpose and understanding.
- Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary**.**

Writing Standards

Text Types and Purposes

W.2.1. Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section.

W.2.2. Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

W.2.3. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

Production and Distribution of Writing

W.2.4. (Begins at Grade 3)

W.2.5 With guidance and support from adults and peers, focus on a topic and strengthen writing as needed by revising and editing.

W.2.6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

Research to Build and Present Knowledge

W.2.7. Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

W.2.8. Recall information from experiences or gather information from provided sources to answer a question.

W.2.9. Begins in Grade 4

W.2.10 Begins in Grade 3

Speaking and Listening Standards

Comprehension and Collaboration

SL.2.1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

- Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
- Build on others' talk in conversations by linking their comments to the remarks of others.
- Ask for clarification and further explanation as needed about the topics and texts under discussion.

SL.2.2. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

SL.2.3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

Presentation of Knowledge and Ideas

SL.2.4. Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.

SL.2.5. Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.

SL.2.6. Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Language Standards

Conventions of Standard English

L.2.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

- Use collective nouns (e.g., group).
- Form and use frequently occurring irregular plural nouns (e.g., feet, children, teeth, mice, fish).
- Use reflexive pronouns (e.g., myself, ourselves).
- Form and use the past tense of frequently occurring irregular verbs (e.g., sat, hid, told).
- Use adjectives and adverbs, and choose between them depending on what is to be modified.
- Produce, expand, and rearrange complete simple and compound sentences (e.g., The boy watched the movie; The little boy watched the movie; The action movie was watched by the little boy).

L..2.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

- Capitalize holidays, product names, and geographic names.
- Use commas in greetings and closings of letters.
- Use an apostrophe to form contractions and frequently occurring possessives.
- Generalize learned spelling patterns when writing words (e.g., cage → badge; boy → boil).
- Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

Knowledge of Language

L.2.3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

- Compare formal and informal uses of English.

Vocabulary Acquisition and Use

L.2.4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies.

- Use sentence-level context as a clue to the meaning of a word or phrase.
- Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., happy/unhappy, tell/retell).
- Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., addition, additional).
- Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., birdhouse, lighthouse, housefly; bookshelf, notebook, bookmark).
- Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.

L.2.5. Demonstrate understanding of word relationships and nuances in word meanings.

- Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy).
- Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny).

L.2.6. Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy that makes me happy).

ELA Standards for Grade 3

Reading Standards for Literature

Key Ideas and Details

3.RL.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

3.RL.2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.

3.RL.3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

B. Craft and Structure

3.RL.4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from non-literal language.

3.RL.5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.

3.RL.6. Distinguish their own point of view from that of the narrator or those of the character**s.**

Integration of Knowledge and Ideas

3.RL.7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

3.RL.9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

Range of Reading and Level of Text Complexity

3.RL.10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2–3 text complexity band independently and proficiently.

Reading Standards for Informational Text

Key Ideas and Details

3.RI.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

3.RI.2. Determine the main idea of a text; recount the key details and explain how they support the main idea.

3.RI.3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

Craft and Structure

3.RI.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*.

3.RI.5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

3.RI.6. Distinguish their own point of view from that of the author of a text.

Integration of Knowledge and Ideas

3.RI.7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

3.RI.8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).

3.RI.9. Compare and contrast the most important points and key details presented in two texts on the same topic.

Range of Reading and Level of Text Complexity

3.RI.10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.

Reading Standards: Foundational Skills

Phonics and Word Recognition

3.RF.3. Know and apply grade-level phonics and word analysis skills in decoding words.

- Identify and know the meaning of the most common prefixes and derivational suffixes.
- Decode words with common Latin suffixes.
- Decode multi-syllable words.
- Read grade-appropriate irregularly spelled words.

Fluency

3.RF.4. Read with sufficient accuracy and fluency to support comprehension.

- Read on-level text with purpose and understanding.
- Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings
- Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Writing Standards

Text Types and Purposes

3.W.1. Write opinion pieces on topics or texts, supporting a point of view with reasons.

- Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.
- Provide reasons that support the opinion.
- Use linking words and phrases (e.g., *because*, *therefore*, *since*, *for example*) to connect opinion and reasons.
- Provide a concluding statement or section.

3.W.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

- Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
- Develop the topic with facts, definitions, and details.
- Use linking words and phrases (e.g., *also*, *another*, *and*, *more*, *but*) to connect ideas within categories of information.
- Provide a concluding statement or section.

3.W.3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

- Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
- Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
- Use temporal words and phrases to signal event order.
- Provide a sense of closure.

Production and Distribution of Writing

3.W.4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.

3.W.5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

3.W.6. With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.

Research to Build and Present Knowledge

3.W.7. Conduct short research projects that build knowledge about a topic.

3.W.8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

Range of Writing

3.W.10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Speaking and Listening Standards

Comprehension and Collaboration

3.SL.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.

- Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
- Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
- Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others**.**
- Explain their own ideas and understanding in light of the discussion.

3.SL 2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

3.SL 3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

Presentation of Knowledge and Ideas

3.SL 4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

3.SL 5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

3.SL 6. Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Language Standards

Conventions of Standard English

3.L.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

- Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.
- Form and use regular and irregular plural nouns.
- Use abstract nouns (e.g., *childhood*).
- Form and use regular and irregular verbs.
- Form and use the simple (e.g., *I walked; I walk; I will walk*) verb tenses.
- Ensure subject-verb and pronoun-antecedent agreement.
- Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.
- Use coordinating and subordinating conjunctions.
- Produce simple, compound, and complex sentences.

3.L.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

- Capitalize appropriate words in titles.
- Use commas in addresses.
- Use commas and quotation marks in dialogue.
- Form and use possessives.
- Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting, smiled, cries, happiness*).
- Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.
- Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.

Knowledge of Language

3.L.3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

- Choose words and phrases for effect.
- Recognize and observe differences between the conventions of spoken and written standard English.

Vocabulary Acquisition and Use

3.L.4. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on *grade 3 reading and content,* choosing flexibly from a range of strategies.

- Use sentence-level context as a clue to the meaning of a word or phrase.
- Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat*).
- Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company, companion*).
- Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.

3.L.5. Demonstrate understanding of word relationships and nuances in word meanings.

- Distinguish the literal and non-literal meanings of words and phrases in context (e.g., *take steps*).
- Identify real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*).
- Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., *knew, believed, suspected, heard, wondered*).

3.L.6. Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., *After dinner that night we went looking for them*).

Measuring Text Complexity

Qualitative evaluation of the text

- **Levels of meaning, structure, language conventionality and clarity, and knowledge demands**

Quantitative evaluation of the text

- **Readability measures and other scores of text complexity**

Matching reader to text and task

- **Reader variables (such as motivation, knowledge, and experiences) and task variables (such as purpose and the complexity generated by the task assigned and the questions posed)**

Students in K–5 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

Literature			Informational Text
Stories	**Dramas**	**Poetry**	**Literary Nonfiction and Historical, Scientific, and Technical Texts**
Includes children's adventure stories, folktales, legends, fables, fantasy, realistic fiction, and myth	Includes staged dialogue and brief familiar scenes	Includes nursery rhymes and the subgenres of the narrative poem, limerick, and free verse poem	Includes biographies and autobiographies; books about history, social studies, science, and the arts; technical texts, including directions, forms, and information displayed in graphs, charts, or maps; and digital sources on a range of topics

Texts Illustrating the Complexity, Quality, & Range of Student Reading K–1-2

	Literature: Stories, Drama, Poetry	Informational Texts: Literary Nonfiction and Historical, Scientific, and Technical Texts
1[1]	"Mix a Pancake" by Christina G. Rossetti (1893)** *Mr. Popper's Penguins* by Richard Atwater (1938)* *Little Bear* by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)** *Frog and Toad Together* by Arnold Lobel (1971)** *Hi! Fly Guy* by Tedd Arnold (2006)	*A Tree Is a Plant* by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)** *Starfish* by Edith Thacher Hurd (1962) *Follow the Water from Brook to Ocean* by Arthur Dorros (1991)** *From Seed to Pumpkin* by Wendy Pfeffer, illustrated by James Graham Hale (2004)* *How People Learned to Fly* by Fran Hodgkins and True Kelley (2007)*
2-3	• Who Has Seen the Wind?" by Christina G. Rossetti (1893) • *Charlotte's Web* by E. B. White (1952)* • *Sarah, Plain and Tall* by Patricia MacLachlan (1985) • *Tops and Bottoms* by Janet Stevens (1995) • P*oppleton in Winter* by Cynthia Rylant, illustrated by Mark Teague (2001)	• *A Medieval Feast* by Aliki (1983) • *From Seed to Plant* by Gail Gibbons (1991) • *The Story of Ruby Bridges* by Robert Coles (1995)* • *A Drop of Water: A Book of Science and Wonder* by Walter Wick (1997) *Moonshot: The Flight of Apollo 11* by Brian Floca (2009)

Note:

Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a wide range of topics and genres. (See Appendix B of the Common Core Standards for excerpts of these and other texts illustrative of K–5 text complexity, quality, and range.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study those topics or themes in depth. On the next page is an **example** of progressions of texts building knowledge across grade levels.

Staying on Topic Within a Grade & Across Grades

Building knowledge systematically in English language arts is like giving children various pieces of a puzzle in each grade that, over time, will form one big picture. At a curricular or instructional level, texts—within and across grade levels—need to be selected around topics or themes that systematically develop the knowledge base of students. Within a grade level, there should be an adequate number of titles on a single topic that would allow children to study that topic for a sustained period. The knowledge children have learned about particular topics in early grade levels should then be expanded and developed in subsequent grade levels to ensure an increasingly deeper understanding of these topics. Children in the upper elementary grades will generally be expected to read these texts independently and reflect on them in writing. However, children in the early grades (particularly K–2) should participate in rich, structured conversations with an adult in response to the written texts that are read aloud, *orally* comparing and contrasting as well as analyzing and synthesizing, in the manner called for by the *Standards*.

Preparation for reading complex informational texts should begin at the very earliest elementary school grades. What follows is one example that uses domain-specific nonfiction titles across grade levels to illustrate how curriculum designers and classroom teachers can infuse the English language arts block with rich, age-appropriate content knowledge and vocabulary in history/social studies, science, and the arts. Having students listen to informational read-alouds in the early grades helps lay the necessary foundation for students' reading and understanding of increasingly complex texts on their own in subsequent grades.

This is only a sample. Full chart can be found on Standards web site.

Exemplar Texts on a Topic Across Grades	1	2-3	2-3
The Human Body Students can begin learning about the human body starting in kindergarten and then review and extend their learning during each subsequent grade.	**Introduction to the systems of the human body and associated body parts** *Under Your Skin:* Your Amazing Body by Mick Manning (2007) *Me and My Amazing Body* by Joan Sweeney (1999) *The Human Body* by Gallimard Jeunesse (2007) *The Busy Body Book* by Lizzy Rockwell (2008) *First Encyclopedia of the Human Body* by Fiona Chandler (2004) **Taking care of your body: Germs, diseases, and preventing illness**	**Digestive and excretory systems** *What Happens to a Hamburger* by Paul Showers (1985) *The Digestive System* by Christine Taylor-Butler (2008) *The Digestive System* by Rebecca L. Johnson (2006) *The Digestive System* by Kristin Petrie (2007)	**Muscular, skeletal, and nervous systems** *The Mighty Muscular and Skeletal Systems* Crabtree Publishing (2009) *Muscles* by Seymour Simon (1998) *Bones* by Seymour Simon (1998) *The Astounding Nervous System* Crabtree Publishing (2009)

Implementation Guide – Grade 2 ELA

COMMON CORE STANDARDS: ELA

Implementing the Common Core Standards may seem to be a daunting task, however, the ELA Curriculum Committee has created four sample guidelines/templates to introduce you to the standards. We have provided a guideline for each of the four types of writing prescribed for each grade. You will see that we have correlated Reading Standards with each Writing piece. These guidelines are meant to be a starting point and while they are comprehensive they do not include every standard. Our intent is that teachers will plug-in other standards as needed. The book companies have created correlations to the Common Core Standards so you will have them to use as well, and you will have the flexibility to add ELA standards from each category (Reading, Writing, Speaking and Listening, and Language) depending on the theme or story.

Coding: ELA.2.A.1 refers to English Language Arts –Grade2- Topic A – Skill 1

Opinion Piece Grade 2	**Writing Standards: ELA.2.K Opinion**	**Reading Standards: ELA. Integration of Knowledge and Ideas**
Essential Questions *What should I be able to answer?* *What guides my thinking?*	What is the topic of this opinion piece? What are the reasons that support the opinion? How do we state an opinion? What is a fact? How do we connect reasons to opinion? Can they use key and linking words to connect opinion and reasons? Can they make an argument reflecting their opinion? Can they write a supportive concluding statement?	Ask and answer questions to demonstrate understanding of text, referring explicitly to the text as a basis for the answers

Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	Write an opinion piece on topics or texts, supporting a point of view with reasons. Create T-Charts labeling the left column Opinion and the right column Reasons. Provide reasons that support the opinion	Know and apply grade-level phonics and word analysis skills in decoding words. J4 Read with sufficient accuracy and fluency to support comprehension.
Skills *What skills do I need to have in order to answer the essential questions?*	Write an opinion piece in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (because, and, also) to connect opinion and reasons, and provide a concluding statement Demonstrate command of the conventions of standard English when writing Be able to complete organizers categorized by Topic, Opinion, Statement, and Reasons Be able to provide reasons that are supported by facts and details Link opinion and reasons using words and phrases	Ask and answer questions to demonstrate understanding of text, referring explicitly to the text as the basis for the answer Identify main topic Describe the relationship between a series of events and cause and effects Determine the connection between a series of scientific ideas or concepts Know and use various text features Identify the main purpose of the text Explain how specific diagrams contribute to and clarify a text. Describe how reasons support specific points; Compare and contrast the most important points and key details presented in two texts on the same topic. Read on-level text with purpose and understanding Demonstrate command of the standard English grammar when speaking Use knowledge of language and its conventions when reading.

Content *What content do I need to know in order to answer the essential questions?*	Identify the topic. Read, interrupt and state your opinion. Recognize the difference between facts and opinion. Use key words to connect opinions and state reasons. Translate the facts into meaningful information	Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers .
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	Know and apply grade-level phonics and word analysis skills. Recall information from experiences or gather information from provided sources to answer a question. (W.3.4) With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (W.3.5) With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (W.3.6) Use technology to produce and publish writing as well as to interact and collaborate with others	Read and comprehend literature including-history/ social studies and science (RL3.4) Determine the meaning of words and phrases as they are used in a text, (RL3.6) Distinguish their own point of view from that of the narrator or those of the characters
Tools for Learning *Which tools will I use that will assist me in my learning?*	Digital resources Reference materials Primary sources	Book, News Magazines, Video Clips from United Streaming and various educational sources

Which 21st Century Skills are woven into this standard? ____Critical Thinking/Problem Solving ____Collaboration
_____Communications ____Creativity/Innovation

What level of rigor will I be using? (A, C)__ ___ What level of relevance will I be using?__ ____ (B,D)

Narrative - Grade 2	**Writing Standards: ELA Grade 2 K.3 Text Types- Narratives and Purposes**	**Reading Standards: ELA Grade 2. K.3- Types- Narrative Integration of Knowledge and Ideas**
Essential Questions *What should I be able to answer?* *What guides my thinking?*	How can you write a narrative? How can you recount an event or short sequence of events? Did I include details to describe the action? Can I describe the characters thoughts and feelings? Can I create the problem and solution? How do organize my thoughts in order? How do I write a summary? What details do I want to include? Did I provide a sense of closure? Can I complete a graphic organizer listing the main ideas?	Do I understand the story elements such as who, what, when, why, and how? Can I identify the main topic of a multi-paragraph as well as the specific paragraphs within the text? Can I identify the main purpose of a text?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	Gather information. Write list. Organize the list. Write a short story that contain the following elements; beginning, middle, ending, action details, description of thoughts and feelings, and words that signal order of events. Share information with classmates. Completed report and illustrate	Ask and answer such questions as who, what, when, why, and how to demonstrate understanding of key details in a text. Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral Describe how characters in a story respond to major events and challenges.

Skills *What skills do I need to have in order to answer the essential questions?*	Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences Know and apply grade- level phonics and word analysis skills in decoding words. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. Use knowledge of language and its conventions when writing Determine or clarify the meaning on unknown and multiple-meaning words and phrases Demonstrate understanding of word relationships and nuances in word meaning Use words and phrases acquired through conversation, reading and being read to, and responding to texts including adjectives and adverbs Determine the meaning of words and phrases Identify the main purpose	Ask and answer questions as who, what, where, when, why, and, how of story details. Identify the main purpose of a text Describe how reasons support specific points Read with sufficient accuracy and fluency to support comprehension

Content *What content do I need to know in order to answer the essential questions?*	Read and interpret various stories. Apply writing skills. (W.3.3) Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences (W.3.3b) Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations (W.3.3c) Use temporal words and phrases to signal event order (W.3.3d) Provide a sense of closure	Reading Anthologies Understand the topic. (RL.3.2) Recount stories including fables, folktales, and myths from diverse culture; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text (RL.3.3) Describe characters in a story and explain how their actions contribute to the sequence of events
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	Content area topics- Science/ Social Studies/ Religion/ Math; Know and apply grade-level phonics and word analysis skills. Recall information from experiences or gather information from provided sources to answer a question. (W.3.4) With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (W.3.5) With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (W.3.6) Use technology to produce and publish writing as well as to interact and collaborate with others	Read and comprehend various types of literature. RL3.6) Distinguish their own point of view from that of the narrator or those of the characters RL3.4) Determine the meaning of words and phrases as they are used in a text,

Tools for Learning *Which tools will I use that will assist me in my learning?*	Technology to produce and publish; brainstorming, graphic organizers, logs, journals	Examples of good narratives. Video of stories

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving __Collaboration
___Communications ____Creativity/Innovation

What level of rigor will I be using? (A, C)__ ___ What level of relevance will I be using?__ ___ (B,D)

Informative or Explanatory text Grade 2	**Writing Standards: ELA.2.K Informative/Explanatory Text and Purposes**	**Reading Standards: ELA. 2.E Key Ideas and Details**
Essential Questions *What should I be able to answer?* *What guides my thinking?*	What is an information paragraph? What is the topic of my paragraph? How do I use facts and definitions to develop an information paragraph? How do I write a closing statement?	Ask and answer questions as who, what, where, when, why, and how to demonstrate understanding of key details in text Identify the main topic of a multi paragraphs Describe the connection between a series of historical events or scientific ideas or concepts
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	Gather information. Write list. Organize the list. Write an information paragraph. Share information with classmates. Completed report and illustrate	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area Know and use various text features to locate key facts or information in a text.

Skills *What skills do I need to have in order to answer the essential questions?*	K2-Write informative text in which they introduce a topic, use facts and definitions to develop points and provide a concluding statement or section Use outlines to identify topics, supporting points, and conclusions of informational pieces Focus on a topic and strengthen writing as needed by revising and editing Use a variety of digital tools to produce and publish writing, including peer collaboration Participate in shared research and writing projects Students create graphic organizers with 3 columns labeled Facts, Definition, Details and record the topics above the heading. With partners, students complete organizers using relevant resources.	Ask and answer questions as who, what, where, when, why, and, how of story details. Identify main topic Determine the connection between a series of scientific ideas or concepts Know and use various text features Identify the main purpose of the text Explain how specific diagrams contribute to and clarify a text. Describe how reasons support specific points Read on-level text with purpose and understanding Demonstrate command of the standard English grammar when speaking Use knowledge of language and its conventions when reading.

Content *What content do I need to know in order to answer the essential questions?*	Develop the topic with facts, definitions, and connect details Use linking words and phrases (also, another, and, more, but) to connect ideas within categories of information. What is the meaning of the content Organize content information	Understand the topic. Translate the facts into meaningful information
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	All subjects require comprehensive understanding and translation such as Science/ Social Studies/ Religion	All subjects require comprehensive reading abilities
Tools for Learning *Which tools will I use that will assist me in my learning?*	Digital resources Reference materials Various Leveled Reading texts	Digital resources; reading texts and reference materials Graphic Organizer.

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ____Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)__ ___ What level of relevance will I be using?__ ____ (B,D)

Research – Grade 2	**Writing Standards: ELA.2.K – Research to Build and Present Knowledge**	**Reading Standards: ELA.2.G- Integration of Knowledge and Ideas**
Essential Questions *What should I be able to answer? What guides my thinking?*	What is research? What does good research look like? What are some reliable research sources? What is the most effective way to present the information?	How do we distinguish the difference between fact and interpretation? What types of resources do I need to read to develop my topic?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	Research process Peer review and editing Completed report and/or presentation	Develop key concepts from various sources

Skills *What skills do I need to have in order to answer the essential questions?*	Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). Recall information from experiences or gather information from provided sources to answer a question.	Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases. Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area. Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.
Content *What content do I need to know in order to answer the essential questions?*	Read and understand information from multiple print and digital sources Chart or graph information	Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within the text. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently. By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

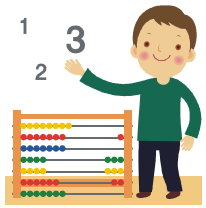
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	Content area topics- By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.	By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.
Tools for Learning *Which tools will I use that will assist me in my learning?*	Digital resources Reference materials Primary sources	Reference materials and digital resources

Which 21st Century Skills are woven into this standard? ____Critical Thinking/Problem Solving ___Collaboration
_____Communications __Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?___
____ (B,D)

Mathematics

Grade 2



Common Core State Standards – Grade One
Common Core State Standards – Grade Two
Common Core State Standards – Grade Three
Implementation Guide – Grade Two

Key Points In Mathematics

- The K-5 standards provide students with a *solid foundation in whole numbers, addition, subtraction, multiplication, division, fractions and decimals*—which help young students build the foundation to successfully apply more demanding math concepts and procedures, and move into applications.
- In kindergarten, the standards follow successful international models and recommendations from the National Research Council's Early Math Panel report, by focusing kindergarten work on the number core: learning how numbers correspond to quantities, and learning how to put numbers together and take them apart (the beginnings of addition and subtraction).
- The K-5 standards build on the best state standards to provide detailed guidance to teachers on how to navigate their way through knotty topics such as *fractions, negative numbers, and geometry*, and do so by maintaining a continuous progression from grade to grade.
- The standards stress not only procedural skill but also conceptual understanding, to make sure students are learning and absorbing the critical information they need to succeed at higher levels - rather than the current practices by which many students learn enough to get by on the next test, but forget it shortly thereafter, only to review again the following year.
- Having built a strong foundation K-5, students can do hands on learning in geometry, algebra and probability and statistics. Students who have completed 7th grade and mastered the content and skills through the 7th grade will be *well-prepared for algebra* in grade 8.
- The middle school standards are robust and provide a coherent and rich *preparation for high school mathematics*.
- The high school standards call on students to *practice applying mathematical ways of thinking to real world issues and challenges*; they prepare students to think and reason mathematically.
- The high school standards set a *rigorous definition of college and career readiness*, by helping students develop a depth of understanding and ability to apply mathematics to novel situations, as college students and employees regularly do.
- The high school standards *emphasize mathematical modeling*, the use of mathematics and statistics to analyze empirical situations, understand them better, and improve decisions. For example, the standards state: Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. It is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important "processes and proficiencies" with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council's report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy).

1 **Make sense of problems and persevere in solving them**.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems\involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a

student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

7 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7 × 8 equals the well remembered 7 × 5 + 7 × 3, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2 × 7 andthe 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 – 3(x – y)2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

8 Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y – 2)/(x – 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x – 1)(x + 1)$, $(x – 1)(x^2 + x + 1)$, and $(x – 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Connecting the Standards for Mathematical Practice to the Standards for Mathematical Content

The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years. Designers of curricula, assessments, and professional development should all attend to the need to connect the mathematical practices to mathematical content in mathematics instruction.

The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices. In this respect, those content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.

Mathematics Standards

Grade 1

Introduction

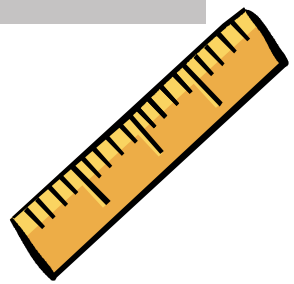
In Grade 1, instructional time should focus on four critical areas:

(1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20;
(2) developing understanding of whole number relationships and place value, including grouping in tens and ones;
(3) developing understanding of linear measurement and measuring lengths as iterating length units; and
(4) reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.
2. Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.
3. Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.[1]
4. Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral) and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

Grade 1 Overview

- **Operations and Algebraic Thinking**
  - Represent and solve problems involving addition and subtraction.
  - Understand and apply properties of operations and the relationship between addition and subtraction.
  - Add and subtract within 20.
  - Work with addition and subtraction equations.
- **Number and Operations in Base Ten**
  - Extend the counting sequence.
  - Understand place value.
  - Use place value understanding and properties of operations to add and subtract.
- **Measurement and Data**
  - Measure lengths indirectly and by iterating length units.
  - Tell and write time.
  - Represent and interpret data.
- **Geometry**
  - Reason with shapes and their attributes.



Operations & Algebraic Thinking

Represent and solve problems involving addition and subtraction.

1.OA.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.[1]

1.OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Understand and apply properties of operations and the relationship between addition and subtraction.

1.OA.3. Apply properties of operations as strategies to add and subtract.[2] Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)

1.OA.4.Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within 20.

Add and subtract within 20.

1.OA.5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

1.OA.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

Work with addition and subtraction equations.

1.OA.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.

1.OA.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.

Number & Operations in Base Ten

Extend the counting sequence.

1.NBT.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Understand place value.

1.NBT.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

- 10 can be thought of as a bundle of ten ones — called a “ten.”
- The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
- The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.

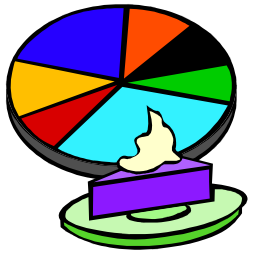
Use place value understanding and properties of operations to add and subtract.

1.NBT.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

1.NBT.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

1.NBT.6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Measurement & Data



Measure lengths indirectly and by iterating length units.

1.MD.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.

1.MD.2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

Tell and write time.

1.MD.3. Tell and write time in hours and half-hours using analog and digital clocks.

Represent and interpret data.

1.MD.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Geometry

Reason with shapes and their attributes.

1.G.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.

1.G.2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.[1]

1.G.3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares**.**

Grade 2

In Grade 2, instructional time should focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

- 1. Students extend their understanding of the base-ten system. This includes ideas of counting in fives, tens, and multiples of hundreds, tens, and ones, as well as number relationships involving these units, including comparing. Students understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent amounts of thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).

- 2. Students use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction, and they develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of whole numbers in base-ten notation, using their understanding of place value and the properties of operations. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences for numbers with only tens or only hundreds.

- 3. Students recognize the need for standard units of measure (centimeter and inch) and they use rulers and other measurement tools with the understanding that linear measure involves an iteration of units. They recognize that the smaller the unit, the more iterations they need to cover a given length.

- 4. Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding area, volume, congruence, similarity, and symmetry in later grades.

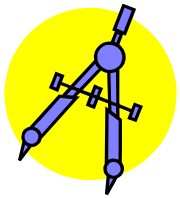
Grade 2 Overview

- **Operations and Algebraic Thinking**
  - Represent and solve problems involving addition and subtraction.
  - Add and subtract within 20.
  - Work with equal groups of objects to gain foundations for multiplication.

- **Number and Operations in Base Ten**
  - Understand place value.
  - Use place value understanding and properties of operations to add and subtract.

- **Measurement and Data**
  - Measure and estimate lengths in standard units.
  - Relate addition and subtraction to length.
  - Work with time and money.
  - Represent and interpret data.

- **Geometry**
  - Reason with shapes and their attributes.



Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction.

2.OA.1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Add and subtract within 20.

2.OA.2. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.

Work with equal groups of objects to gain foundations for multiplication.

2.OA.3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

2.OA.4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

Number and Operations in Base Ten

Understand place value.

2..NBT.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

- 100 can be thought of as a bundle of ten tens — called a “hundred.”

- The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

2..NBT.2. Count within 1000; skip-count by 5s, 10s, and 100s.

2..NBT.3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

2..NBT.4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

Use place value understanding and properties of operations to add and subtract.

2..NBT.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2..NBT.6. Add up to four two-digit numbers using strategies based on place value and properties of operations.

2..NBT.7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

2..NBT.8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

2..NBT.9. Explain why addition and subtraction strategies work, using place value and the properties of operations. *[Explanations may be supported by drawings or objects.]*

Measurement and Data

Measure and estimate lengths in standard units.

2.MD.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

2.MD.3. Estimate lengths using units of inches, feet, centimeters, and meters.

2.MD.4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.

Relate addition and subtraction to length.

2.MD.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

2.MD.6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.

Work with time and money.

2.MD.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

2.MD.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Represent and interpret data.

2.MD.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

2.MD.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Geometry

Reason with shapes and their attributes.

2.G.1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. *[Sizes are compared directly or visually, not compared by measuring.]* Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

2.G.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

2.G.3. Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Grade 3

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes.

1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

2. Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, 1/2 of the paint in a small bucket could be less paint than 1/3 of the paint in a larger bucket, but 1/3 of a ribbon is longer than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

3. Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

4. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Grade 3 Overview

- **Operations and Algebraic Thinking**
  - Represent and solve problems involving multiplication and division.
  - Understand properties of multiplication and the relationship between multiplication and division.
  - Multiply and divide within 100.
  - Solve problems involving the four operations, and identify and explain patterns in arithmetic.

- **Number and Operations in Base Ten**
  - Use place value understanding and properties of operations to perform multi-digit arithmetic.

- **Number and Operations—Fractions**
  - Develop understanding of fractions as numbers.

- **Measurement and Data**
  - Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

    Represent and interpret data.

  - Geometric measurement: understand concepts of area and relate area to multiplication and to addition.
  - Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

- **Geometry**
  - Reason with shapes and their attributes.

Grade 3

Operations and Algebraic Thinking

Represent and solve problems involving multiplication and division.

3.OA.1. Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 × 7.*

3.OA.2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*

3.OA.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

3.OA.4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = □ ÷ 3, 6 × 6 = ?.*

Understand properties of multiplication and the relationship between multiplication and division.

3.OA.5. Apply properties of operations as strategies to multiply and divide. *[Students need not use formal terms for these properties.] Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)*

3.OA.6. Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*

Multiply and divide within 100.

3.OA.7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

3.OA.8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. *[This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).]*

3.OA.9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

Number and Operations in Base Ten

Use place value understanding and properties of operations to perform multi-digit arithmetic. *[A range of algorithms may be used.]*

3.NBT.1. Use place value understanding to round whole numbers to the nearest 10 or 100.

3.NBT.2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

3.NBT.3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Number and Operations—Fractions

[Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.]

Develop understanding of fractions as numbers.

3.NF.1. Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by *a* parts of size 1/*b*.

3.NF.2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.

- Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.
- Represent a fraction *a*/*b* on a number line diagram by marking off *a* lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line.

3.NF.3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

- Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
- Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model.
- Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.*
- Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.

Measurement and Data

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

3.MD.2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). *[Excludes compound units such as cm^3 and finding the geometric volume of a container.]* Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. *[Excludes multiplicative comparison problems (problems involving notions of "times as much")]*

Represent and interpret data.

3.MD.3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

3.MD.4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

3.MD.5. Recognize area as an attribute of plane figures and understand concepts of area measurement.

- A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
- A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.

3.MD.6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

3.MD.7. Relate area to the operations of multiplication and addition.

- Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
- Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
- Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
- Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

3.MD.8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Geometry

Reason with shapes and their attributes.

3.G.1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

3.G.2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.*

Implementation Guide – Grade 2 Mathematics

Code: M.2.A.1 refers to: Mathematics –Grade 2 – Topic A – Skill 1

CATEGORY: Operations and Algebraic Thinking. Standard: M.2.A. Represent and solve problems involving addition and subtraction.	
Essential Questions *What should I be able to answer? What guides my thinking?*	• Where and how do I use math and numbers in the real world? • What are different ways to count? • How can I use manipulatives and drawings to help me solve a problem? • How can making a list or table help me solve a problem?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • "Problem of the Day" – During Morning Meeting/Circle Time or as a warm-up to the daily Math lesson, the class can solve one of the four types of addition/subtraction problems. • "Learning Centers" – Teacher observation of children playing addition and subtraction games involving word problems in Learning Centers. • "Role Play" – Students can act out an addition or subtraction word problem. **Summative:** • Math Journals – Students can solve a weekly word problem in their Math Journals. In these journals, students should be able to show their work as well as explain how they solved the problem.

Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.A.**1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** add, addend, addition sentence, count back, count on/up, difference, doubles fact, doubles + 1, doubles - , equals, fact family, join, minus, missing addend, number sentence, order, part + part = whole, plus, related addition facts, related subtraction facts, subtract, subtraction sentence, sum, take away, ten-frame, & whole – part = part **Math Concepts:** M.1.A Represent and solve problems involving addition and subtraction & M.1.B. Understand and apply properties of operations and the relationship between addition and subtraction Students should be exposed to the 4 main types of addition and subtraction situations: • Take-from example: David had 63 stickers. He gave 37 to Susan. How many stickers does David have now? 63 – 37 = ☐ • Add to example: David had $37. His grandpa gave him some money for his birthday. Now he has $63. How much money did David's grandpa give him? $37 + ☐ = $63 • Compare example: David has 63 stickers. Susan has 37 stickers. How many more stickers does David have than Susan? 63 – 37 = ☐ o Even though the modeling of the two problems above is different, the equation, 63 - 37 = ?, can represent both situations (How many more do I need to make 63?) • Take-from (Start Unknown) David had some stickers. He gave 37 to Susan. Now he has 26 stickers. How many stickers did David have before? ☐ - 37 = 26

Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	Students can create their own word problems about topics in ELA, Religion, Science, & Social Studies.
Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** **First in Math Website (http://www.firstinmath.com):** Deep Sea-Quence, Know & Show 3 **Manipulatives:** connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, stickers, ten-frame **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndAl.aspx): Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Operations and Algebraic Thinking. Standard: M.2.B. Add and subtract within 20.

Essential Questions *What should I be able to answer? What guides my thinking?*	• What are different ways to count? • How can I use the words before, after, and between to describe number order? • How can I use what I know about addition to help me subtract?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • "Around the World" – Using flash cards, pairs of students must correctly solve an addition or subtraction fact. The student who correctly solves the problem first, moves on to face another student while the student who solved the problem wrong, must sit down. • "Calendar Time" – During Circle Time or Morning Meeting, incorporate number activities. For example, if the date is April 8th students should describe 8 as 4+4, 15-7, 3+3+2, etc. Students can also describe 8 as the number that comes after 7, before 9, or between 7 & 9. • "Case of the Missing Pennies" – Each pair of student must be given a cup and 20 pennies or counters. Students must lay the pennies or counters out so all can be seen. One student, Detective A, covers some pennies or counters with a cup while the other student, Detective B, looks away. Once the pennies or counters are covered with the cup, Detective B must write a number sentence to solve the problem. For example, if there are only 7 pennies or counters left, the number sentence would be 20 – 7 = 13. 13 pennies or counters were covered by the cup. • "Clip the Sum" – Make game boards with the numbers 0 – 9 in a random order.

3	**7**	**0**	**2**	**5**
1	**4**	**8**	**6**	**9**

	Have students work in groups of 3 or 4. Each student must choose a goal sum between 2 – 18. When it is the player's turn, 2 paper clips or counters are tossed onto the board. Whatever the numbers the paper clips or counters land on, the student must create a number sentence. For example, 7 + 9 = 16. Whoever's goal sum in the group is closest to 16 gets a point. The game continues until a player reaches 3. Then, a new goal sum is chosen. **Summative:** • Math Journals – Students should be given various problems involving sum and difference to 20 to solve in their Math Journals. • Timed Fact Practice – Since this standard emphasize fluency, students should constantly be attempting to better their time with flash cards for addition/subtraction or using computer software/games. In the beginning, students can use manipulatives to show problems but by the end of 2nd Grade, students should know their facts to 20 without the use of manipulatives.
Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.B.** 1. Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** add, addend, addition sentence, count back, count on/up, difference, doubles fact, doubles + 1, doubles - , equals, fact family, join, minus, missing addend, number sentence, order, part + part = whole, plus, related addition facts, related subtraction facts, subtract, subtraction sentence, sum, take away, ten-frame, & whole – part = part **Math Concepts:** M.1.A Represent and solve problems involving addition and subtraction & M.1.B. Understand and apply properties of operations and the relationship between addition and subtraction

Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** Students should use magazines or newspapers to find examples of basic addition and subtraction facts and how they are used in real life. **Religion:** Students can use the words before and after to describe the order of the parts of the Mass. **Science:** Use the words before and after to describe the position of the planets in the solar system. **Social Studies:**
Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** *Annie's One to Ten* by Annie Owen; *Cats Add Up!* by Diane Ochiltree; *The Philharmonic Gets Dressed* by Karla Kuskin; *Pondlarker* by Fred Gwynne; & *12 Ways to Get to 11* by Eve Mirriam **First in Math Website (http://www.firstinmath.com):** Skill Sets, More or Less, First in Tens, Ten Wheels, Grand Slam Addition & Subtraction, First to 20, K2 3 to 9, K2 More or Less, K2 Skip Game **Manipulatives:** connecting cubes, counters, dominoes, flash cards, hundreds chart, interactive white board, number cards, number line, spinners, ten-frame **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndMathFacts.aspx); Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Operations and Algebraic Thinking Standard: M.2.C. Work with equal groups of objects to gain foundations for multiplication.

Essential Questions *What should I be able to answer? What guides my thinking?*	• How can I tell if a number is even or odd? • How is multiplication related to addition? • Where can I use multiplication in the real world?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • "Even or Odd" – Give each student 15 connecting cubes. Have the students make a train with 8 cubes. Then, disconnect the 8 cube train into groups of two. Students should recognize that four equal groups of two are made. Repeat the activity for 9, 12, & 15. Emphasize that some trains will have left over cubes. On a hundreds chart, students should color even numbers one color and odd numbers another color. This visual representation will show students that even numbers end in 0, 2, 4, 6, & 8 while odd numbers end in 1, 3, 5, 7, & 9. In their Math Journals, students should write about things that come in pairs – gloves, mittens, shoes, socks, twins, etc. Teach the students a song to remember even and odd numbers. • "Amazing Arrays" – Allow students to create arrays using Dot Art/BINGO stamps and stickers. Students can create these arrays on large chart paper. Emphasize the necessity of keeping the Dot Art/BINGO stamps and stickers in neat rows and columns. Once the arrays are created students can write multiplication sentences. Students can also switch arrays to solve problems. Students can also use Geoboards to form rectangular arrays. **Summative:** • "Scrumptious Snack" – For snack, give students a baggie of cereal, crackers fruit snacks, popcorn, pretzels, raisins, etc. First, have students count how many pieces of food they have. They should determine if they have an even or odd amount. Then, have the children make an array to match a flashcard. Challenge students to see how many arrays they can build in 10 minutes. When finished, they can share their arrays with another class so they can explain their mathematical reasoning. Of course, they can eat their arrays when finished!

Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.C.1.**. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends. **M.2.C.2**. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** array, column, equal groups, even, factor, hundreds chart; model, multiplication sign, multiply, odd, pair, product, repeated addition, & row **Math Concepts:** Knowledge of Addition; Knowledge of Shapes/Attributes
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**Art/ELA:** Allow students the opportunity to create a classroom floor plan for desks/furniture. Once the designs are completed, students should present their ideas to the class and attempt to persuade their classmates why their design works best in the classroom. Students could vote for their favorite arrangement which would be used in the classroom for a set period of time. **Religion:** **Science:** Use pictures of mammals, reptiles, insects, or spiders when making arrays. **Social Studies:** Students could use their knowledge of arrays to create a community.

Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** *Amanda Bean's Amazing Dream* by Cindy Neuschwander; *Bats on Parade* by Kathi Appelt; *Bunches and Bunches of Bunnies* by Louise Matthews; *Corkscrew Counts: A Story about Multiplication* by Donna Jo Napoli & Richard Tchen; *The Doorbell Rang* by Pat Hutchins; *Emma's Christmas* by Irene Trivas; *Even Steven, Odd Todd* by Kathryn Cristaldi; *Hershey's Milk Chocolate Multiplication Book* By Jerry Pallotta & Rob Bolster; *Two of Everything* by Lily Toy Hong; *2 X 2 = Boo: A Set of Spooky Multiplication Stories* by Loreen Leedy **First in Math Website (http://www.firstinmath.com):** Just the Facts: Multiply; Whole Numbers: Multiply Gym **Manipulatives:** connecting cubes, counters, Dot Art, geoboards, interactive white board, stickers **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx); Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Number and Operations in Base Ten. Standard: M.2.D. Understand place value.

Essential Questions *What should I be able to answer? What guides my thinking?*	• Why is zero so important to our number system? • How can I tell if a number is even or odd? • How does place value help me understand numbers? • How can estimating help me work with large numbers? • How can I recognize patterns in numbers?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • "Base 10 Blocks" – Throughout this unit, students should have daily practice with Base 10 Blocks. Children should form numbers with the blocks and recognize opportunities to make exchanges. • "Calendar Time" – During Circle Time or Morning Meeting, incorporate place value activities each day. For example, students can count the day using Base 10 Blocks. If the date is the 23rd, students should put 2 rods (groups of 10) and 3 units (1 each) into the Unit, Rod, & Flat cups. Each day this should be done which will lead to exchanges being made on certain days. Also, if the date is the 23rd, students can say that "Today's date is March 23rd. The number 23 is greater than 20 but less than 30. 23 comes between 22 and 24. There are 2 tens and 3 ones in the number 23. 23 is an odd number. The expanded form for 23 is 20 + 3." • "Number Mania" – post a 2-digit or 3-digit number in your classroom each day. Vary the form in which you present the number (i.e. expanded form, visual picture of its place on a number line, number word, ordinal form, etc.) Throughout the day, allow children to give other versions of that number. Students can also discuss what number comes before and after as well as if the number is even or odd. • "Place Value Houses" – Give students the opportunity to create their own place value houses (i.e. each house is one period containing 3 spots – ones, tens, & hundreds). After students had ample exposure to Base 10 Blocks, the children should make numbers on their houses and practice saying numbers correctly without using the word "and".

	Summative: • "My Number" – students should select a meaningful 2-digit or 3-digit number in their life such as a house number, favorite number, sports team number, etc. Allow children the opportunity to create a poster or use Paint in Computer class to give different representations of the chosen number. Students should use vocabulary words from the unit such as place value, tens and ones, number words, expanded form, ordinals, etc.
Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.D.**1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens — called a "hundred." b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). **M.2.D.** 2. Count within 1000; skip-count by 5s, 10s, and 100s. **M.2.D .**3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. **M.2.D.** 4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** after, before, between, equal to, estimate, even numbers, expanded form, flat, greater than >, greatest, halfway, hundreds, least, less than <, number words, odd numbers, ones, ordinal numbers, rod, round, place value chart, standard form, tens, unit, 2-digit number, & 3 digit number **Math Concepts:** M.1.C. Extend the counting sequence, M.1.D. Understand place value, & M.1.E. Use place value understanding and properties of operations to add and subtract.
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** Since students will be comparing numbers in Math, incorporate compare/contrast writing at this time in ELA. For example, students could read the *Frog and Toad* books. Students could use a Venn Diagram to compare/contrast the characters Frog & Toad. **Religion:** In the unit on 7 Sacraments, discuss how 7 is an odd number and how Jesus had 12 Apostles which is an even number. **Science:** Continue the theme of compare/contrast when teaching students the differences between reflection and refraction of light. **Social Studies:** Using toothpicks and gumdrops/marshmallows, students can create 3-D geometric shapes in order to form a neighborhood or community. Students should label the house numbers in their community. Students should be able to explain how even number houses are on side and odd number houses are on another side. This activity ties in with Standard M.2.J. Reason with Shapes and their Attributes. In addition, students could compare/contrast rural, suburban, and urban communities.

Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** *How Much is a Million* by David M. Schwartz **First in Math Website (http://www.firstinmath.com):** **Manipulatives:** Base 10 Blocks (units, rods, flats, & cubes), connecting cubes, counters, hundred chart, interactive white board, number line, place value mat **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndPlaceValue.aspx & http://ed-u-smart.com/2ndGradeExplore.aspx); Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Number and Operations in Base Ten. Standard: M.2.E. Use place value understanding and properties of operations to add and subtract.

Essential Questions *What should I be able to answer? What guides my thinking?*	• How does learning how to add/subtract large numbers help me in the real world? • How does regrouping and understanding place value help me to add and subtract large numbers?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • "Base 10 Blocks" – Throughout this unit, students should have daily practice with Base 10 Blocks. Children should form numbers with the blocks and recognize opportunities to make exchanges. • "Calendar Time" – During Circle Time or Morning Meeting, incorporate place value activities each day. For example, students can count the day using Base 10 Blocks. If the date is the 23rd, students should put 2 rods (groups of 10) and 3 units (1 each) into the Unit, Rod, & Flat cups. Each day this should be done which will lead to exchanges being made on certain days. Also, if the date is the 23rd, students can say that "Today's date is March 23rd. The number 23 is greater than 20 but less than 30. 23 comes between 22 and 24. There are 2 tens and 3 ones in the number 23. 23 is an odd number. The expanded form for 23 is 20 + 3." • "Number Mania" – post a 2-digit or 3-digit number in your classroom each day. Vary the form in which you present the number (i.e. expanded form, visual picture of its place on a number line, number word, ordinal form, etc.) Throughout the day, allow children to give other versions of that number. Students can also discuss what number comes before and after as well as if the number is even or odd. • "Place Value Houses" – Give students the opportunity to create their own place value houses (i.e. each house is one period containing 3 spots – ones, tens, & hundreds). After students had ample exposure to Base 10 Blocks, the children should make numbers on their houses and practice saying numbers correctly without using the word "and".

	Summative: • "My Number" – students should select a meaningful 2-digit or 3-digit number in their life such as a house number, favorite number, sports team number, etc. Allow children the opportunity to create a poster or use Paint in Computer class to give different representations of the chosen number. Students should use vocabulary words from the unit such as place value, tens and ones, number words, expanded form, ordinals, etc.
Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.E.1**. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. **M.2.E.2**. Add up to four two-digit numbers using strategies based on place value and properties of operations. **M.2.E.3**. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. **M.2.E.4**. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900. **M.2.E.5**. Explain why addition and subtraction strategies work, using place value and the properties of operations. *[Explanations may be supported by drawings or objects.]*
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** addend, algorithm, difference, digit, estimate, regroup, round, sum, tens, 3-digit number, 10 ones = 1 ten, 10 tens = 1 hundred, 1 hundred = 10 tens **Math Concepts:** Fluency with addition and subtraction facts to 20 & Knowledge of Place Value

Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** Students should use magazines or newspapers to find examples of larger numbers and how they are used in real life. **Religion:** **Science:** **Social Studies:**
Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** **First in Math Website (http://www.firstinmath.com):** **Manipulatives:** addition frame, Base 10 Blocks, coins/bills, hundred chart, interactive white board, number line, money addition/subtraction frames, place value mat, subtraction frame, 3-digit number cards, **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndNumbers.aspx & http://ed-u-smart.com/2ndMathFacts.aspx)**;** Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Measurement and Data. Standard: M.2.F. Measure and estimate lengths in standard units.

Essential Questions *What should I be able to answer? What guides my thinking?*	• Why do we need to learn how to measure in everyday life? • Why is it important to measure using a standard tool?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • Allow students the opportunity to measure various classroom and home objects using a nonstandard tool (i.e. counting cube, each student's footprint, paper clip, pencil, etc.) Have students compare measurements. At the end of the lesson, have students write on an Exit Card why it is important to have a standard unit of measurement. • "Which tool should I use?" – Give students different examples of items to measure. Have students decide what is the best tool to use – measuring tape, meter stick, ruler, or yard stick. • "Long Jump" – Tape 2 meter sticks end to end on the floor. Mark a starting place with masking tape. Students can estimate how far they think they can jump. After the estimates are recorded, students should jump and compare their estimates with the exact measurements. Students can calculate the difference. • "Let's Race" – Using pull back cars, students can record the distance traveled by the cars. First, students can estimate how far the cars will travel in inches and centimeters. Then, the cars will race. Students can record the distances in both the Customary & Metric Systems. The children can calculate the differences between their estimates and actual measurements. **Summative:** • "Metric Olympics" – see lesson at http://www2.scholastic.com/browse/article.jsp?id=7516 Focus only on the events where students will measure in centimeters and meters. • "Measure This…" – In their Math Journals, students can create a Venn Diagram that shows the similarities and differences between the Customary System & Metric System. Afterwards, students can give examples of when it would be appropriate to use a centimeter, meter, inch, foot, or yard.

Skills *What skills do I need to have in order to answer the essential questions?*	M.2.F.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. M.2.F.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen. M.2.F.3. Estimate lengths using units of inches, feet, centimeters, and meters. M.2.F.4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** centimeter, Customary System, difference, estimate, half inch, feet, foot, length, meter, Metric System, unit of measure, & yard **Math Concepts:** M.1.F. Measure lengths indirectly and by iterating length units
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** Students should look through various magazines to cut out pictures of items that have measurements in meters, feet, or yards. **Religion:** Allow students to create a diorama of the inside of a Church to display the altar and sacramentals. Students will need to use their knowledge of measurement to position objects within their diorama. **Science:** During a unit on life science, students can plant their own seed in a container with potting soil. The class can chart the growth of the plants by keeping a journal of the plant's measurements as they grow. **Social Studies:** Using rulers, graph paper, and furniture catalogs, invite children to design a bookcase for a dollhouse after first examining a bookcase in a furniture catalog. Children can draw their bookcase and shelves on graph paper. When finished, students can label the height and width of the bookcase.

Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** *The Biggest Fish* by Shelia Keenan; *How Big is a Foot?; Inch by Inch* by Leo Lionni; *Moira's Birthday* by Robert Munsch; *Ten Beads Tall* by Pam Adams; & *Twelve Snails to One Lizard* by Susan Hightower **First in Math Website (http://www.firstinmath.com):** **Manipulatives:** centimeter grid paper, connecting cubes, graph paper, inch grid paper, interactive white board, measuring tape, meter stick, objects to measure, ruler, yard stick, **Technology:** Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Measurement and Data. Standard: M.2.G. Relate addition and subtraction to length.

Essential Questions *What should I be able to answer? What guides my thinking?*	• Why do we need to learn how to measure in everyday life? • Why is it important to measure using a standard tool? • What are different ways to count?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • Allow students the opportunity to measure various classroom and home objects using a nonstandard tool (i.e. counting cube, each student's footprint, paper clip, pencil, etc.) Have students compare measurements. At the end of the lesson, have students write on an Exit Card why it is important to have a standard unit of measurement. • "Which tool should I use?" – Give students different examples of items to measure. Have students decide what is the best tool to use – measuring tape, meter stick, ruler, or yard stick. • "Long Jump" – Tape 2 meter sticks end to end on the floor. Mark a starting place with masking tape. Students can estimate how far they think they can jump. After the estimates are recorded, students should jump and compare their estimates with the exact measurements. Students can calculate the difference. • "Let's Race" – Using pull back cars, students can record the distance traveled by the cars. First, students can estimate how far the cars will travel in inches and centimeters. Then, the cars will race. Students can record the distances in both the Customary & Metric Systems. The children can calculate the differences between their estimates and actual measurements. **Summative:** • "Metric Olympics" – see lesson at http://www2.scholastic.com/browse/article.jsp?id=7516 Focus only on the events where students will measure in centimeters and meters. • "Measure This…" – In their Math Journals, students can create a Venn Diagram that shows the similarities and differences between the Customary System & Metric System. Afterwards, students can give examples of when it would be appropriate to use a centimeter, meter, inch, foot, or yard.

Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.G.1**. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. **M.2.G.2**. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** centimeter, Customary System, difference, estimate, feet, foot, half inch, interactive white board, length, meter, Metric System, unit of measure, & yard **Math Concepts:** M.1.F. Measure lengths indirectly and by iterating length units; Knowledge of Addition & Subtraction; Fluency of facts to 20
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** Use content area material in creating original word problems using these concepts. **Religion:** **Science:** **Social Studies:**
Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** **First in Math Website (http://www.firstinmath.com):** **Manipulatives:** **Technology:** Ed-U-Smart (); Please see the recommended websites from the Technology Committee. **Textbook**

CATEGORY: Measurement and Data . Standard: M.2.H. Work with time and money.	
Essential Questions *What should I be able to answer? What guides my thinking?*	• Why do I need to tell time in daily life? • What is the relationship between analog and digital clocks? • How does recognizing coins and bills help me in real life? • How does skip counting help me to count money and tell time?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • "Calendar Time" – During Circle Time or Morning Meeting, incorporate money and time activities each day. For example, students can count the day with money. If the date is the 24th, students should place 2 dimes and 4 pennies in the Penny, Nickel, Dime, Quarter, Half Dollar, & Dollar cups. Exchanges will arise on different days. For time, ask students throughout the day what time it is when beginning or ending certain activities. • "Classroom Piggy Banks" – Create a large piggy bank on pink paper and laminate for each student. Throughout the unit on money, students can use coins to form various amounts and make change on the piggy bank mat. Students should be given multiple opportunities to form equivalent amounts using coins and bills. (Example: 76 cents – 3 quarters & 1 penny; 7 dimes, 1 nickel, & 1 penny; 76 pennies; 15 nickels & 1 penny, etc.) • "Class Store" – See **Integration of Learning** below for description. • "Human Clock" – create a "Human Clock" in your classroom using students. Twelve students should be given a number from 1 – 12 to wear on their chest. Evenly space these students in a circle to create a clock. Place 2 additional students in the center of the clock to act as the hour and minute hand. The clock hand students should be given a time to form

	on the clock. Other students in the classroom can form the time on individual Judy clocks. Students can be rotated so they can be both a clock number and clock hand. • "Quick Write" - Provide students with a large sticky note, an index card, or half sheet of paper. Pose a question to the students from the time and money unit. Students can write their reflections. **Summative:** • **"**Let's Go Shopping" – Given a circular for a store, give students a budget to buy items. Students will have to select their items to purchase and choose how they will pay for items with bills and coins. Students can also calculate if they were under or over budget. • **"**Geometry Money" – Allow students the opportunity to create a picture with pattern blocks or draw a picture using circles, squares, triangles, and rectangles. Assign a monetary value (1 cent, 5 cents, 10 cents, 25 cents, etc.) and ask the students to calculate how much their pictures are worth. • "It's About Time" – Create a Flipbook where students can chart an entire day with their activities and the time they completed the activity. Students should begin with the time they wake until the time when they go to bed. All activities should be charted. Each page in the Flipbook should represent a different time and activity. Students should form the time on an analog clock on each page and draw a picture of the activity. In addition, students should include 1 – 2 sentences that describe the activity. Emphasize the two cycles of 12 hours in a day – A.M./P.M. • "Time Flies.." - In their Math Journals, have students write about three activities in our world

	that would be very different if we had no way of telling time.
Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.H.1**. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. **M.2.H.2**. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. *Example: If you have 2 dimes and 3 pennies, how many cents do you have?*
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** A.M., analog clock, cent symbol, change, decimal point, digital clock, dime, dollar, dollar sign, equal amounts, half hour, half past, hour, hour hand, minute, minute hand, nickel, P.M., penny, quarter, quarter hour, second, & total **Math Concepts:** Knowledge of Addition & Subtraction; Problem Solving Strategies; Skip Counting Students need practice with common time phrases such as quarter till, quarter after, ten till, ten after, and half past.

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration
___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** Have students brainstorm places to travel for a class trip. Once a destination is chosen, have students create an itinerary with specific times for activities on the field trip. After the trip, have students write about if they were able to follow the schedule and if enough time was given for activities on the trip. **Religion:** Read the book, *Alexander, Who Used to be Rich Last Sunday*. Discuss the concepts of saving and spending money. Students can create a chart with three columns (Spend, Save, & Donate). Students can create this chart in Microsoft Word or on large chart paper. In the Spend & Save columns, students can write or draw pictures of things they would like to buy or things they would like to save their money. In the Donate column, students should brainstorm activities of how they can help the less fortunate. The class could choose student ideas for a class Service Project. **Science:** Read the book, *The Grouchy Ladybug*. Each student can choose an animal from the story to research. **Social Studies:** Create a class store where students can serve as customers/cashiers in order to practice using money and making change; discuss the terms producers/consumers; introduce students to the concept of credit/debit cards as well as checking/savings accounts.

Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** *Alexander, Who Used to Be Rich Last Sunday* by Judith Viorst; *Benny's* Pennies by Pat Brisson; *A Chair for My* Mother by Vera Williams; *The Grouchy Ladybug* by Eric Carle; *How the Second Grade Got $8,205.50 to Visit the Statue of* Liberty by Nathan Zilmelman; *If You Made a Million* by David M. Schwartz **First in Math Website (http://www.firstinmath.com):** Measurement World ("Equal Pay", "Time More or Less", "Equal Time", & "Passing Time"); K-2 World K2 Skip Game **Manipulatives:** coins/bills, interactive white board, Judy Clocks **Technology:** United States Mint - http://www.usmint.gov/kids; Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Measurement and Data Standard: M. 2. I. Represent and interpret data.	
Essential Questions *What should I be able to answer? What guides my thinking?*	• Why do we need to learn how to measure in everyday life? • Why is it important to measure using a standard tool? • How do I ask appropriate questions to find out specific data? • How can we collect data to learn about each other? • How do tally marks help us to organize data? • How can I organize large amounts of data using a pictograph or bar graph?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • Create a "Measurement Station" in your classroom. In this area, have a "Question of the Day" where students can answer via tally mark or by adding his/her name square to create a bar graph or pictograph. In addition, in this measurement station have a weekly item that students can measure and a monthly item where students can estimate the number of items in a container. • Allow students the opportunity to measure various classroom and home objects using a nonstandard tool (i.e. counting cube, each student's footprint, paper clip, pencil, etc.) Have students compare measurements. At the end of the lesson, have students write on an Exit Card why it is important to have a standard unit of measurement. **Summative:** • "Graphing Guru" – Have students create a question which they will use to survey classmates and members of their families. Once the question is formulated, students should survey a given number of people and collect data using tally marks. Afterwards, the students should create a pictograph and bar graph to represent the data. Students should be exposed to

	both horizontal and vertical bar graphs. • "Picture This…" – In their Math Journals, students can create a Venn Diagram that shows the similarities and differences between a pictograph and bar graph. Afterwards, students can give examples of when it would be appropriate to create a pictograph and when it would appropriate to create a bar graph.
Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.I 1**. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units. **M.2.I.2**. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** bar graph, data, horizontal, key, length, line plot, pictograph, symbol, survey, tally chart, & vertical **Math Concepts:** Knowledge of Addition & Subtraction; Problem solving strategies
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** Create a bar graph/pictograph to demonstrate the number of books read or favorite genre. **Religion:** Create a bar graph/pictograph to display the students' favorite story of forgiveness. **Science:** Create a bar graph/pictograph to show local weather patterns for a specified time; Have students create a chart showing the basic food groups. Each student should tally how many servings of each food group he/she eats in one day. Then, the results could be graphed. As ELA extension, students could write about if he/she is eating in a healthy way. **Social Studies:** Create a personal timeline of important events in a student's life.

Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** *The Biggest Fish* by Shelia Keenan; *How Big is a Foot?; Inch by Inch* by Leo Lionni; *Lemonade for Sale* by Stuart J. Murphy; *Moira's Birthday* by Robert Munsch; *Ten Beads Tall* by Pam Adams; & *Twelve Snails to One Lizard* by Susan Hightower **First in Math Website (http://www.firstinmath.com):** Know & Show 3 ("Picture This") **Manipulatives:** classroom objects to measure, graphing materials (crayons, colored pencils, graph paper, interactive white board, markers, paper, stickers/symbols for pictograph, tally chart, etc.), meter stick, yard stick, ruler **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndGradeData.aspx); Microsoft Excel (Bar Graphs); Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

CATEGORY: Geometry Standard: M.2.J. Reason with shapes and their attributes.	
Essential Questions *What should I be able to answer? What guides my thinking?*	• How are shapes represented in our world? What are the differences between two and three dimensional shapes? • How can recognizing patterns help me solve problems? • How can I find smaller shapes in a larger picture? • How can I create new shapes from other shapes? • How can I divide a shape into equal parts?
Assessment *What will I be expected to know, understand, and be able to do in order to demonstrate my learning?*	**Formative:** • "Shape Sorter" – Cut basic shapes in various sizes from cardboard or foam. Place the shapes in a bag. Have students place their hands in the bag and choose a shape. Before pulling the shape out of the bag, have the student describe as many characteristics/properties as possible. If possible, the student should attempt to name the shape. • "Geometric War" – Provide each small group of students with a deck of geometric shape cards. Player #1 draws a card and describes the shape to the group. The first child to correctly identify the shape takes the card and adds it to his/her pile. This procedure continues until all cards have been used. The winner of the game will be the student with the most cards. • "Scavenger Hunt" – Students should locate various shapes in school and at home. Students can compare the objects that they found. Afterwards, students can form these shapes using

	a geoboard. • "Fraction Frenzy" – Drop a handful of pennies or other coins on a table. Have students observe how many coins landed heads-up and how many landed tails-up. Students could determine the fraction of coins that is head-up and the fraction of coins that is tails-up. This activity can also be used with M&Ms or Skittles. Students can estimate what fractions of the candies are red, yellow, green, orange, brown, etc. **Summative:** • "Baking with Fractions" – In the kitchen at school or at home, allow students the opportunity to make a recipe and do the measuring. For example, if the class makes brownies allow the children to determine how the brownies would be cut so each student gets an equal share. • "The Riddler" – Have students create riddles about real life solid shapes. Compile these riddles into a class booklet. • "Geometry in Our World" – Have students in your class create a booklet or PowerPoint with pictures of real world items with different shapes. Students can find pictures using the Internet or taking their own pictures with a camera.
Skills *What skills do I need to have in order to answer the essential questions?*	**M.2.J.** 1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. *[Sizes are compared directly or visually, not compared by measuring.]* Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. **M.2.J.** 2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. **M.2.J.** 3. Partition circles and rectangles into two, three, or four equal shares, describe the shares

	using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.
Content *What content do I need to know in order to answer the essential questions?*	**Math Vocabulary:** angle, attribute, circle, corner, cube, edge, equal share, face, flat surface, fraction, fourths, half, halves, hexagon, partition, pentagon, quadrilateral, rectangle, thirds, triangle, & vertex/vertices **Math Concepts:** Ability to differentiate between defining attributes and non-defining attributes; Knowledge of two & three dimensional shapes; Knowledge of halves and quarters
Integration of Learning *How does this learning connect to my other areas (subjects) of learning?*	**ELA:** **Religion:** Use the book *3 in 1: A Picture Book of God* by Joanne Markhausen to teach about the Holy Trinity; Have students create a liturgical calendar that demonstrates the seasons of the Church year. **Science:** Using Oreo cookies, allow children to create the phases of the moon. By creating the phases of the moon on the cookies, students practice working with fractions. **Social Studies:** Using toothpicks and gumdrops/marshmallows, students can create 3-D geometric shapes in order to form a neighborhood or community. Students should label the house numbers in their community. Students should be able to explain how even number houses are on side and odd number houses are on another side. This activity ties in with Standard M.2.D. Understand Place Value.

Tools for Learning *Which tools will I use that will assist me in my learning?*	**Children's Literature:** *Circles, Triangles, and Squares* by Tana Hoban; *Color* Zoo by Lois Ehlert; *Eating Fractions* by Bruce McMillan; *Fraction Action* by Loreen Leedy; *Fraction Fun* by David A. Adler; *Gator Pie* by Louise Matthews; *The Greedy Triangle* by Marilyn Burns; *Listen to a Shape* by Marcia Brown; *Shapes in Nature* by Judy Feldman; *Three Pigs, One Wolf, and Seven Shapes* by Grace Maccarone; *The Village of Round and Square Houses* by Ann Grifalconi **First in Math Website (http://www.firstinmath.com):** K2 Pundi's Puzzle & Triplets, Shape Shuffle, Speed Shuffle **Manipulatives:** fraction bars/circles, geoboards, interactive white board, pattern blocks **Technology:** Ed-U-Smart (http://ed-u-smart.com/2ndGradeGeometry.aspx; http://ed-u-smart.com/2ndFract.aspx); Please see the recommended websites from the Technology Committee. **Textbook**

Which 21st Century Skills are woven into this standard? ___Critical Thinking/Problem Solving ___Collaboration ___Communications ___Creativity/Innovation

What level of rigor will I be using? (A, C)_____ What level of relevance will I be using?_____ (B,D)

Assessment and Grading

Grading and Assessment

Report Cards

The change in curriculum has prompted a change in our reporting document.

- **Report cards** will not be grade specific.
  - **Kindergarten** students will receive reports aligned to the skills appropriate to that level.
  - Students in **grades 1 – 3** will receive the primary form of the report card.
    - The grading system will continue as letter grades.
    - **No** numerical equivalents are attached to these grades.
  - The children in grades 4 – 8 will receive the elementary form of the report card
    - The grading system will continue as number grades for major content areas: Religion, Math and English Language Arts, Science and Social Studies. The general average is calculated from these grades.
    - A number scale is used for other content areas: Art, Music, Physical Education, Technology and World Language.

- **Grading Practices:**
  - The students will receive **<u>one grade</u>** for ELA and **<u>one grade</u>** for Math
    - The overall grade for each of these content areas will be an average of the progress shown in all of the "sub-set" categories for that content area.
    - **ELA** -- Care must be taken to ensure that the assessments reflect the entirety of ELA
      - At a minimum 2 assessments must be planned to assess progress in each of the sub-categories.
      - In each "sub-category":
        - a "+" will indicate that the student meets or exceeds expectations in that area.
        - a "√" will indicate that the student continues to work towards meeting expectations.
    - In **Math**, the students will again receive one overall grade.
      - Progress in sub-categories" will be noted with a "+" or a " √" as indicated above.
      - Progress should be able to documented by at least two different assessments in each area.

Portfolios:

- Portfolio assessment is a *"perfect fit"* with the Core Curriculum State Standards
- Portfolios should be used to gather relevant samples of student work over time
- Students are involved in the selection of artifacts
  - Students do self-reflection of their work
  - Teachers and students periodically discuss the work contained in the portfolio

- **Minimum Requirements for Student Portfolios:**
  - Baseline writing samples – start and end of school year
  - 2 ELA Performance assessments (all stages with rubric attached.)
  - 2 Math Performance assessments
  - Standardized test scores
  - Social Studies, Science, Art, Technology, Music, World Language samples
  - Student Choices with entry slip attached
  - Other items deemed necessary by the local school
    - Writing pieces
    - Science experiments
    - Mathematics problems and solutions
    - Applied Mathematics
    - Book reviews
    - Research projects
    - Physical Fitness Summary
    - Interdisciplinary projects/assignments

Resources

Web site for Common Core Standards:

http://www.corestandards.org/the-standards/

- **Resources aligned to the Common Core Standards can be found at : http://teacherweb.com/PA/AOP/ETCC/apt1.aspx**

You will find a wealth of resources related to curriculum on the following Curriculum Committee web sites.

- **Curriculum web site: http://www.teacherweb.com/PA/AOP/ElementaryCurriculumandInstruction/h1.aspx English Language Arts web site: http://www.teacherweb.com/PA/AOP/ElementaryIntegratedLanguageArts%28ILA%29/ap2.aspx**
- **Mathematics web site: http://www.teacherweb.com/PA/AOP/ElementaryMathematicsCurriculumCommittee/apt1.aspx**
- **Library Media web site: http://www.teacherweb.com/PA/AOP/ElementaryLibraryMediaCommittee/h0.stm**
- **Early Childhood web site: http://www.teacherweb.com/PA/AOP/EarlyChildhood/**
- **Assessment: http://www.teacherweb.com/PA/AOP/ElementaryAssessmentCommittee/ap1.aspx**