

# West Virginia College & Career Readiness Standard

Resource Booklet for English Language Arts & Mathematics

Grades K-2

Based on WVBE Policies 2520.1A & 2520.2B Effective July 1, 2016



West Virginia Board of Education 2016-2017

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## Table of Contents

1.	Forew	ord	ii
2.	Colleg	e- and Career-Readiness in West Virginia	1
3.	Colleg	e- and Career-Readiness in the English Language Arts Content Area	1
4.	Text C	omplexity Expectations	2
5.	Distrib	ution of Text Types	2
6.	Distrib	ution of Writing Types	2
7.	West V	/irginia College- and Career-Readiness Standards for English Language Arts	
	a.	Grade K	4
	b.	Grade 1	10
	C.	Grade 2	16
8.	Colleg	e- and Career-Readiness in the Mathematics Content Area	22
9.	Explar	nation of Terms	22
10.	Mathe	matical Habits of Mind	23
11.	Conne	ecting the Mathematical Habits of Mind to the Standards for Mathematical Content	25
12.	West V	/irginia College- and Career-Readiness Standards for Mathematics	
	a.	Grade K	26
	b.	Grade 1	30
	C.	Grade 2	35
Ар	cendic	es	
	A. St	andards vs. Curriculum Infographic	39
	B. Sa	ample Introductory Parent Letters	
	i	Grade K	40
	i	. Grade 1	41
	i	i. Grade 2	42
	C. Er	glish Language Arts Standard Progressions	43
	D. M	athematics Standard Progression	56
	E. De	evelopmentally Appropriate Foundations to Support Formative Assessment Processes	61
	F. A	Snapshot of Assessments and Assessment Processes for West Virginia Schools	62
	G. O	verview of the West Virginia TREE	63



# Foreword

Dear West Virginia Educators,

As we move forward with the rollout of West Virginia's College- and Career-Readiness Standards for English Language Arts and Mathematics (West Virginia Board of Education Policies 2520.1A and 2520.2B, respectively), I am excited to share this standards-focused resource booklet with you. In this booklet you will find:

- Applicable West Virginia College- and Career-Readiness Standards for English Language Arts and/or Mathematics (effective July 1, 2016) for your grade/content area;
- Sample letters by grade level for families regarding the West Virginia Collegeand Career-Readiness Standards;
- Progression documents for English Language Arts and/or Mathematics; and
- The state-adopted definition of College and Career Readiness for West Virginia.

I know our goal of ensuring all West Virginia students graduate from high school with the skills, knowledge and dispositions to be considered truly college and career ready can become a reality if we focus on the development and success of all students. It is my sincere hope that you will utilize the resources found within this document to tailor your instruction and curricula to meet the needs of all the students you serve.

Last, I would like to thank you for your dedication to the lives and well-being of the students of our great state. I am humbled by the amazing work you do each day to ensure all students are college and career ready.

Sincerely,

Furn L. Paine

Steven L. Paine, Ed.D State Superintendent of Schools



# College- and Career-Readiness in West Virginia

West Virginia's College- and Career-Readiness Standards have been developed with the goal of preparing students for a wide range of high-quality post-secondary opportunities. Specifically, college- and career-readiness refers to the knowledge, skills, and dispositions needed to be successful in higher education and/or training that lead to gainful employment. The West Virginia College- and Career-Readiness Standards establish a set of knowledge and skills that all individuals need to transition into higher education or the workplace, as both realms share many expectations. All students throughout their education necessary to be successful in their chosen pathway, and a plan to attain their goals.

# College- and Career-Readiness in the English Language Arts Content Area

West Virginia's College- and Career-Readiness Standards for English Language Arts promote proficiency in reading a range of material, fluency in writing in several modes, adaptability in verbal and written communication, and integrity in responsible collaboration with peers. Students will develop problem solving and critical thinking skills independently and collaboratively as they engage in the four domains of reading, writing, speaking/listening, and language. College- and career-readiness is supported in English language arts as students acquire and further develop their abilities to be critical consumers of what they read or hear and informed sources when they write or speak.

The West Virginia College- and Career-Readiness Standards are the result of a statewide public review of the state's educational standards. The West Virginia Department of Education (hereinafter WVDE), West Virginia Board of Education (hereinafter WVBE), and West Virginia University partnered in this initiative that began with a website, Academic Spotlight, which served as the platform for feedback collection. This website was active July through September of 2015. After the comment period closed, comments were evaluated by a team of diverse stakeholders, who made recommendations to WVBE based on the comments to meet the needs of West Virginia students. Additionally, during the month of September 2015, eight universities around the state hosted town hall meetings where citizens could pose questions about the standards to a panel of teachers, administrators, and representatives from higher education. The West Virginia College- and Career-Readiness Standards reflect the improvements brought to light by these two methods of public input.



### **Text Complexity Expectations**

Grade Band	Lexile Range
K-1	N/A
2-3	420-820L
4-5	740-1010L
2-3 4-5 6-8 9-10	926-1185L
9-10	1050-1335L
11-12	1185-1385L

### Distribution of Text Types\*

Grade Band	Literary	Informational
K-5	50%	50%
6-8	45%	55%
9-12	30%	70%

## Distribution of Writing Types\*

Grade Band	Argumentative	Informative	Narrative
K-5	30%	35%	35%
6-8	35%	35%	30%
9-12	40%	40%	20%

\*The percentages shown above should be met over the course of the entire instructional day and by the end of the programmatic level.



### **Explanation of Terms**

**Domains** are the broad components that make up a content area; e.g., reading, writing, speaking/ listening, and language make up the English language arts content area.

- **Language** Students will learn and apply the standard rules of written and spoken English while approaching language as a matter of craft and informed choice among alternatives to communicate. Students will understand words and phrases, their relationships, and their nuances and acquire new vocabulary, particularly general academic and domain-specific words and phrases.
- **Reading** The development of proficient reading skills is critical for mastering academic content. Students must show a steadily growing ability to discern more from and make fuller use of text. This includes 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 text. In order to build the foundations of reading, students will master the essential components of reading (i.e., fluency, phonics and word recognition, phonological awareness, and print concepts). Students will gain exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.
- **Speaking/ Listening** Students will be required to communicate ideas clearly and efficiently, including but not limited to formal presentation. They will use oral communication and interpersonal skills as they work together. They will need to be able to 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.
- **Writing** Students will apply writing skills and strategies to communicate effectively for different purposes using specific writing types. They will use the writing process by appropriately applying the organization of ideas, development of main ideas and supporting details, varied sentence structure, word choice, and mechanics. Using a variety of literary and informational texts, print sources and media sources, students will select, organize, and evaluate for research purposes.

**Clusters** are groups of standards that define the expectations students must demonstrate to be college- and career-ready.

**Standards** are the expectations for what students should know, understand, and be able to do; standards represent educational goals.

#### **Numbering of Standards**

The numbering for each standard is composed of three parts, each part separated by a period:

- the content area code (e.g., ELA for English language arts),
- the grade level, and
- the standard.

Illustration: ELA.3.1 refers to English language arts, grade 3, standard 1.



# West Virginia College- and Career-Readiness English Language Arts – Kindergarten

All West Virginia teachers are responsible for classroom instruction that integrates content standards, learning skills and technology tools. Students in kindergarten will advance through a developmentally-appropriate progression of standards. The following chart represents the components of literacy that will be developed in the reading, writing, speaking/listening, and language domains in kindergarten:

Ea	Early Learning Foundations			
•	Name upper-and lower-case letters, recognize the structure of sounds in language, and match letters with their sounds and print them.			
Re	ading	Writing		
<ul> <li>Compare the adventures and experiences of characters in familiar stories, such as fairy tales and folktales.</li> <li>Retell familiar stories and talk about stories read to them using details from the text.</li> <li>Ask and answer questions about key details in stories or other information read aloud.</li> </ul>		<ul> <li>State an opinion or preference about a topic or book in writing (e.g., "My favorite book is").</li> <li>Use a combination of drawing, dictating, and writing to describe an event, including his or her reaction to what happened.</li> </ul>		
Sp	eaking/Listening	Language		
•	Take part in classroom conversations and follow rules for discussions (e.g., learn	<ul> <li>Understand and use question words (e.g., who, what, where, when, why, how) in</li> </ul>		

opeaning, metering		
<ul> <li>Take part in classroom conversations and follow rules for discussions (e.g., learn to listen to others and take turns when speaking).</li> <li>Speak clearly to express thoughts, feelings, and ideas, including descriptions of familiar people, places, things, and events</li> </ul>	<ul> <li>Understand and use question words (e.g., who, what, where, when, why, how) in discussions.</li> <li>Learn to recognize, spell, and properly use those little grammatical words that hold the language together (e.g., a, the, to, of, from, I, is, and are).</li> </ul>	

### Kindergarten – Grade 1 Specifications

In kindergarten through grade 1, students should be immersed in a literacy-rich environment and have numerous opportunities to engage with complex texts appropriate for kindergarten in order to meet college- and career-readiness expectations. By the end of the programmatic level (grade 1) and over the course of the entire instructional day, the distribution of text types should include 50% literary and 50% informational, and writing types should be 30% argumentative, 35% informative, and 35% narrative.



# Numbering of Standards

The following English language arts standards are numbered continuously. The ranges in the chart below relate to the clusters found within the English language arts domains:

Early Learning Foundations		
Fluency	Foundation I	
Phonics and Word Recognition	Foundation II	
Handwriting	Foundation III	
Phonological Awareness	Foundation IV	
Print Concepts	Foundation V	
Reading		
Key Ideas and Details	Standards 1-6	
Craft and Structure	Standards 7-12	
Integration of Knowledge and Ideas	Standards 13-17	
Range of Reading and Text Complexity	Standards 18-19	
Writing		
Text Types and Purposes	Standards 20-22	
Production and Distribution of Writing	Standards 23-25	
Research to Build and Present Knowledge	Standards 26-28	
Range of Writing	Standard 29	
Speaking & Listening		
Comprehension and Collaboration	Standards 30-32	
Presentation of Knowledge and Ideas	Standards 33-35	
Language		
Conventions of Standard English	Standards 36-37	
Knowledge of Language	Standard 38	
Vocabulary Acquisition and Use	Standards 39-41	

# Early Learning Foundations

Cluster	Fluency
ELA.K.I	Read emergent-reader texts with purpose and understanding.
Cluster	Phonics and Word Recognition
ELA.K.II	<ul> <li>Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary or many of the most frequent sounds for each consonant.</li> <li>Associate common spellings (graphemes) with the five major short vowel sounds.</li> <li>Read common high-frequency words by sight (e.g., <i>the, of, to, you, she, my, is, are, do, or does</i>).</li> <li>Distinguish between similarly spelled words by identifying the sounds of the letters that differ.</li> </ul>



Cluster	Handwriting
ELA.K.III	Print upper- and lowercase letters.
Cluster	Phonological Awareness
ELA.K.IV	<ul> <li>Demonstrate understanding of spoken words, syllables, and sounds (phonemes).</li> <li>Recognize and produce rhyming words.</li> <li>Count, pronounce, blend, and segment syllables in spoken words.</li> <li>Blend and segment onsets and rimes of single-syllable spoken words.</li> <li>Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme words (i.e., consonant-vowel-consonant, hereinafter CVC). This does not include CVCs ending with /l/, /r/ or /x/.</li> <li>Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.</li> </ul>
Cluster	Print Concepts

Cluster	Print Concepts
ELA.K.V	<ul> <li>Demonstrate understanding of the organization and basic features of print.</li> <li>Follow words from left to right, top to bottom, and page by page.</li> <li>Recognize that spoken words are represented in written language by specific sequences of letters.</li> <li>Understand that words are separated by spaces in print.</li> <li>Recognize and name upper- and lowercase letters of the alphabet.</li> </ul>

# Reading

Cluster	Key Ideas and Details	
ELA.K.1	With prompting and support, ask and answer questions about key details in a literary text.	
ELA.K.2	With prompting and support, retell familiar stories, including key details in literary texts.	
ELA.K.3	With prompting and support, identify characters, settings, and major events in a literary text.	
ELA.K.4	With prompting and support, ask and answer questions about key details in an informational text.	
ELA.K.5	With prompting and support, identify the main topic and retell key details of an informational text.	
ELA.K.6	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in an informational text.	
Cluster	Craft and Structure	
ELA.K.7	With prompting and support, ask and answer questions about unknown words in a literary text.	
ELA.K.8	With prompting and support, recognize common types of texts (e.g., storybooks or poems).	
ELA.K.9	With prompting and support, name the author and illustrator of a story and define the role of each in telling the story in a literary text.	
ELA.K.10	With prompting and support, ask and answer questions about unknown words in an informational text.	

ELA.K.11	With prompting and support, identify the front cover, back cover, and title page of a book.
ELA.K.12	With prompting and support, name the author and illustrator of a text and define the role of each in presenting the ideas or information in an informational text.
Cluster	Integration of Knowledge and Ideas
ELA.K.13	With prompting and support, describe the relationship between illustrations and the literary story in which they appear (e.g., what moment in a story an illustration depicts).
ELA.K.14	With prompting and support, compare and contrast the adventures and experiences of characters in familiar literary stories.
ELA.K.15	With prompting and support, describe the relationship between illustrations and the informational text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).
ELA.K.16	With prompting and support, identify the reasons an author gives to support points in a literary or informational text.
ELA.K.17	With prompting and support, identify basic similarities in and differences between two literary or informational texts on the same topic (e.g., in illustrations, descriptions, or procedures).
Cluster	Range of Reading and Text Complexity
ELA.K.18	Actively engage in group reading activities of literary texts with purpose and understanding.
ELA.K.19	Actively engage in group reading activities of informational texts with purpose and understanding.

# Writing

Cluster	Text Types and Purposes
ELA.K.20	Use a combination of drawing, dictating, and writing to compose opinion pieces in which the topic or the name of the text being discussed is included; state an opinion or preference about the topic or book (e.g., "My favorite book is").
ELA.K.21	Use a combination of drawing, dictating, and writing to compose informative/ explanatory texts; name and supply some information about the topic.
ELA.K.22	Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.
Cluster	Production and Distribution of Writing
ELA.K.23	(Begins in grade 3.)
ELA.K.24	With guidance and support from adults and collaborative discussions, add details to strengthen writing as needed.
ELA.K.25	With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including collaboration with peers.
Cluster	Research to Build and Present Knowledge
ELA.K.26	With guidance and support, participate in shared research and writing (e.g., explore a number of books by a favorite author and express opinions about them).



ELA.K.27	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
ELA.K.28	(Begins in grade 4.)
Cluster	Range of Writing
FLA.K.29	(Begins in grade 3.)

# Speaking & Listening

Cluster	Comprehension and Collaboration
ELA.K.30	<ul> <li>Participate in collaborative conversations with diverse partners about <i>kindergarten topics and texts</i> with peers and adults in small and larger groups.</li> <li>Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).</li> <li>Continue a conversation through multiple exchanges.</li> </ul>
ELA.K.31	Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
ELA.K.32	Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
Cluster	Presentation of Knowledge and Ideas
FLAK 33	Describe familiar people places things and events and with promoting and

Ulustei	Fresentation of Knowledge and Ideas
ELA.K.33	Describe familiar people, places, things, and events and, with prompting and support, provide additional details.
ELA.K.34	Add drawings or other visual displays to descriptions as desired to provide additional details.
ELA.K.35	Speak audibly and express thoughts, feelings, and ideas clearly.

### Language

Cluster	Conventions of Standard English
ELA.K.36	<ul> <li>Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.</li> <li>Use frequently occurring nouns and verbs.</li> <li>Form regular plural nouns orally by adding /s/ or /es/ (e.g., <i>dog</i> and <i>dogs; wish</i> and <i>wishes</i>).</li> <li>Understand and use question words (interrogatives) (e.g., <i>who, what, where, when, why,</i> and <i>how</i>).</li> <li>Use the most frequently occurring prepositions (e.g., <i>to, from, in, out, on, off, for, of, by,</i> and <i>with</i>).</li> <li>Produce and expand complete sonteneos in shared language activities.</li> </ul>
	• Produce and expand complete sentences in shared language activities.



ELA.K.37	Demonstrate command of the conventions of Standard English capitalization,
	punctuation, and spelling when writing.
	Capitalize the first word in a sentence and the pronoun I.
	Recognize and name end punctuation.
	• Write a letter or letters for most consonant and short-vowel sounds (phonemes).
	Spell simple words phonetically, drawing on knowledge of sound-letter
	relationships.

Cluster	Knowledge of Language
ELA.K.38	(Begins in grade 2.)
Cluster	Vocabulary Acquisition and Use
ELA.K.39	<ul> <li>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>kindergarten reading and content</i>.</li> <li>Identify new meanings for familiar words and apply them accurately (e.g., knowing <i>duck</i> is a bird and learning the verb <i>to duck</i>).</li> <li>Introduce the most frequently occurring inflections and affixes (e.g., <i>-ed, -s, re-, un-, pre-, -ful,</i> and <i>-less</i>) as a clue to the meaning of an unknown word.</li> </ul>
ELA.K.40	<ul> <li>With guidance and support from adults, explore word relationships and nuances in word meanings.</li> <li>Sort common objects into categories (e.g., shapes or foods) to gain a sense of the concepts the categories represent.</li> <li>Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).</li> <li>Identify real-life connections between words and their use (e.g., note places at home that are <i>cozy</i>).</li> <li>Distinguish shades of meaning among verbs describing the same general action (e.g., <i>walk, march, strut,</i> and <i>prance</i>) by acting out the meanings.</li> </ul>
ELA.K.41	Use words and phrases acquired through conversations, reading, being read to, and responding to texts.



# West Virginia College- and Career-Readiness English Language Arts – Grade 1

All West Virginia teachers are responsible for classroom instruction that integrates content standards, learning skills, and technology tools. Students in first grade will continue enhancing skills in a developmentally-appropriate progression of standards. Following the skill progressions from kindergarten, the following chart represents the components of literacy that will be developed in the reading, writing, speaking/listening, and language domains in first grade:

#### **Early Learning Foundations**

- Read stories and poems aloud with sufficient fluency to support comprehension.
- Use phonics (matching letters and sounds) and word analysis skills to figure out unfamiliar words when reading and writing.
- Be able to hear and orally reproduce sounds used to make words.
- Understand the basic features of print.

Reading	Writing
<ul> <li>Get facts and information from different writings.</li> </ul>	<ul> <li>Write about a topic, supplying some facts and providing some sense of opening and closing.</li> </ul>
Speaking/Listening	Language
• Take part in conversations about topics and texts being studied by responding to the comments of others and asking questions to clear up any confusion.	<ul> <li>Produce and expand complete simple and compound statements, questions, commands, and exclamations.</li> <li>Identify the correct meaning for a word with multiple meanings, based on the sentence or paragraph in which the word is used (e.g., deciding whether the word bat means a flying mammal or a club used in baseball).</li> <li>Learn to think about finer distinctions in the meanings of near-synonyms (e.g., marching, prancing, strutting, strolling, and walking).</li> </ul>

### Kindergarten through Grade 1 Specifications

In kindergarten through grade 1, students should have numerous opportunities to engage with complex texts appropriate for first grade in order to meet college- and career-readiness expectations. By the end of the programmatic level (grade 1) and over the course of the entire instructional day, the distribution of text types should include 50% literary and 50% informational, and writing types should be 30% argumentative, 35% informative, and 35% narrative.



# Numbering of Standards

The following English language arts standards are numbered continuously. The ranges in the chart below relate to the clusters found within the English language arts domains:

Early Learning Foundations	
Fluency	Foundation I
Phonics and Word Recognition	Foundation II
Handwriting	Foundation III
Phonological Awareness	Foundation IV
Print Concepts	Foundation V
Reading	
Key Ideas and Details	Standards 1-6
Craft and Structure	Standards 7-12
Integration of Knowledge and Ideas	Standards 13-17
Range of Reading and Text Complexity	Standards 18-19
Writing	
Text Types and Purposes	Standards 20-22
Production and Distribution of Writing	Standards 23-25
Research to Build and Present Knowledge	Standards 26-28
Range of Writing	Standard 29
Speaking & Listening	
Comprehension and Collaboration	Standards 30-32
Presentation of Knowledge and Ideas	Standards 33-35
Language	
Conventions of Standard English	Standards 36-37
Knowledge of Language	Standard 38
Vocabulary Acquisition and Use	Standards 39-41

### Early Learning Foundations

Cluster	Fluency
ELA.1.I	<ul> <li>Read with sufficient accuracy and fluency to support comprehension.</li> <li>Read on-level text with purpose and understanding.</li> <li>Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul>



Cluster Phonics and Word Recognition	
ELA.1.II	<ul> <li>Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>Know the spelling-sound correspondences for common consonant digraphs.</li> <li>Decode regularly spelled one-syllable words.</li> <li>Know final -e and common vowel team conventions for representing long vowel sounds.</li> <li>Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.</li> <li>Decode two-syllable words following basic patterns by breaking the words into syllables.</li> <li>Read words with inflectional endings.</li> <li>Recognize and read grade-appropriate irregularly spelled words.</li> </ul>

Cluster	Handwriting
ELA.1.III	Print all upper- and lowercase letters using proper letter formation and directionality.

Cluster	Phonological Awareness
ELA.1.IV	<ul> <li>Demonstrate understanding of spoken words, syllables, and sounds (phonemes).</li> <li>Distinguish long from short vowel sounds in spoken single-syllable words.</li> <li>Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.</li> <li>Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.</li> <li>Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).</li> </ul>
Cluster	Print Concepts
ELA.1.V	<ul> <li>Demonstrate understanding of the organization and basic features of print.</li> <li>Recognize the distinguishing features of a sentence (e.g., first word, capitalization, and ending punctuation).</li> </ul>

# Reading

Cluster	Key Ideas and Details
ELA.1.1	Ask and answer questions about key details in a literary text.
ELA.1.2	Retell stories, including key details, and demonstrate understanding of their central message or lesson in literary texts.
ELA.1.3	Describe characters, settings, and major events in a story, using key details in literary texts.
ELA.1.4	Ask and answer questions about key details in an informational text.
ELA.1.5	Identify the main topic and retell key details of an informational text.
ELA.1.6	Describe the connection between two individuals, events, ideas, or pieces of information in an informational text.

Cluster	Craft and Structure
ELA.1.7	In literary texts, identify words and phrases in stories or poems that suggest feelings
	or appeal to the senses.



Cluster	Range of Reading and Text Complexity
	<u>I</u>
ELA.1.17	Identify basic similarities in and differences between two informational texts on the same topic (e.g., in illustrations, descriptions, or procedures).
ELA.1.16	Identify the reasons an author gives to support points in an informational text.
ELA.1.15	Use the illustrations and details in a text to describe its key ideas in informational texts.
ELA.1.14	Compare and contrast the adventures and experiences of characters in stories in literary texts.
ELA.1.13	Use illustrations and details in a story to describe its characters, setting, or events in literary texts.
Cluster	Integration of Knowledge and Ideas
ELA.1.12	Distinguish between information provided by pictures or other illustrations and information provided by the words in an informational text.
ELA.1.11	Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, and/or icons) to locate key facts or information in an informational text.
ELA.1.10	Ask and answer questions to help determine or clarify the meaning of words and phrases in an informational text.
ELA.1.9	Identify who is telling the story at various points in a literary text.
ELA.1.8	Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of literary text types.

Cluster	Range of Reading and Text Complexity
ELA.1.18	With prompting and support, read prose and poetry of appropriate complexity for grade 1 in literary texts.
ELA.1.19	With prompting and support, read informational texts appropriately complex for grade 1.

# Writing

Cluster	Text Types and Purposes
ELA.1.20	Write opinion pieces by introducing the topic or name of the text being discussed, stating an opinion, supplying a reason for the opinion, and providing some sense of closure.
ELA.1.21	Write informative/explanatory texts by naming a topic, supplying some facts about the topic, and providing some sense of closure.
ELA.1.22	Write narratives to recount two or more appropriately sequenced events, include some details regarding what happened, use transitional words to signal event order, and provide some sense of closure.
Cluster	Production and Distribution of Writing
ELA.1.23	(Begins in Grade 3.)
ELA.1.24	With guidance and support from adults and collaborative discussions, focus on a topic and add details to strengthen writing as needed.



Cluster	Research to Build and Present Knowledge
ELA.1.26	Participate in shared research and writing (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions).
ELA.1.27	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
ELA.1.28	(Begins in grade 4.)
Cluster	Bange of Writing

Cluster	Range of Writing
ELA.1.29	(Begins in grade 3.)

# Speaking & Listening

Cluster	Comprehension and Collaboration		
ELA.1.30	<ul> <li>Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups.</li> <li>Follow agreed-upon rules for discussions (e.g., listening to others with care and speaking one at a time about the topics and texts under discussion).</li> <li>Build on others' talk in conversations by responding to the comments of others through multiple exchanges.</li> <li>Ask questions to clear up any confusion about the topics and texts under discussion.</li> </ul>		
ELA.1.31	Ask and answer questions about key details in a text read aloud or information presented orally or through other media.		
ELA.1.32	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.		
Cluster	Presentation of Knowledge and Ideas		
ELA.1.33	Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.		
ELA.1.34	Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.		

ELA.1.35 Produce complete sentences when appropriate to task and situation.



# Language

Cluster	Conventions of Standard English
ELA.1.36	<ul> <li>Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.</li> <li>Use common, proper, and possessive nouns.</li> <li>Use singular and plural nouns with matching verbs in basic sentences (e.g., <i>he hops; we hop</i>).</li> <li>Use personal, possessive and indefinite pronouns (e.g., <i>I, me, and my; they, them,</i> and <i>their; anyone</i> and <i>everything</i>).</li> <li>Use verbs to convey a sense of past, present, and future (e.g., <i>yesterday I walked home; today I walk home; tomorrow I will walk home</i>).</li> <li>Use frequently occurring adjectives.</li> <li>Use determiners (e.g., <i>articles</i> and <i>demonstratives</i>).</li> <li>Use frequently occurring prepositions (e.g., <i>during, beyond,</i> or <i>toward</i>).</li> <li>Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.</li> </ul>
ELA.1.37	<ul> <li>Demonstrate command of the conventions of Standard English capitalization, punctuation, and spelling when writing.</li> <li>Capitalize dates and names of people.</li> <li>Use end punctuation for sentences.</li> <li>Use commas in dates and to separate single words in a series.</li> <li>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.</li> </ul>

Cluster	Knowledge of Language
ELA.1.38	(Begins in grade 2.)

Cluster	Vocabulary Acquisition and Use
ELA.1.39	<ul> <li>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.</li> <li>Use sentence-level context as a clue to the meaning of a word or phrase.</li> <li>Use frequently occurring affixes as a clue to the meaning of a word.</li> <li>Identify frequently occurring root words (e.g., <i>look</i>) and their inflectional forms (e.g., <i>looks, looked,</i> and <i>looking</i>).</li> </ul>
ELA.1.40	<ul> <li>With guidance and support from adults, demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</li> <li>Sort words into categories (e.g., <i>colors</i> and <i>clothing</i>) to gain a sense of the concepts the categories represent.</li> <li>Define words by category and by one or more key attributes (e.g., <i>a duck is a bird that swims; a tiger is a large cat with stripes</i>).</li> <li>Identify real-life connections between words and their use (e.g., note places at home that are <i>cozy</i>).</li> <li>Distinguish shades of meaning among verbs differing in manner (e.g., <i>look, peek, glance, stare, glare,</i> and <i>scowl</i>) and adjectives differing in intensity (e.g., <i>large</i> and <i>gigantic</i>) by defining or choosing them or by acting out the meanings.</li> </ul>
ELA.1.41	Use words and phrases acquired through conversations, reading, being read to, and responding to texts; use frequently occurring conjunctions to signal simple relationships (e.g., <i>because</i> ).



# West Virginia College- and Career-Readiness English Language Arts – Grade 2

All West Virginia teachers are responsible for classroom instruction that integrates content standards, learning skills, and technology tools. Students in second grade will continue enhancing skills in a developmentally-appropriate progression of standards. Following the skill progressions from first grade, the following chart represents the components of literacy that will be developed in the reading, writing, speaking/listening, and language domains in second grade:

#### **Early Learning Foundations**

- Read stories and poems aloud fluently, without pausing to figure out what each word means.
- Use word analysis skills and phonics to decode words.
- Create readable documents with legible print.

Reading	Writing	
<ul> <li>Pay close attention to details, including illustrations and graphics, in stories and books to answer who, what, where, when, why, and how questions.</li> <li>Determine the lesson or moral of stories, fables, and folktales.</li> <li>Use text features (e.g., captions, bold print, and indexes) to locate key facts or information efficiently.</li> </ul>	<ul> <li>Write an opinion about a book he or she has read, using important details from the materials to support that opinion.</li> <li>Write stories that include a short sequence of events and include a clear beginning, middle, and end.</li> </ul>	
Speaking/Listening	Language	
<ul> <li>Take part in conversations by linking his or her comments to the remarks of others and asking and answering questions to gather additional information or deepen understanding of the topic.</li> <li>Retell key information or ideas from media or books read aloud.</li> </ul>	<ul> <li>Produce, expanding, and rearranging sentences (e.g., "The boy watched the movie;" "The little boy watched the movie;" "The action movie was watched by the little boy").</li> <li>Determine the meaning of the new word formed when a known prefix or suffix is added to a known word (happy/unhappy and pain/painful/painless).</li> </ul>	

### Grades 2-3 Specifications

In grades 2-3, students should be exposed to texts that fall in the 420-820 Lexile range in order to meet college- and career-readiness expectations. By the end of the programmatic level (grade 3) and over the course of the entire instructional day, the distribution of text types should include 50% literary and 50% informational, and writing types should be 30% argumentative, 35% informative, and 35% narrative.



# Numbering of Standards

The following English language arts standards are numbered continuously. The ranges in the chart below relate to the clusters found within the English language arts domains:

Early Learning Foundations		
Fluency	Foundation I	
Phonics and Word Recognition	Foundation II	
Handwriting	Foundation III	
Reading		
Key Ideas and Details	Standards 1-6	
Craft and Structure	Standards 7-12	
Integration of Knowledge and Ideas	Standards 13-17	
Range of Reading and Text Complexity	Standards 18-19	
Writing		
Text Types and Purposes	Standards 20-22	
Production and Distribution of Writing	Standards 23-25	
Research to Build and Present Knowledge	Standards 26-28	
Range of Writing	Standard 29	
Speaking & Listening		
Comprehension and Collaboration	Standards 30-32	
Presentation of Knowledge and Ideas	Standards 33-35	
Language		
Conventions of Standard English	Standards 36-37	
Knowledge of Language	Standard 38	
Vocabulary Acquisition and Use	Standards 39-41	

# Early Learning Foundations

Cluster	Fluency
ELA.2.I	<ul> <li>Read with sufficient accuracy and fluency to support comprehension.</li> <li>Read on-level text with purpose and understanding.</li> <li>Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul>



Cluster	Phonics and Word Recognition
ELA.2.II	<ul> <li>Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>Distinguish long and short vowels when reading regularly spelled one-syllable words.</li> <li>Know spelling-sound correspondences for additional common vowel teams.</li> <li>Decode regularly spelled two-syllable words with long vowels.</li> <li>Decode words with common prefixes and suffixes.</li> <li>Identify words with inconsistent but common spelling-sound correspondences.</li> <li>Recognize and read grade-appropriate irregularly spelled words.</li> </ul>

Cluster	Handwriting
ELA.2.III	Create readable documents with legible print or cursive as developmentally appropriate.

### Reading

Cluster	Key Ideas and Details
ELA.2.1	Ask and answer key ideas such questions as <i>who, what, where, when, why</i> , and <i>how</i> to demonstrate understanding of key details in literary text.
ELA.2.2	Recount stories, including fables and folktales from diverse cultures and determine their central message, lesson, or moral in literary text.
ELA.2.3	Describe how characters in a story respond to major events and challenges in literary text.
ELA.2.4	Ask and answer such questions as <i>who, what, where, when, why,</i> and <i>how</i> to demonstrate understanding of key details in informational text.
ELA.2.5	Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within informational text.
ELA.2.6	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in an informational text.
Cluster	Craft and Structure
ELA.2.7	Describe how words and phrases (e.g., regular beats, alliteration, rhymes, and repeated lines) in literary text supply rhythm and meaning in a story, poem, or song.
ELA.2.8	Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action in literary text.
ELA.2.9	Acknowledge differences in the points of view of characters, including by speaking in a different voice for each character when reading dialogue aloud from literary text.
ELA.2.10	Determine the meaning of words and phrases in informational text relevant to a <i>grade</i> 2 topic or subject area.
ELA.2.11	Know and use various informational text features (e.g., captions, bold print,

subheadings, glossaries, indexes, electronic menus, and icons) to locate key facts or<br/>information in a text efficiently.ELA.2.12Identify the main purpose of informational text, including what the author wants to

answer, explain, or describe

Cluster	Integration of Knowledge and Ideas	
	Use information gained from the illustrations and words in a print or digital literary text	
	to demonstrate understanding of its characters, setting, or plot.	

ELA.2.14	Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures in a literary text.
ELA.2.15	Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify an informational text.
ELA.2.16	Describe how reasons support specific points the author makes in an informational text.
ELA.2.17	Compare and contrast the most important points presented by two informational texts on the same topic.

Cluster	Range of Reading and Text Complexity
ELA.2.18	By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2–3 text complexity range proficiently, with scaffolding as needed at the high end of the range.
ELA.2.19	By the end of year, read and comprehend informational texts, including social studies, science, and technical texts, in the grades 2–3 text complexity range proficiently, with scaffolding as needed at the high end of the range.

# Writing

Cluster	Text Types and Purposes
ELA.2.20	Write opinion pieces by introducing the topic or text being discussed, stating an opinion, supplying reasons that support the opinion, using linking words (e.g., because, and, or also) to connect opinion and reasons, and providing a concluding statement or section.
ELA.2.21	Write informative/explanatory texts by introducing a topic, using facts and definitions to develop points, and providing a concluding statement or section.
ELA.2.22	Write narratives to recount a well-elaborated event or short sequence of events, including details to describe actions, thoughts, and feelings, and using transitional words to signal event order and provide a sense of closure.
Cluster	Production and Distribution of Writing
ELA.2.23	
	(Begins in grade 3.)
ELA.2.24	With guidance and support from adults and collaborative discussions, focus on a topic and strengthen writing as needed by revising and editing.
ELA.2.25	With guidance and support from adults, use a variety of digital tools to produce and publish writing, including collaboration with peers.
Cluster	Research to Build and Present Knowledge
ELA.2.26	Participate in shared research and writing (e.g., read a number of books on a single topic to produce a report; record science observations).
ELA.2.27	Recall information from experiences or gather information from provided sources to answer a question.
ELA.2.28	(Begins in grade 4.)
Cluster	Range of Writing
ELA.2.29	(Begins in grade 3.)



# Speaking & Listening

Cluster	Comprehension and Collaboration
ELA.2.30	<ul> <li>Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.</li> <li>Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, and speaking one at a time about the topics and texts under discussion).</li> <li>Build on others' talk in conversations by linking comments to the remarks of others.</li> <li>Ask for clarification and further explanation as needed about the topics and texts under discussion.</li> </ul>
ELA.2.31	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
ELA.2.32	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.

Cluster	Presentation of Knowledge and Ideas
ELA.2.33	Tell a story or recount an experience with appropriate facts and relevant, descriptive details; speaking audibly and coherently.
ELA.2.34	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.
ELA.2.35	Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

### Language

Cluster	Conventions of Standard English
ELA.2.36	<ul> <li>Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.</li> <li>Use collective nouns (e.g., <i>group</i>).</li> <li>Form and use frequently occurring irregular plural nouns (e.g., <i>feet, children, teeth, mice,</i> and <i>fish</i>).</li> <li>Use reflexive pronouns (e.g., <i>myself</i> or <i>ourselves</i>).</li> <li>Form and use the past tense of frequently occurring irregular verbs (e.g., <i>sat, hid,</i> or <i>told</i>).</li> <li>Use adjectives and adverbs and choose between them depending on what is to be modified.</li> <li>Produce, expand, and rearrange complete simple and compound sentences (e.g., <i>the boy watched the movies; the little boy watched the movie; the action movie was watched by the little boy</i>).</li> </ul>



ELA.2.37	<ul> <li>Demonstrate command of the conventions of Standard English capitalization, punctuation, and spelling when writing.</li> <li>Capitalize holidays, product names, and geographic names.</li> <li>Use commas in greetings and closings of letters.</li> <li>Use an apostrophe to form contractions and frequently occurring possessives.</li> <li>Generalize learned spelling patterns when writing words (e.g., cage / badge; boy / boil).</li> <li>Consult reference materials, including beginning dictionaries, as needed to abade and engline and engli</li></ul>
	check and correct spellings.

Cluster	Knowledge of Language
ELA.2.38	<ul><li>Use knowledge of language and its conventions when writing, speaking, reading, or listening.</li><li>Compare formal and informal uses of English.</li></ul>

Cluster	Vocabulary Acquisition and Use
ELA.2.39	<ul> <li>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grade 2 reading and content</i>, choosing flexibly from an array of strategies.</li> <li>Use sentence-level context as a clue to the meaning of a word or phrase.</li> <li>Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., <i>happy/unhappy</i>, and <i>tell/retell</i>).</li> <li>Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., <i>addition</i> and <i>additional</i>).</li> <li>Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., <i>birdhouse, lighthouse, housefly; bookshelf, notebook,</i> and <i>bookmark</i>).</li> <li>Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.</li> </ul>
ELA.2.40	<ul> <li>Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</li> <li>Identify real-life connections between words and their use (e.g., describe foods that are <i>spicy</i> or <i>juicy</i>).</li> <li>Distinguish shades of meaning among closely related verbs (e.g., <i>toss, throw, and hurl</i>) and closely related adjectives (e.g., <i>thin, slender, skinny, and scrawny</i>).</li> </ul>
ELA.2.41	Use words and phrases acquired through conversations, reading, being read to, and responding to texts; use adjectives and adverbs to describe (e.g., <i>when other kids are happy, that makes me happy</i> ).



# College- and Career-Readiness in the Mathematics Content Area

West Virginia's College- and Career-Readiness Standards for Mathematics are the culmination of an extended, broad-based effort to help ensure that all students are college- and career-ready upon completion of high school. The skills contained in the mathematics standards are essential for college- and career-readiness in a twenty-first-century, globally competitive society. The standards reflect a progression and key ideas determining how knowledge is organized and generated within the content area. Standards evolve from specifics to deeper structures inherent in the discipline. These deeper structures serve to connect the specifics. The standards follow such a design, stressing conceptual understanding of key ideas and continually returning to organizing principles such as place value or the properties of operations to structure those ideas. The sequence of topics and performances outlined in mathematics standards must respect the scientific research about how students learn and what is known about how their mathematical knowledge, skill, and understanding develop over time.

The West Virginia College- and Career-Readiness Standards are the result of a statewide public review of the state's educational standards. The West Virginia Department of Education (WVDE), West Virginia Board of Education (WVBE), and West Virginia University partnered in this initiative that began with a website, Academic Spotlight, which served as the platform for feedback collection. This website was active July through September of 2015. After the comment period closed, comments were evaluated by a team of diverse stakeholders, who made recommendations to WVBE based on the comments to meet the needs of West Virginia students. Additionally, during the month of September 2015, eight universities around the state hosted town hall meetings where citizens could pose questions about the standards to a panel of teachers, administrators, and representatives from higher education. The West Virginia College- and Career-Readiness Standards reflect the improvements brought to light by these two methods of public input.

### **Explanation of Terms**

**Clusters** are groups of standards that define the expectations students must demonstrate to be college- and career-ready.

**Domains** are broad components that make up a content area. Domains in mathematics vary by gradelevel and by course. For example, the four domains for mathematics in grade 1 are Operations and Algebraic Thinking, Number and Operations in Base Ten, Geometry, and Measurement and Data.

**Standards** are expectations for what students should know, understand and be able to do; standards represent educational goals.

#### **Numbering of Standards**

The numbering for each standard is composed of three parts, each part separated by a period:

- the content code (e.g., M for Mathematics),
- the grade level or course, and
- the standard.

Illustration: M.2.1 refers to mathematics, grade 2, standard 1.



#### MATHEMATICS

The West Virginia College- and Career-Readiness Standards for Mathematics define what students should understand and be able to do in their study of mathematics. Asking a student to understand something means asking a teacher to assess whether the student has understood it. What does mathematical understanding look like? One hallmark of mathematical understanding is the ability to justify, in a way appropriate to the student's mathematical maturity, why a particular mathematical statement is true or where a mathematical rule comes from. There is a world of difference between a student who can summon a mnemonic device to expand a product such as (a + b)(x + y) and a student who can explain where the mnemonic comes from. The student who can explain the rule understands the mathematics, and may have a better chance to succeed at a less familiar task such as expanding (a + b + c)(x + y). Mathematical understanding and procedural skill are equally important, and both are assessable using mathematical tasks of sufficient richness.

The Standards begin with eight Mathematical Habits of Mind.

# Mathematics: Mathematical Habits of Mind

The Mathematical Habits of Mind (hereinafter MHM) describe varieties of expertise that mathematics educators at all levels should develop in their students.

#### MHM1. 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.

#### MHM2. 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.



#### MHM3. 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.

#### MHM4. 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.

#### MHM5. 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.

#### MHM6. 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.



#### MHM7. 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  $7 \times 8$  equals the well-remembered  $7 \times 5 + 7 \times 3$ , in preparation for learning about the distributive property. In the expression  $x^2 + 9x + 14$ , older students can see the 14 as  $2 \times 7$  and the 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.

#### MHM8. 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 Mathematical Habits of Mind to the Standards for Mathematical Content

The Mathematical Habits of Mind describe ways in which developing students of mathematics increasingly 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 habits of mind to mathematical content in mathematics instruction.



# West Virginia College- and Career-Readiness Mathematics – Kindergarten

All West Virginia teachers are responsible for classroom instruction that integrates content standards and mathematical habits of mind. Students in kindergarten will focus on two critical areas: (1) representing and comparing whole numbers, initially with sets of objects; (2) describing shapes and space. Mathematical habits of mind, which should be integrated in these content areas, include: making sense of problems and persevering in solving them, reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others; modeling with mathematics; using appropriate tools strategically; attending to precision, looking for and making use of structure; and looking for and expressing regularity in repeated reasoning. The skill progressions begin in kindergarten as foundational understanding of numeracy. The following chart represents the mathematical understandings that will be developed in kindergarten:

Counting and Cardinality	Operations and Algebraic Thinking
<ul> <li>Count objects to tell how many there are by ones and by tens.</li> <li>Write numbers from 0 to 20.</li> <li>Compare two groups of objects to tell which group, if either, has more; compare two written numbers to tell which is greater.</li> <li>Group pennies.</li> </ul>	<ul> <li>Understand addition as putting together and adding to.</li> <li>Understand subtraction as taking apart and taking from.</li> <li>Add and subtract very small numbers quickly and accurately (e.g., 3 + 1).</li> </ul>
Number and Operations in Base Ten	Measurement and Data
<ul> <li>Act out addition and subtraction word problems and draw diagrams to represent them.</li> <li>Add with a sum of 10 or less; subtract from a number 10 or less; and solve addition and subtraction word problems.</li> <li>Group objects by tens and ones. (1 group of 10 and 3 ones makes 13)</li> </ul>	<ul> <li>Describe and compare objects as longer, shorter, larger, smaller, etc.</li> <li>Classify objects and count the number of objects in each category. (e.g., Identify coins and sort them into groups of 5s or 10s.)</li> </ul>
Geometry	
<ul> <li>Name shapes correctly regardless of orientation or size (e.g., a square oriented as a "diamond" is still a square).</li> </ul>	



# Numbering of Standards

The following Mathematics Standards are numbered continuously. The following ranges relate to the clusters found within Mathematics:

Counting and Cardinality	
Know number names and the count sequence.	Standards 1-3
Count to tell the number of objects.	Standards 4-5
Compare numbers.	Standards 6-7
<b>Operations and Algebraic Thinking</b>	
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	Standard 8-12
Number and Operations in Base Ten	
Work with numbers 11-19 to gain foundations for place value.	Standard 13
Measurement and Data	
Describe and compare measurable attributes.	Standards 14-15
Classify objects and count the number of objects in each category.	Standard 16
Geometry	
Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres)	Standards 17-19
Analyze, compare, create, and compose shapes	Standards 20-22

### Counting and Cardinality

Cluster	Know number names and the count sequence.	
M.K.1	Count to 100 by ones and by tens.	
M.K.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	
M.K.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).	
Cluster	Count to tell the number of objects.	
M.K.4	<ul> <li>Understand the relationship between numbers and quantities; connect counting to cardinality.</li> <li>a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.</li> <li>b. Understand that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted.</li> <li>c. Understand that each successive number name refers to a quantity that is one larger.</li> </ul>	



M.K.5	Count to answer questions (e.g., "How many?") about as many as 20 things arranged in a line, a rectangular array, a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
Cluster	Compare numbers.
Viustei	oompare numbers.
M.K.6	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group (e.g., by using matching and counting strategies).
M.K.7	Compare two numbers between 1 and 10 presented as written numerals.

# Operations and Algebraic Thinking

Cluster	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
M.K.8	Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), and acting out situations, verbal explanations, expressions, or equations.
M.K.9	Solve addition and subtraction word problems and add and subtract within 10 by using objects or drawings to represent the problem.
M.K.10	Decompose numbers less than or equal to 10 into pairs in more than one way by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ).
M.K.11	For any number from 1 to 9, find the number that makes 10 when added to the given number by using objects or drawings, and record the answer with a drawing or equation.
M.K.12	Fluently add and subtract within 5.

### Number and Operations in Base Ten

Cluster	Work with numbers 11-19 to gain foundations for place value.
M.K.13	Compose and decompose numbers from 11 to 19 into ten ones and some further ones by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones (one ten) and one, two, three, four, five, six, seven, eight, or nine ones.

### Measurement and Data

Cluster	Describe and compare measurable attributes.
M.K.14	Describe measurable attributes of objects, such as length or weight and describe several measurable attributes of a single object.
M.K.15	Directly compare two objects with a measurable attribute in common, to see which object has "more of" or "less of" the attribute, and describe the difference.



Cluster	Classify objects and count the number of objects in each category.	
M.K.16	Classify objects into given categories, count the numbers of objects in each category, and sort the categories by count. Category counts should be limited to less than or equal to 10. (e.g., Identify coins and sort them into groups of 5s or 10s.)	

# Geometry

Cluster	Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
M.K.17	Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind and next to.
M.K.18	Correctly name shapes regardless of their orientations or overall size.
M.K.19	Through the use of real-life objects, identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").
Cluster	Analyze, compare, create and compose shapes.
M.K.20	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners"), and other attributes (e.g., having sides of equal length). Instructional Note: Student focus should include real-world shapes.
M.K.21	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
M.K.22	Compose simple shapes to form larger shapes (e.g., "Can these two triangles, with full sides touching, join to make a rectangle?").



# West Virginia College- and Career-Readiness Mathematics – Grade 1

All West Virginia teachers are responsible for classroom instruction that integrates content standards and mathematical habits of mind. Students in the first grade will 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 repeating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes. Mathematical habits of mind, which should be integrated in these content areas, include: making sense of problems and persevering in solving them, reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others; modeling with mathematics; using appropriate tools strategically; attending to precision, looking for and making use of structure; and looking for and expressing regularity in repeated reasoning. Continuing the skill progressions from kindergarten, the following chart represents the mathematical understandings that will be developed in first grade:

Operations and Algebraic Thinking	Number and Operations in Base Ten
<ul> <li>Solve addition and subtraction word problems in situations of adding to, taking from, putting together, taking apart, and comparing (e.g., a taking from situation would be: "Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat?").</li> <li>Add fluently with a sum of 10 or less, and accurately subtract from a number 10 or less (e.g., 2 + 5, 7 - 5).</li> <li>Understanding the relationship between addition and subtraction.</li> </ul>	<ul> <li>Understand what the digits mean in two-digit numbers (place value).</li> <li>Use understanding of place value and properties of operations to add and subtract (e.g., 38 + 5, 29 + 20, 64 + 27, 80 - 50).</li> <li>Identify the value of pennies, nickels and dimes.</li> </ul>
Measurement and Data	Geometry
<ul><li>Measure lengths of objects by using a shorter object as a unit of length.</li><li>Tell and write time.</li></ul>	<ul> <li>Make composite shapes by joining shapes together, and dividing circles and rectangles into halves or fourths.</li> </ul>

Iell and write time.



# Numbering of Standards

The following Mathematics Standards are numbered continuously. The following ranges relate to the clusters found within Mathematics:

Operations and Algebraic Thinking				
Represent and solve problems involving addition and subtraction.	Standards 1-2			
Understand and apply properties of operations and the relationship between addition and subtraction.	Standards 3-4			
Add and subtract within 20.	Standards 5-6			
Work with addition and subtraction equations.	Standard 7-8			
Number and Operations in Base Ten				
Extend the counting sequence.	Standard 9			
Understand place value.	Standards 10-11			
Use place value understanding and properties of operations to add and subtract.	Standards 12-14			
Measurement and Data				
Measure lengths indirectly and by iterating length units.	Standards 15-16			
Tell and write time.	Standard 17			
Represent and interpret data.	Standard 18			
Geometry				
Reason with shapes and their attributes.	Standards 19-21			

# Operations and Algebraic Thinking

Cluster	Represent and solve problems involving addition and subtraction.	
M.1.1	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).	
M.1.2	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).	
Cluster	Understand and apply properties of operations and the relationship between addition and subtraction.	
M.1.3	Apply properties of operations as strategies to add and subtract (e.g., 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). Instructional Note: Students need not use formal terms for these properties.	
M.1.4	Understand subtraction as an unknown-addend problem (e.g., subtract 10 – 8 by finding the number that makes 10 when added to 8).	



Cluster	Add and subtract within 20.
M.1.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
M.1.6	<ul> <li>Add and subtract within 20, demonstrating fluency for addition and subtraction within 10 and use strategies such as <ul> <li>counting on;</li> <li>making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14);</li> <li>decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9);</li> <li>using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and</li> <li>creating equivalent but easier or known sums (e.g., adding 6 +7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).</li> </ul> </li> </ul>
Cluster	Work with addition and subtraction equations.
M.1.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false? $6 = 6$ , $7 = 8 - 1$ , $5 + 2 = 2 + 5$ , $4 + 1 = 5 + 2$ ).
M.1.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., Determine the unknown number that makes the equation true in each of the equations. $8 + ? = 11, 5 = ? - 3, 6 + 6 = ?$ ).

# Number and Operations in Base Ten

Cluster	Extend the counting sequence.	
M.1.9	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.	
Cluster	Understand place value.	
M.1.10	<ul> <li>Understand the two digits of a two-digit number represent amounts of tens and ones.</li> <li>Understand the following as special cases: <ul> <li>a. 10 can be thought of as a bundle of ten ones — called a "ten." (e.g., A group of ten pennies is equivalent to a dime.)</li> <li>b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight or nine ones.</li> <li>c. 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).</li> </ul> </li> </ul>	
M.1.11	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.	



Cluster	Use place value understanding and properties of operations to add and subtract.
M.1.12	<ul> <li>Add within 100, including <ul> <li>adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10,</li> <li>using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction.</li> </ul> </li> <li>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.</li> </ul>
M.1.13	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count and explain the reasoning used.
M.1.14	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 and Data

Cluster	Measure lengths indirectly and by iterating length units.
M.1.15	Order three objects by length and compare the lengths of two objects indirectly by using a third object.
M.1.16	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. Instructional Note: Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

Cluster	Tell and write time.	
M.1.17	Tell and write time in hours and half-hours using analog and digital clocks.	
Cluster	Represent and interpret data.	
M.1.18	Organize, represent, 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

Cluster	Reason with shapes and their attributes.	
M.1.19	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, and/or overall size); build and draw shapes to possess defining attributes.	



M.1.20	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. Instructional Note: Students do not need to learn formal names such as, "right rectangular prism."
M.1.21	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 and understand for these examples that decomposing into more equal shares creates smaller shares.

# West Virginia College- and Career-Readiness Mathematics – Grade 2

All West Virginia teachers are responsible for classroom instruction that integrates content standards and mathematical habits of mind. Students in the second grade will 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. Mathematical habits of mind, which should be integrated in these content areas, include: making sense of problems and persevering in solving them, reasoning abstractly and quantitatively; constructing viable arguments and critiquing the reasoning of others; modeling with mathematics; using appropriate tools strategically; attending to precision, looking for and making use of structure; and looking for and expressing regularity in repeated reasoning. Continuing the skill progressions from first grade, the following chart represents the mathematical understandings that will be developed in second grade:

<b>Operations and Algebraic Thinking</b>	Number and Operations in Base Ten	
<ul> <li>Solve challenging addition and subtraction word problems with one or two steps (e.g., a "one-step" problem would be: "Lucy has 23 fewer apples than Julie. Julie has 47 apples. How many apples does Lucy have?").</li> <li>Fluently add with a sum of 20 or less (e.g., 11 + 8); fluently subtract from a number 20 or less (e.g., 16 – 9); and know all sums of one-digit numbers from memory by the end of the year.</li> <li>Work with equal groups of objects to gain foundations for multiplication.</li> </ul>	<ul> <li>Understand what the digits mean in three-digit numbers (place value).</li> <li>Use an understanding of place value to add and subtract three-digit numbers (e.g., 811 – 367); add and subtract two-digit numbers fluently (e.g., 77 – 28).</li> </ul>	
Measurement and Data	Geometry	
<ul> <li>Solve addition and subtraction word problems involving length (e.g., "The pen is 2 cm longer than the pencil. If the pencil is 7 cm long, how long is the pen?").</li> <li>Tell time.</li> <li>Count money.</li> </ul>	<ul> <li>Build, draw, and analyze 2-D and 3-D shapes to develop foundations for area, volume, and geometry in later grades.</li> <li>Divide shapes into equal shares to build the foundations for fractions in later grades.</li> </ul>	



# Numbering of Standards

The following Mathematics Standards are numbered continuously. The following ranges relate to the clusters found within Mathematics:

<b>Operations and Algebraic Thinking</b>	
Represent and solve problems involving addition and subtraction.	Standard 1
Add and subtract within 20.	Standard 2
Work with equal groups of objects to gain foundations for multiplication.	Standards 3-4
Number and Operations in Base Ten	
Understand place value.	Standard 5-8
Use place value understanding and properties of operations to add and subtract.	Standards 9-13
Measurement and Data	
Measure and estimate lengths in standard units.	Standards 14-17
Relate addition and subtraction to length.	Standards 18-19
Work with time and money.	Standards 20-21
Represent and interpret data.	Standards 22-23
Geometry	
Reason with shapes and their attributes.	Standards 24-26

# Operations and Algebraic Thinking

Cluster	Represent and solve problems involving addition and subtraction.	
M.2.1	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).	
Cluster	Add and subtract within 20.	
M.2.2	Fluently add and subtract within 20 using mental strategies and by end of Grade 2, know from memory all sums of two one-digit numbers.	
Cluster	Work with equal groups of objects to gain foundations for multiplication.	
M.2.3	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.	
M.2.4	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

Cluster	Understand place value.
M.2.5	<ul> <li>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).</li> <li>Understand the following as special cases: <ul> <li>a. 100 can be thought of as a bundle of ten tens – called a "hundred."</li> <li>b. 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.</li> </ul> </li> </ul>
M.2.6	Count within 1000 and skip-count by 5s, 10s and 100s.
M.2.7	Read and write numbers to 1000 using base-ten numerals, number names and expanded form.
M.2.8	Compare two three-digit numbers based on meanings of the hundreds, tens and ones digits, using >, = and < symbols to record the results of comparisons.
Cluster	Use place value understanding and properties of operations to add and subtract.
M.2.9	Fluently add and subtract within 100 using strategies based on place value, properties of operations and/or the relationship between addition and subtraction.
M.2.10	Add up to four two-digit numbers using strategies based on place value and properties of operations.
M.2.11	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.2.12	Mentally add 10 or 100 to a given number 100-900 and mentally subtract 10 or 100 from a given number 100-900.
M.2.13	Explain why addition and subtraction strategies work, using place value and the properties of operations. Instructional Note: Explanations may be supported by drawing or objects.

### Measurement and Data

Cluster	Measure and estimate lengths in standard units.
M.2.14	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
M.2.15	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.2.16	Estimate lengths using units of inches, feet, centimeters, and meters.
M.2.17	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.



Cluster	Relate addition and subtraction to length.
M.2.18	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.2.19	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.

Cluster	Work with time and money.
M.2.20	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
M.2.21	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately (e.g., If you have 2 dimes and 3 pennies, how many cents do you have?).

Cluster	Represent and interpret data.
M.2.22	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.2.23	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

Cluster	Reason with shapes and their attributes
M.2.24	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.2.25	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
M.2.26	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., describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.



# Appendix A Standards vs. Curriculum

# **COLLEGE- & CAREER-READINESS**

# STANDARDS

# CURRICULUM

# What's the Difference?

**Standards** are what we want students to know, understand and be able to do; **Standards** represent goals.

The **Curriculum** is an intentional learning plan to ensure students achieve the goals of the standards; the **Curriculum** represents the learning experience.

## Standards and Curriculum

A STANDARD is a goal. The CURRICULUM is a means to achieve the goal.

#### Example 1 • 3rd Grade Mathematics Goal

#### Standard: M.3.8

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.

#### Example 2 • 6th Grade English Language Arts Goal

#### Standard: ELA.6.18

By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grade 6-8 text complexity range proficiently, with scaffolding as needed at the high end of the range.

#### **Curriculum:**

Teacher locates instructional materials, plans and facilitates learning activities and assesses the students' mastery of the standard.

# Who is Responsible?

West Virginia Board of Education West Virginia Department of Education County boards of education, administrators and teachers







# Appendix B Sample Introductory Parent Letter (Grade K)

(Insert Date)

Dear Parent or Guardian,

To help all our students reach their potential we will be using the new learning standards adopted by the West Virginia Board of Education. These standards were designed to meet the needs of all West Virginia students. They set high expectations for our students so they will be ready to compete with students across the state, the nation, and around the world.

I look forward to being your child's kindergarten teacher! Kindergarten is such an exciting year of physical, social, and academic development. I am proud to play a part in educating your child. The West Virginia College- and Career-Readiness Standards for kindergarten set the stage for future learning, and prepare your child for success.

What you can expect of your child's experience in kindergarten this year:

- An inviting classroom where your child can learn through active exploration and experimentation
- Lots of conversations throughout the day with other children and adults
- An active classroom where your child will be busy learning through play
- Discovery of the connections between letters and sounds; numbers and counting
- A schedule that allows large blocks of time for your child to learn about topics of interest
- A teacher and assistant(s) who interact with your child to support and extend the learning

Your child is constantly learning, at home, at play, and at school. Please understand that teaching occurs all school year long, so your child needs to have regular attendance. Every day matters.

I recognize that you are your child's first teacher, and it is an honor to support your desire for your child to achieve. As I welcome your child to my classroom and share what to expect in kindergarten for the upcoming school year, please remember if you have any questions or concerns, feel free to contact me using the information below.

Sincerely,

# Sample Introductory Parent Letter (Grade 1)

(Insert Date)

Dear Parent or Guardian,

This year, the West Virginia Board of Education adopted new learning standards to meet the needs of all West Virginia students. Our rigorous standards set high expectations for West Virginia students so they will be able to compete with other students across the state, the nation, and the world. The West Virginia College- and Career-Readiness Standards for first grade support previous learning, set the stage for future learning, and prepare your child for success.

I look forward to being your child's first grade teacher! First grade is such an exciting year of continued physical, social, and academic development and I am proud to play a part in educating your child.

What you can expect of your child's experience in first grade this year:

- An inviting classroom where your child can learn through exploration and experimentation
- Opportunities to share ideas and conversations throughout the day with children and adults
- An active classroom where your child will have frequent opportunities to participate in physical activity inside and outside
- Discovery of how to match letters to sounds to figure out unfamiliar words when reading and writing
- Using knowledge of numbers to determine value, measure, and solve problems
- A schedule that allows large blocks of time for your child to be immersed in developmentally appropriate learning
- A teacher who interacts with your child to support and extend the learning

Good attendance habits are developed during these early years, so it is important to make sure your child continues to be at school regularly. Every day matters.

I recognize that you are committed to your child's success, and it is an honor to partner with you in helping your child to achieve. As I welcome your child to my classroom and share what to expect in first grade for the upcoming school year, please remember if you have any questions or concerns, feel free to contact me using the information below.

Sincerely,



# Sample Introductory Parent Letter (Grade 2)

(Insert Date)

Dear Parent or Guardian,

This year, the West Virginia Board of Education adopted new learning standards to meet the needs of all West Virginia students. Our rigorous standards set high expectations for West Virginia students so they will be able to compete with other students across the state, the nation, and the world. The West Virginia College- and Career-Readiness Standards for second grade support previous learning, set the stage for future learning, and prepare your child for success.

I look forward to being your child's second grade teacher! Second grade is an exciting year of social interaction, physical development, and academic engagement. I am delighted to play a part in educating your child.

What you can expect of your child's experience in second grade this year:

- An inviting classroom where your child can feel safe and accepted
- Opportunities to process new ideas throughout the day in a collaborative manner
- An active classroom with frequent opportunities to participate in physical activity
- Expanding vocabulary, reading fluently, and writing
- Use of numbers to solve increasingly challenging math problems, learning to tell time, and count money
- A schedule that allows experimentation and exploration on a variety of science and social studies concepts
- A teacher who interacts with your child to support and extend the learning

Good attendance is critical for your child's success, so it is important to make sure your child continues to be at school regularly. Every day matters.

I recognize that you are committed to your child's success, and it is an honor to partner with you in helping your child to achieve. As I welcome your child to my classroom and share what to expect in second grade for the upcoming school year, please remember if you have any questions or concerns, feel free to contact me using the information below.

Sincerely,

# Appendix C English Language Arts Standards Progressions

### Skill Progressions in West Virginia College- and Career-Readiness Standards for English Language Arts

The following pages contain the skill progressions found in the West Virginia College- and Career Readiness Standards for English language arts (ELA). In ELA, each grade level consists of 41 standards; these standards have been organized in K-12 order to show the advancing rigor and complexity of the expectations for what students should know, understand, and be able to do.

This document is intended to be a resource to foster and support discussion among teachers or how best to personalize and differentiate instruction for their students. The progression of skills toward college- and career-readiness that are outlined here can be used to scaffold instruction, assist with remediation, and to develop instructional plans that meet the specific needs of each student.

Early L	earning Foundations-Fluency
K.I	Read emergent-reader texts with purpose and understanding.
1.1	<ul> <li>Read with sufficient accuracy and fluency to support comprehension.</li> <li>Read on-level text with purpose and understanding.</li> <li>Read on-level text orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul>
2.1	<ul> <li>Read with sufficient accuracy and fluency to support comprehension.</li> <li>Read on-level text with purpose and understanding.</li> <li>Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul>
3.1	<ul> <li>Read with sufficient accuracy and fluency to support comprehension.</li> <li>Read on-level text with purpose and understanding.</li> <li>Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.</li> <li>Use context to confirm or self-correct word recognition and understanding, rereading as necessary.</li> </ul>
Early L	earning Foundations-Phonics and Word Recognition
K.II	<ul> <li>Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>Demonstrate basic knowledge of one-to-one letter-sound correspondences by producing the primary or many of the most frequent sounds for each consonant.</li> <li>Associate common spellings (graphemes) with the five major short vowel sounds.</li> <li>Read common high-frequency words by sight (e.g., <i>the, of, to, you, she, my, is, are, do, or does</i>).</li> <li>Distinguish between similarly spelled words by identifying the sounds of the letters that differ.</li> </ul>



1.	<ul> <li>Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>Know the spelling-sound correspondences for common consonant digraphs.</li> <li>Decode regularly spelled one-syllable words.</li> <li>Know final -e and common vowel team conventions for representing long vowel sounds.</li> <li>Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word.</li> <li>Decode two-syllable words following basic patterns by breaking the words into syllables.</li> <li>Read words with inflectional endings.</li> <li>Recognize and read grade-appropriate irregularly spelled words.</li> </ul>
2.11	<ul> <li>Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>Distinguish long and short vowels when reading regularly spelled one-syllable words.</li> <li>Know spelling-sound correspondences for additional common vowel teams.</li> <li>Decode regularly spelled two-syllable words with long vowels.</li> <li>Decode words with common prefixes and suffixes.</li> <li>Identify words with inconsistent but common spelling-sound correspondences.</li> <li>Recognize and read grade-appropriate irregularly spelled words.</li> </ul>
3.11	<ul> <li>Know and apply grade-level phonics and word analysis skills in decoding words.</li> <li>Identify and know the meaning of the most common prefixes and derivational suffixes.</li> <li>Decode words with common Latin suffixes.</li> <li>Decode multi-syllable words.</li> <li>Read grade-appropriate irregularly spelled words.</li> </ul>
Early Le	earning Foundations-Handwriting
K.III	Print upper- and lowercase letters.
1.111	Print all upper- and lowercase letters using proper letter formation and directionality.
2.111	Create readable documents with legible print or cursive as developmentally appropriate.
3.111	Write legibly in cursive or joined italics, allowing margins and correct spacing between letters in a word and words in a sentence.
Early Le	earning Foundations-Phonological Awareness
K.IV	<ul> <li>Demonstrate understanding of spoken words, syllables, and sounds (phonemes).</li> <li>Recognize and produce rhyming words.</li> <li>Count, pronounce, blend, and segment syllables in spoken words.</li> <li>Blend and segment onsets and rimes of single-syllable spoken words.</li> <li>Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme words (i.e., consonant-vowel-consonant, hereinafter CVC). This does not include CVCs ending with /l/, /r/ or /x/.</li> <li>Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words.</li> </ul>
1.IV	<ul> <li>Demonstrate understanding of spoken words, syllables, and sounds (phonemes).</li> <li>Distinguish long from short vowel sounds in spoken single-syllable words.</li> <li>Orally produce single-syllable words by blending sounds (phonemes), including consonant blends.</li> <li>Isolate and pronounce initial, medial vowel, and final sounds (phonemes) in spoken single-syllable words.</li> <li>Segment spoken single-syllable words into their complete sequence of individual sounds (phonemes).</li> </ul>
Standar	
K.1	With prompting and support, ask and answer questions about key details in a literary text.
1.1	Ask and answer questions about key details in a literary text.
2.1	Ask and answer key ideas such questions as <i>who, what, where, when, why</i> , and <i>how</i> to demonstrate understanding of key details in literary text.



3.1	Ask and answer questions to demonstrate understanding of a literary text, referring explicitly to the text as the basis for the answers.
Standa	rd 2
K.2	With prompting and support, retell familiar stories, including key details in literary texts.
1.2	Retell stories, including key details, and demonstrate understanding of their central message or lesson in literary texts.
2.2	Recount stories, including fables and folktales from diverse cultures and determine their central message, lesson, or moral in literary text.
3.2	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 literary text.
Standa	rd 3
K.3	With prompting and support, identify characters, settings, and major events in a literary text.
1.3	Describe characters, settings, and major events in a story, using key details in literary texts.
2.3	Describe how characters in a story respond to major events and challenges in literary text.
3.3	Describe characters in a literary story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.
Standa	rd 4
K.4	With prompting and support, ask and answer questions about key details in an informational text.
1.4	Ask and answer questions about key details in an informational text.
2.4	Ask and answer such questions as <i>who, what, where, when, why,</i> and <i>how</i> to demonstrate understanding of key details in informational text.
3.4	Ask and answer questions to demonstrate understanding of an informational text, referring explicitly to the text as the basis for the answers.
Standa	rd 5
K.5	With prompting and support, identify the main topic and retell key details of an informational text.
1.5	Identify the main topic and retell key details of an informational text.
2.5	Identify the main topic of a multi-paragraph text as well as the focus of specific paragraphs within informational text.
3.5	Determine the main idea of an informational text; recount the key details and explain how they support the main idea.
Standa	rd 6
K.6	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in an informational text.
1.6	Describe the connection between two individuals, events, ideas, or pieces of information in an informational text.
2.6	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in an informational text.
3.6	Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in an informational text, using language that pertains to time, sequence, and cause/effect.
Standa	rd 7
K.7	Ask and answer questions about unknown words in a literary text.
1.7	In literary texts, identify words and phrases in stories or poems that suggest feelings or appeal to the senses.



2.7	Describe how words and phrases (e.g., regular beats, alliteration, rhymes, and repeated lines) in literary text supply rhythm and meaning in a story, poem, or song.
3.7	Determine the meaning of words and phrases as they are used in a literary text, distinguishing literal from nonliteral language.
Standa	
K.8	Recognize common types of texts (e.g., storybooks or poems).
1.8	Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of literary text types.
2.8	Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action in literary text.
3.8	Refer to parts of stories, dramas, and poems when writing or speaking about a literary text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.
Standa	rd 9
K.9	With prompting and support, name the author and illustrator of a story and define the role of each in telling the story in a literary text.
1.9	Identify who is telling the story at various points in a literary text.
2.9	Acknowledge differences in the points of view of characters, including speaking in a different voice for each character when reading dialogue aloud from literary text.
3.9	Distinguish one's point of view from that of the narrator or those of the characters in a literary text.
Standa	rd 10
K.10	With prompting and support, ask and answer questions about key details from an informational text.
1.10	Ask and answer questions to help determine or clarify the meaning of words and phrases in an informational text.
2.10	Determine the meaning of words and phrases in informational text relevant to a <i>grade 2 topic or subject area</i> .
3.10	Determine the meaning of general academic and domain-specific words and phrases in an informational text relevant to a <i>grade 3 topic or subject area</i> .
Standa	rd 11
K.11	Identify the front cover, back cover, and title page of a book.
1.11	Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, and/or icons) to locate key facts or information in an informational text.
2.11	Know and use various informational text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, and icons) to locate key facts or information in a text efficiently.
3.11	Use informational text features and search tools (e.g., key words, sidebars, and hyperlinks) to locate information relevant to a given topic efficiently
Standa	rd 12
K.12	Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.
1.12	Distinguish between information provided by pictures or other illustrations and information provided by the words in an informational text.
2.12	Identify the main purpose of informational text, including what the author wants to answer, explain, or describe
3.12	Distinguish one's own point of view from that of the author of an informational text.



Standa	rd 13
K.13	With prompting and support, describe the relationship between illustrations and the literary story in which they appear (e.g., what moment in a story an illustration depicts).
1.13	Use illustrations and details in a story to describe its characters, setting, or events in literary texts.
2.13	Use information gained from the illustrations and words in a print or digital literary text to demonstrate understanding of its characters, setting, or plot.
3.13	Explain how specific aspects of a literary text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood or emphasize aspects of a character or setting).
Standa	rd 14
K.14	With prompting and support, compare and contrast the adventures and experiences of characters in familiar literary stories.
1.14	Compare and contrast the adventures and experiences of characters in stories in literary texts.
2.14	Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures in a literary text.
3.14	Compare and contrast the themes, settings, and plots of literary stories written by the same author about the same or similar characters (e.g., in books from a series).
Standa	rd 15
K.15	With prompting and support, describe the relationship between illustrations and the informational text in which they appear (e.g., what person, place, thing, or idea in the text at illustration depicts).
1.15	Use the illustrations and details in a text to describe its key ideas in informational texts.
2.15	Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify an informational text.
3.15	Use information gained from illustrations (e.g., maps or photographs) and the words in an informational text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).
Standa	rd 16
K.16	With prompting and support, identify the reasons an author gives to support points in a literary or informational text.
1.16	Identify the reasons an author gives to support points in an informational text.
2.16	Describe how reasons support specific points the author makes in an informational text.
3.16	Describe the logical connection between particular sentences and paragraphs in an informational text (e.g., comparison, cause/effect, or first/second/third in a sequence).
Standa	rd 17
K.17	With prompting and support, identify basic similarities in and differences between two literary or informational texts on the same topic (e.g., in illustrations, descriptions, or procedures).
1.17	Identify basic similarities in and differences between two informational texts on the same topic (e.g., in illustrations, descriptions, or procedures).
2.17	Compare and contrast the most important points presented by two informational texts on the same topic.
3.17	Compare and contrast the most important points and key details presented in two informational texts on the same topic.
	rd 18



1.18	With prompting and support, read prose and poetry of appropriate complexity for grade 1 in literary texts.
2.18	By the end of the year, read and comprehend literature, including stories and poetry, in the grades 2–3 text complexity range proficiently, with scaffolding as needed at the high end of the range.
3.18	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 range independently and proficiently.
Standa	rd 19
K.19	Actively engage in group reading activities of informational texts with purpose and understanding.
1.19	With prompting and support, read informational texts appropriately complex for grade 1.
2.19	By the end of year, read and comprehend informational texts, including social studies, science, and technical texts, in the grades 2–3 text complexity range proficiently, with scaffolding as needed at the high end of the range.
3.19	By the end of the year, read and comprehend informational texts, including social studies, science, and technical texts, at the high end of the grades 2–3 text complexity range independently and proficiently.
Standa	rd 20
K.20	Use a combination of drawing, dictating, and writing to compose opinion pieces in which the topic or the name of the text being discussed is included; state an opinion or preference about the topic or book (e.g., " <i>My favorite book is</i> ").
1.20	Write opinion pieces by introducing the topic or name of the text being discussed, stating an opinion, supplying a reason for the opinion, and providing some sense of closure.
2.20	Write opinion pieces by introducing the topic or text being discussed, stating an opinion, supplying reasons that support the opinion, using linking words (e.g., <i>because, and</i> , or <i>also</i> ) to connect opinion and reasons, and providing a concluding statement or section.
3.20	<ul> <li>Write opinion pieces on topics or texts, supporting a point of view with reasons.</li> <li>Introduce the topic or text being discussed, state an opinion, and create an organizational structure that lists reasons.</li> <li>Provide reasons that support the opinion.</li> <li>Use linking words and phrases (e.g., <i>because, therefore, since,</i> or <i>for example</i>) to connect opinion and reasons.</li> <li>Provide a concluding statement or section.</li> </ul>
Standa	
K.21	Use a combination of drawing, dictating, and writing to compose informative/ explanatory texts; name and supply some information about the topic.
1.21	Write informative/explanatory texts by naming a topic, supplying some facts about the topic, and providing some sense of closure.
2.21	Write informative/explanatory texts by introducing a topic, using facts and definitions to develop points, and providing a concluding statement or section.
3.21	<ul> <li>Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</li> <li>Introduce a topic and group related information together; include illustrations when useful to aid comprehension.</li> <li>Develop the topic with facts, definitions, and details.</li> <li>Use linking words and phrases (e.g., <i>also, another, and, more</i>, or <i>but</i>) to connect ideas within categories of information.</li> <li>Provide a concluding statement or section.</li> </ul>



Standa	
K.22	Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.
1.22	Write narratives to recount two or more appropriately sequenced events, include some details regarding what happened, use transitional words to signal event order, and provide some sense of closure.
2.22	Write narratives to recount a well-elaborated event or short sequence of events, including details to describe actions, thoughts, and feelings, and using transitional words to signal event order and provide a sense of closure.
3.22	<ul> <li>Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</li> <li>Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.</li> <li>Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.</li> <li>Use transitional words and phrases to signal event order.</li> <li>Provide a sense of closure.</li> </ul>
Standa	rd 23
K.23	(Begins in grade 3.)
1.23	(Begins in Grade 3.)
2.23	(Begins in grade 3.)
3.23	With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in Text Types and Purposes.)
Standa	
K.24	With guidance and support from adults and collaborative discussions, add details to strengthen writing as needed.
1.24	With guidance and support from adults and collaborative discussions, focus on a topic and add details to strengthen writing as needed.
2.24	With guidance and support from adults and collaborative discussions, focus on a topic and strengthen writing as needed by revising and editing.
3.24	With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards up to and including grade 3).
Standa	rd 25
K.25	With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including collaboration with peers.
1.25	With guidance and support from adults, use a variety of digital tools to produce and publish writing, including collaboration with peers.
2.25	With guidance and support from adults, use a variety of digital tools to produce and publish writing, including collaboration with peers.
3.25	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.
Standa	rd 26
K.26	Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).



1.26	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).
2.26	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).
3.26	Conduct short research projects that build knowledge about a topic.
Standa	rd 27
K.27	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
1.27	With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
2.27	Recall information from experiences or gather information from provided sources to answer a question.
3.27	Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.
Standa	rd 28
K.28	(Begins in grade 4.)
1.28	(Begins in grade 4.)
2.28	(Begins in grade 4.)
3.28	(Begins in grade 4.)
Standa	rd 29
K.29	(Begins in grade 3.)
1.29	(Begins in grade 3.)
2.29	(Begins in grade 3.)
3.29	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.
Standa	rd 30
K.30	<ul> <li>Participate in collaborative conversations with diverse partners about <i>kindergarten topics</i> and texts with peers and adults in small and larger groups.</li> <li>Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).</li> <li>Continue a conversation through multiple exchanges.</li> </ul>
1.30	<ul> <li>Participate in collaborative conversations with diverse partners about <i>grade 1 topics and texts</i> with peers and adults in small and larger groups.</li> <li>Follow agreed-upon rules for discussions (e.g., listening to others with care and speaking one at a time about the topics and texts under discussion).</li> <li>Build on others' talk in conversations by responding to the comments of others through multiple exchanges.</li> <li>Ask questions to clear up any confusion about the topics and texts under discussion.</li> </ul>
2.30	<ul> <li>Participate in collaborative conversations with diverse partners about <i>grade 2 topics and texts</i> with peers and adults in small and larger groups.</li> <li>Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, and speaking one at a time about the topics and texts under discussion).</li> <li>Build on others' talk in conversations by linking comments to the remarks of others.</li> <li>Ask for clarification and further explanation as needed about the topics and texts under discussion.</li> </ul>



3.30	<ul> <li>Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 3 topics and texts</i>, building on others' ideas and expressing ideas clearly.</li> <li>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</li> </ul>
	discussion.
	<ul> <li>Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, and speaking one at a time about the topics and texts under discussion).</li> </ul>
	<ul> <li>Ask questions to check understanding of information presented, stay on topic, and link comments to the remarks of others.</li> <li>Explain ideas and understanding in light of the discussion.</li> </ul>
Standa	
K.31	Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
1.31	Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
2.31	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
3.31	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.
Standa	rd 32
K.32	Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
1.32	Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
2.32	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.
3.32	Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
Standa	rd 33
K.33	Describe familiar people, places, things, and events and, with prompting and support, provide additional details.
1.33	Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
2.33	Tell a story or recount an experience with appropriate facts and relevant, descriptive details; speaking audibly and coherently.
3.33	Report on a topic or text; tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly and coherently.
Standa	rd 34
K.34	Add drawings or other visual displays to descriptions as desired to provide additional details.
1.34	Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
2.34	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.



3.34	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.
Standa	rd 35
K.35	Speak audibly and express thoughts, feelings, and ideas clearly.
1.35	Produce complete sentences when appropriate to task and situation.
2.35	Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
3.35	Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
Standa	rd 36
K.36	<ul> <li>Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.</li> <li>Use frequently occurring nouns and verbs.</li> <li>Form regular plural nouns orally by adding /s/ or /es/ (e.g., <i>dog and dogs; wish and wishes</i>).</li> <li>Understand and use question words (interrogatives) (e.g., <i>who, what, where, when, why, and how</i>).</li> <li>Use the most frequently occurring prepositions (e.g., <i>to, from, in, out, on, off, for, of, by, and with</i>).</li> <li>Produce and expand complete sentences in shared language activities.</li> </ul>
1.36	Demonstrate command of the conventions of Standard English grammar and usage when
2.26	<ul> <li>writing or speaking.</li> <li>Use common, proper, and possessive nouns.</li> <li>Use singular and plural nouns with matching verbs in basic sentences (e.g., <i>he hops; we hop</i>).</li> <li>Use personal, possessive and indefinite pronouns (e.g., <i>I, me, and my; they, them, and their; anyone and everything</i>).</li> <li>Use verbs to convey a sense of past, present, and future (e.g., <i>yesterday I walked home; today I walk home; tomorrow I will walk home</i>).</li> <li>Use frequently occurring adjectives.</li> <li>Use determiners (e.g., <i>articles</i> and <i>demonstratives</i>).</li> <li>Use frequently occurring prepositions (e.g., <i>during, beyond</i>, or <i>toward</i>).</li> <li>Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.</li> </ul>
2.36	<ul> <li>Demonstrate command of the conventions of Standard English grammar and usage when writing or speaking.</li> <li>Use collective nouns (e.g., <i>group</i>).</li> <li>Form and use frequently occurring irregular plural nouns (e.g., <i>feet, children, teeth, mice,</i> and <i>fish</i>).</li> <li>Use reflexive pronouns (e.g., <i>myself</i> or <i>ourselves</i>).</li> <li>Form and use the past tense of frequently occurring irregular verbs (e.g., <i>sat, hid,</i> or <i>told</i>).</li> <li>Use adjectives and adverbs and choose between them depending on what is to be modified.</li> <li>Produce, expand, and rearrange complete simple and compound sentences (e.g., <i>the boy watched the movies; the little boy watched the movie; the action movie was watched by the little boy</i>).</li> </ul>



3.36	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
	<ul><li>their functions in particular sentences.</li><li>Form and use regular and irregular plural nouns.</li></ul>
	<ul> <li>Use abstract nouns (e.g., <i>childhood</i>).</li> </ul>
	<ul> <li>Form and use regular and irregular verbs.</li> </ul>
	• Form and use the simple (e.g., <i>I walked; I walk; I will walk</i> ) 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.
	<ul> <li>Use coordinating and subordinating conjunctions.</li> </ul>
	Produce simple, compound, and complex sentences.
Standa	rd 37
K.37	Demonstrate command of the conventions of Standard English capitalization, punctuation,
	and spelling when writing.
	<ul> <li>Capitalize the first word in a sentence and the pronoun I.</li> <li>Recognize and name end punctuation.</li> </ul>
	<ul> <li>Write a letter or letters for most consonant and short-vowel sounds (phonemes).</li> </ul>
	• Spell simple words phonetically, drawing on knowledge of sound-letter relationships.
1.37	Demonstrate command of the conventions of Standard English capitalization, punctuation,
	and spelling when writing.
	<ul><li>Capitalize dates and names of people.</li><li>Use end punctuation for sentences.</li></ul>
	<ul> <li>Use commas in dates and to separate single words in a series.</li> </ul>
	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.
2.37	Demonstrate command of the conventions of Standard English capitalization, punctuation, and spelling when writing.
	<ul> <li>Capitalize holidays, product names, and geographic names.</li> </ul>
	<ul> <li>Use commas in greetings and closings of letters.</li> </ul>
	Use an apostrophe to form contractions and frequently occurring possessives.
	Generalize learned spelling patterns when writing words (e.g., cage / badge;
	<ul> <li>boy / boil).</li> <li>Consult reference materials, including beginning dictionaries, as needed to check and</li> </ul>
	correct spellings.
3.37	Demonstrate command of the conventions of Standard English capitalization, punctuation,
	and spelling when writing.
	Capitalize appropriate words in titles.
	<ul><li>Use commas in addresses.</li><li>Use commas and quotation marks in dialogue.</li></ul>
	<ul> <li>Form and use possessives.</li> </ul>
	Use conventional spelling for high-frequency and other studied words and for adding
	suffixes to base words (e.g., <i>sitting, smiled, cries,</i> or <i>happiness</i> ).
	• Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, and meaningful word parts) in writing words.
	<ul> <li>Consult reference materials, including beginning dictionaries, as needed to check and</li> </ul>
	correct spellings.
Standa	rd 38
K.38	(Begins in grade 2.)
1.38	(Begins in grade 2.)



2.38	Use knowledge of language and its conventions when writing, speaking, reading, or listening.				
	Compare formal and informal uses of English.				
3.38	<ul> <li>Use knowledge of language and its conventions when writing, speaking, reading, or listening.</li> <li>Choose words and phrases for effect.</li> <li>Recognize and observe differences between the conventions of spoken and written Standard English.</li> </ul>				
Standar	d 39				
K.39	<ul> <li>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>kindergarten reading and content</i>.</li> <li>Identify new meanings for familiar words and apply them accurately (e.g., knowing <i>duck</i> is a bird and learning the verb <i>to duck</i>).</li> <li>Introduce the most frequently occurring inflections and affixes (e.g., <i>-ed, -s, re-, un-, pre-, -ful,</i> and <i>-less</i>) as a clue to the meaning of an unknown word.</li> </ul>				
1.39	<ul> <li>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.</li> <li>Use sentence-level context as a clue to the meaning of a word or phrase.</li> <li>Use frequently occurring affixes as a clue to the meaning of a word.</li> <li>Identify frequently occurring root words (e.g., <i>look</i>) and their inflectional forms (e.g., <i>looks, looked,</i> and <i>looking</i>).</li> </ul>				
2.39	<ul> <li>Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grade 2 reading and content</i>, choosing flexibly from an array of strategies.</li> <li>Use sentence-level context as a clue to the meaning of a word or phrase.</li> <li>Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., <i>happy/unhappy</i>, and <i>tell/retell</i>).</li> <li>Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., <i>addition</i> and <i>additional</i>).</li> <li>Use knowledge of the meaning of individual words to predict the meaning of compound words (e.g., <i>birdhouse, lighthouse,</i> and <i>housefly; bookshelf, notebook,</i> and <i>bookmark</i>).</li> <li>Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.</li> </ul>				
3.39	<ul> <li>Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on <i>grade 3 reading and content</i>, choosing flexibly from a range of strategies.</li> <li>Use sentence-level context as a clue to the meaning of a word or phrase.</li> <li>Determine the meaning of the new word formed when a known affix is added to a known word (e.g., <i>agreeable/disagreeable, comfortable/uncomfortable, care/careless,</i> and <i>heat/preheat</i>).</li> <li>Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., <i>company</i> and <i>companion</i>).</li> <li>Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.</li> </ul>				



Standa	rd 40	
K.40	<ul> <li>With guidance and support from adults, explore word relationships and nuances in word meanings.</li> <li>Sort common objects into categories (e.g., shapes or foods) to gain a sense of the concepts the categories represent.</li> <li>Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their opposites (antonyms).</li> <li>Identify real-life connections between words and their use (e.g., note places at school that are <i>colorful</i>).</li> <li>Distinguish shades of meaning among verbs describing the same general action (e.g., <i>walk, march, strut,</i> and <i>prance</i>) by acting out the meanings.</li> </ul>	
1.40	<ul> <li>With guidance and support from adults, demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</li> <li>Sort words into categories (e.g., <i>colors</i> and <i>clothing</i>) to gain a sense of the concepts the categories represent.</li> <li>Define words by category and by one or more key attributes (e.g., <i>a duck is a bird that swims; a tiger is a large cat with stripes</i>).</li> <li>Identify real-life connections between words and their use (e.g., <i>note places at home that are cozy</i>).</li> <li>Distinguish shades of meaning among verbs differing in manner (e.g., <i>look, peek, glance, stare, glare, and scowl</i>) and adjectives differing in intensity (e.g., <i>large</i> and <i>gigantic</i>) by defining or choosing them or by acting out the meanings.</li> </ul>	
2.40	<ul> <li>Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</li> <li>Identify real-life connections between words and their use (e.g., describe foods that are <i>spicy</i> or <i>juicy</i>).</li> <li>Distinguish shades of meaning among closely related verbs (e.g., <i>toss, throw,</i> and <i>hurl</i>) and closely related adjectives (e.g., <i>thin, slender, skinny,</i> and <i>scrawny</i>).</li> </ul>	
3.40	<ul> <li>Demonstrate understanding of word relationships and nuances in word meanings.</li> <li>Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., <i>take steps</i>).</li> <li>Identify real-life connections between words and their use (e.g., describe people who are <i>friendly</i> or <i>helpful</i>).</li> <li>Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., <i>knew, believed, suspected, heard,</i> and <i>wondered</i>).</li> </ul>	
Standa	rd 41	
K.41	Use words and phrases acquired through conversations, reading, being read to, and responding to texts.	
1.41	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., <i>because</i> ).	
2.41	Use words and phrases acquired through conversations, reading, being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., <i>when other kids are happy, that makes me happy</i> ).	
3.41	Acquire and accurately use grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and transitional relationships (e.g., <i>after dinner that night, we went looking for them</i> ).	



# Appendix D Mathematics Standards Progressions

### Building Numeracy through Mathematical Progressions Kindergarten-Grade 2

"Numeracy" is a term that refers to all the mathematics that elementary students learn including number, operations, and geometry and measurement concepts. This document was created by the West Virginia Department of Education Office of Early Learning primarily as a tool to help teachers and parents understand the role of progressions in developing numeracy skills in elementary students. This knowledge helps teachers and parents select and use activities that build numeracy skills in students. Building these skills is foundational for children as they progress through their study of mathematics.

The West Virginia College- and Career-Readiness Standards (WVCCRS) call for a greater focus in mathematics. Rather than racing to cover topics in a mile-wide, inch-deep curriculum, the WVCCRS require us to significantly narrow and deepen the way time and energy are spent in the math classroom. We focus on the major work of each grade so that students can gain strong foundations: solid conceptual understanding, a high degree of procedural skill and fluency, and the ability to apply the math they know to solve problems inside and outside the math classroom.

**Counting and Cardinality Kindergarten** Know number names and the count sequence. 1. Count to 100 by ones and by tens. 2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1). 3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects). Count to tell the number of objects. Understand the relationship between numbers and quantities; connect counting to cardinality. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted. С Understand that each successive number name refers to a quantity that is one larger. Count to answer questions (e.g., "How many?") about as many as 20 things arranged in a 2. line, a rectangular array, a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects. **Compare numbers.** Identify whether the number of objects in one group is greater than, less than, or equal to the 1. number of objects in another group (e.g., by using matching and counting strategies). 2 Compare two numbers between 1 and 10 presented as written numerals. Grade 1 Grade 2

This appendix is designed to facilitate discussions related to mathematics progressions and to indicate the body of concepts elementary children should understand.



<b>Operations and</b>	d Algebraic Thinking
Kindergarten	<ul> <li>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</li> <li>1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), and acting out situations, verbal explanations, expressions, or equations.</li> <li>2. Solve addition and subtraction word problems and add and subtract within 10 by using objects or drawings to represent the problem.</li> <li>3. Decompose numbers less than or equal to 10 into pairs in more than one way by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).</li> <li>4. For any number from 1 to 9, find the number that makes 10 when added to the given number by using objects or drawings, and record the answer with a drawing or equation.</li> <li>5. Fluently add and subtract within 5.</li> </ul>
Grade 1	Represent and solve problems involving addition and subtraction.
	<ol> <li>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).</li> <li>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).</li> </ol>
	Understand and apply properties of operations and the relationship between
	<ol> <li>Addition and subtraction.</li> <li>Apply properties of operations as strategies to add and subtract (e.g., 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). Instructional Note: Students need not use formal terms for these properties.</li> <li>Understand subtraction as an unknown-addend problem (e.g., subtract 10 - 8 by finding the number that makes 10 when added to 8).</li> </ol>
	<ul> <li>Add and subtract within 20.</li> <li>1. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</li> <li>2. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10 and use strategies such as <ul> <li>counting on;</li> <li>making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14);</li> </ul> </li> </ul>
	<ul> <li>decomposing a number leading to a ten (e.g., 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9);</li> <li>using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 - 8 = 4); and</li> <li>creating equivalent but easier or known sums (e.g., adding 6 +7 by creating the known</li> </ul>
	equivalent $6 + 6 + 1 = 12 + 1 = 13$ ).
	<ul> <li>Work with addition and subtraction equations.</li> <li>1. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false (e.g., Which of the following equations are true and which are false? 6 = 6, 7 = 8 - 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2).</li> </ul>
	<ol> <li>Determine the unknown whole number in an addition or subtraction equation relating three whole numbers (e.g., Determine the unknown number that makes the equation true in each of the equations. 8 + ? = 11, 5 = ? - 3, 6 + 6 = ?).</li> </ol>
Grade 2	<ul> <li>Represent and solve problems involving addition and subtraction.</li> <li>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).</li> <li>Add and subtract within 20.</li> </ul>
	<ul> <li>Fluently add and subtract within 20 using mental strategies and by end of Grade 2, know from memory all sums of two one-digit numbers.</li> <li>Work with equal groups of objects to gain foundations for multiplication.</li> <li>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.</li> <li>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.</li> </ul>



Numbers and C	Operations in Base Ten			
Kindergarten				
	Compose and decompose numbers from 11 to 19 into ten ones and some further ones by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g.,			
	18 = 10 + 8); understand that these numbers are composed of ten ones (one ten) and one, two, three, four, five, six, seven, eight, or nine ones.			
Grade 1	Extend the counting sequence.			
	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.			
	<ol> <li>Understand place value.</li> <li>Understand the two digits of a two-digit number represent amounts of tens and ones.</li> </ol>			
	Understand the following as special cases:			
	<ul> <li>a. 10 can be thought of as a bundle of ten ones — called a "ten." (e.g., A group of ten pennies is equivalent to a dime.)</li> </ul>			
	b. 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).			
	<ol> <li>Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols &gt;, =, and &lt;.</li> </ol>			
	Use place value understanding and properties of operations to add and subtract.			
	1. Add within 100, including			
	<ul> <li>adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10,</li> </ul>			
	<ul> <li>using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction.</li> </ul>			
	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.			
	<ol> <li>Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count and explain the reasoning used.</li> </ol>			
	<ol> <li>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</li> </ol>			
	strategy to a written method and explain the reasoning used.			
Grade 2	Understand place value.			
	<ol> <li>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:</li> </ol>			
	a. 100 can be thought of as a bundle of ten tens – called a "hundred."			
	b. 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. Count within 1000 and skip-count by 5s, 10s and 100s. Read and write numbers to 1000 using base-ten numerals, number names and expanded form.			
	<ol> <li>Compare two three-digit numbers based on meanings of the hundreds, tens and ones digits, using &gt;, = and &lt; symbols to record the results of comparisons.</li> </ol>			
	Use place value understanding and properties of operations to add and subtract.			
	1. Fluently add and subtract within 100 using strategies based on place value, properties of			
	<ul><li>operations and/or the relationship between addition and subtraction.</li><li>Add up to four two-digit numbers using strategies based on place value and properties of</li></ul>			
	operations. 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.			
	<ol> <li>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.</li> </ol>			
	<ol> <li>Mentally add 10 or 100 to a given number 100-900 and mentally subtract 10 or 100 from a given number 100-900.</li> </ol>			
	<ol> <li>Explain why addition and subtraction strategies work, using place value and the properties of operations. Instructional Note: Explanations may be supported by drawing or objects.</li> </ol>			

Measurement a	and Data			
Kindergarten	<ul> <li>Describe and compare measurable attributes.</li> <li>1. Describe measurable attributes of objects, such as length or weight and describe several measurable attributes of a single object.</li> <li>2. Directly compare two objects with a measurable attribute in common, to see which object has "more of" or "less of" the attribute, and describe the difference.</li> <li>Classify objects and count the number of objects in each category.</li> <li>Classify objects into given categories, count the numbers of objects in each category, and sort the categories by count. Category counts should be limited to less than or equal to 10. (e.g., Identify coins and sort them into groups of 5s or 10s.)</li> </ul>			
Grade 1	<ul> <li>Measure lengths indirectly and by iterating length units.</li> <li>Order three objects by length and compare the lengths of two objects indirectly by using a thir object.</li> <li>Express the length of an object as a whole number of length units, by laying multiple copies of 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. Instructional Note: Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</li> <li>Tell and write time.</li> <li>Tell and write time in hours and half-hours using analog and digital clocks.</li> <li>Represent and interpret data.</li> <li>Organize, represent, 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</li> </ul>			
Grade 2	<ul> <li>category than in another.</li> <li>Measure and estimate lengths in standard units.</li> <li>Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</li> <li>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.</li> <li>Estimate lengths using units of inches, feet, centimeters, and meters.</li> <li>Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</li> <li>Relate addition and subtraction to length.</li> <li>Use addition and subtraction to represent the problem.</li> <li>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.</li> <li>Work with time and money.</li> <li>Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.</li> <li>Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately (e.g., If you have 2 dimes and 3 pennies, how many cents do you have?).</li> <li>Represent and interpret data.</li> <li>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.</li> </ul>			



Geometry			
Kindergarten	Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).		
	<ol> <li>Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind and next to.</li> <li>Correctly name shapes regardless of their orientations or overall size.</li> <li>Through the use of real-life objects, identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").</li> </ol>		
	Analyze, compare, create and compose shapes.		
	<ol> <li>Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners"), and other attributes (e.g., having sides of equal length). Instructional Note: Student focus should include real-world shapes.</li> <li>Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. Compose simple shapes to form larger shapes (e.g., "Can these two triangles, with full sides touching, join to make a rectangle?").</li> </ol>		
Grade 1	Reason with shapes and their attributes.		
	<ol> <li>Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, and/or overall size); build and draw shapes to possess defining attributes.</li> <li>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. Instructional Note: Students do not need to learn formal names such as, "right rectangular prism."</li> <li>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.</li> <li>Describe the whole as two of, or four of the shares and understand for these examples that decomposing into more equal shares creates smaller shares.</li> </ol>		
Grade 2	<ol> <li>Reason with shapes and their attributes</li> <li>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.</li> <li>Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.</li> <li>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., describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</li> </ol>		



# Appendix E Developmentally Appropriate Foundations to Support Formative Assessment Processes

Teachers employ formative assessment processes to guide daily instruction in early learning programs. Appropriate formative assessment processes provide data to inform classroom instruction. Various forms of evidence demonstrating students' progressions of learning across content areas are utilized to personalize learning. The formative assessment process also ensures developmentally appropriate interactions, competencies, experiences, and skills are measured effectively.

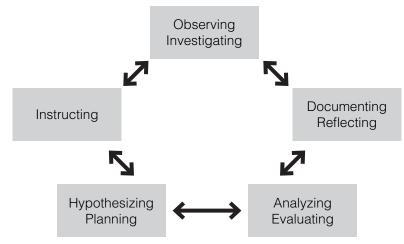
### The Formative Assessment Process and Evidence of Learning

From Policy 2510: The formative assessment process ensures developmentally appropriate interactions, competencies, experiences, and skills are measured effectively.

The formative assessment process provides data to inform instruction, personalize learning, and share students' progress with families.

Implications

- Instruction is crafted based on a deep understanding of the standards and an understanding of how student learning progresses along a learning progression. Ask yourself: Do I have an understanding of all applicable standards for my grade level? Do I know how to use the standards to design learning experiences that will help a student develop an understanding of the standard?
- Evidence of student learning is gathered during classroom instruction. This evidence may include but is not limited to: student observations, observed conversations, checklists, student interviews, student conversations, student work samples and photographs. Ask yourself: Am I consistently looking for evident of student learning related to learning goals? Do I use the gathered evidence to alter instruction in order to support student learning? Do I use evidence of student learning to support individual students? Do I use evidence to articulate individual children's progress to families?



Source: http://nieer.org/pdf/Using\_Anecdotals\_for\_Intentional\_Teaching.pdf



# Appendix F

# of Assessments and Assessment Processes for West Virginia Schools

ASNAPSHOT of Assessments and Assessment Processes for West Virginia Schools			
	FORMATIVE ASSESSMENT PROCESS (occurs daily in grades Pre-K-12; is a fundamental component of high-quality teaching and learning)	INTERIM/ DIAGNOSTIC ASSESSMENTS (occur periodically in grades Pre-K-12; are optional)	STATE SUMMATIVE ASSESSMENT (occurs yearly in grades 3-8 and grade 11 in English language arts and mathematics, and in science in grades 5,8,and 10)
What is it?	A daily process teachers and students use that links evidence of learning to standards in order to personalize learning for all students. (Evidence of learning can include work samples, observations, anecdotal information, graded work, etc)	Non-secure assessments used to obtain data educators can use to help identify: » strengths and weaknesses of their classes and individual students » necessary adjustments to instruction	A standardized test designed to provide a snapshot of student progress toward college and career readiness in the tested content areas
Who selects the assessment?	Is a teacher-driven process; not an isolated event	Educators	State
<b>Who</b> participates in it?	All educators and students in grades Pre-K-12	Students in grades Pre-K-12	All students in grades 3-8 and grade 11
When does it occur?	Daily, during high-quality instruction; the formative assessment process is NOT an event	Periodically, throughout the school year as applicable	At the end of the year or at the end of a course of study
What is done with the results?	Evidence of learning is collected and discussed by teachers and students; evidence is organized in a way that helps teachers tailor their instruction and articulate learning to families	Districts, schools, and educators use results to evaluate student achievement and learning	Long-range planning based on results can occur at the district or state levels; used in state accountability system
How much time does the assessment take?	Is an ongoing, daily process teachers use to personalize learning for all students	1 hour average	4.5 hour average for the WV General Summative Assessment (average across all grades levels and includes ELA, math, and science)





# Appendix G Overview of the West Virginia TREE (Teacher Resources for Educational Excellence)



West Virginia's online platform for educators is a one stop, grade- and/or content-specific site highlighting WV content standards, resources, and links that are essential to ensure high-quality educational programming. The resources include grade specific lessons, professional learning, and guidance documents crafted to help enhance teaching practice and guide the classroom teacher in the art of teaching. The links connect teachers with information regarding:

- Grade- and/or content-specific content standards, linked to resources to support use
- College and career readiness in West Virginia
- The formative assessment process
- Summative assessment login and resources (grades 3-12)
- Opportunities for professional learning
- Working with children with special needs
- Educator effectiveness and licensure (certification and evaluation)
- Guidance documents
- Programmatic level foundations for learning
- Additional resources

The WV TREE is designed with the teacher's busy schedule in mind, one stop, one focus, and tailored for the professional educator. This 'one stop' ensures teachers will not have to scour the WVDE website to find needed resources.

The WV TREE is a fluid website, with resources and content added on a regular basis. Additionally, future plans for the TREE include a site specific to principals, county chief instructional leaders, as well as counselors.





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