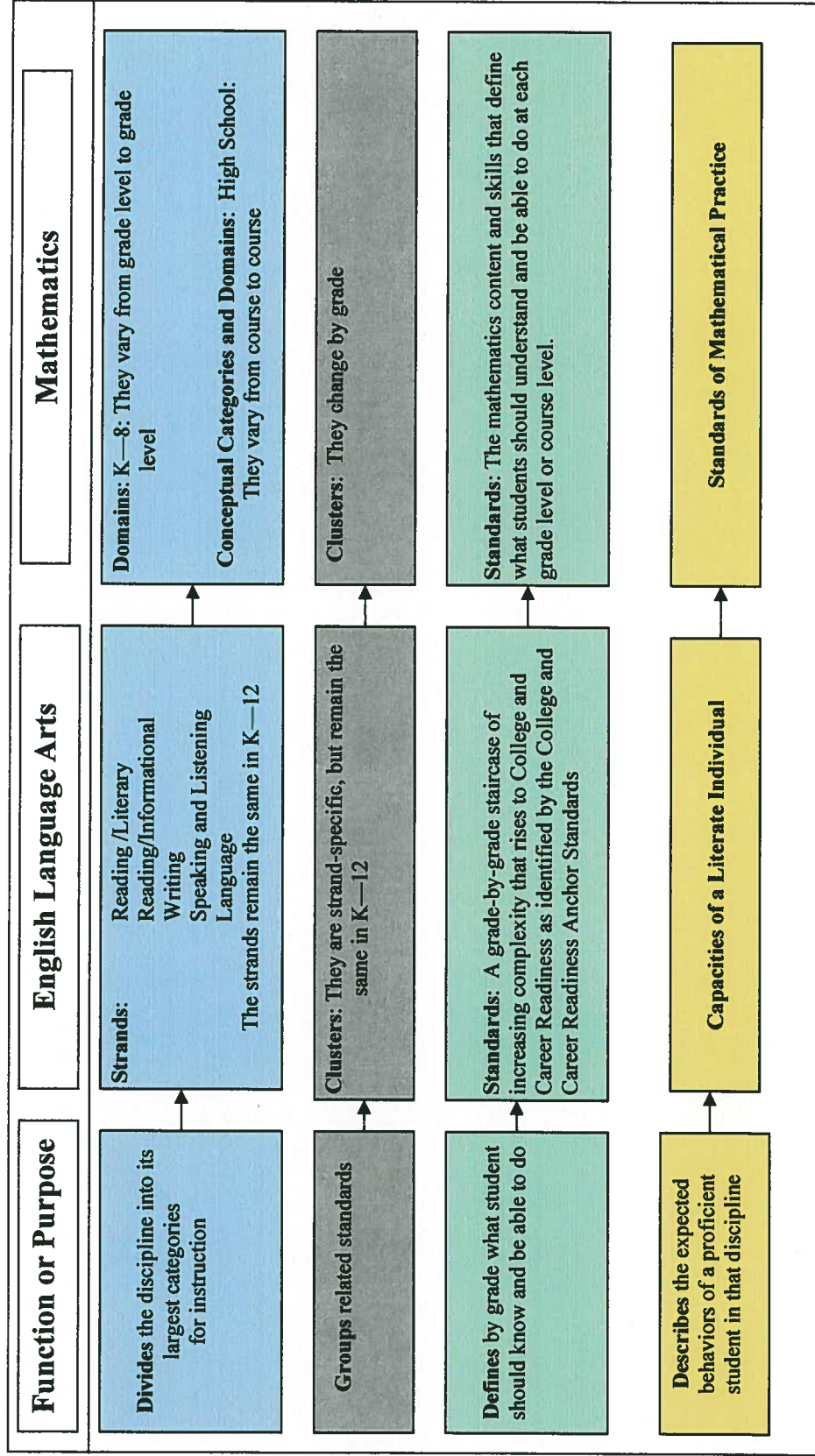


## An Overview of the Maryland Common Core State Curriculum Structure

The Common Core Standards are the foundation on which the Maryland Common Core State Curriculum is constructed. The language in the English Language Arts and Mathematics Standards differs in some areas, but the purpose or function of the two disciplines are aligned: The standards define what students must know and be able to do to be College and Career Ready when they graduate from high school. The graphic below illustrates how the two disciplines are structured.



# Maryland Common Core State Curriculum Development Timeline 2010/2011

Maryland Common Core State Curriculum	Mathematics Development	Reading/English/Language Arts Development
<p><b>Framework</b></p> <ul style="list-style-type: none"> <li>• Common Core State Standards</li> <li>• Crosswalk (only excellent matches identified)</li> <li>• Essential skills and knowledge</li> </ul>	<p>Framework developed by Curriculum Revision Teams</p> <p>Framework shared with Academy Teams along with method for sharing with school teams</p>	<p>Framework developed by Curriculum Revision Teams</p> <p>Framework shared with Academy Teams along with method for sharing with school teams</p>
<p><b>Toolkit</b></p> <ul style="list-style-type: none"> <li>• Clarifications</li> <li>• Vocabulary</li> <li>• Lesson Seeds</li> <li>• Model Lessons</li> <li>• Model Units</li> <li>• Assessments</li> <li>• Prerequisite skills</li> <li>• Resources</li> </ul>	<p>Identify, edit, and include current K - 8 toolkit items that are an excellent match with Maryland Common Core State Curriculum</p> <p>Create tools (clarification tools; additional tools identified in February 2011) for Algebra I: Statistics and Probability Standards</p> <p>Develop lesson seeds that integrate mathematical practices</p> <p>Participate in PARCC collaboration on assessment development and curriculum support</p>	<p>Identify, edit, and include current K - 8 toolkit items that are an excellent match with Maryland Common Core State Curriculum</p> <p>Begin creation of new clarification tools and identification of text passages for use in toolkit</p> <p>Develop sample argument, narrative, and explanatory writing lessons with appropriate text (using items from CCSS Appendix B) that can be used at each grade level; text identified would be in public domain</p> <p>Participate in PARCC collaboration on assessment development and curriculum support</p>
<p><b>Implementation Considerations</b></p> <ul style="list-style-type: none"> <li>• System staff determine expectations in May/June</li> </ul>		
<p><b>Framework</b></p> <ul style="list-style-type: none"> <li>• Common Core State Standards</li> <li>• Crosswalk (only excellent matches identified)</li> <li>• Essential skills and knowledge</li> </ul>	<p>Revise and finalize based on feedback</p>	<p>Revise and finalize based on feedback</p>

## Maryland Common Core State Curriculum Development Timeline 2010/2011

Maryland Common Core State Curriculum	Mathematics Development	Reading/English/Language Arts Development
<p><b>Toolkit</b></p> <ul style="list-style-type: none"> <li>• Clarifications</li> <li>• Vocabulary</li> <li>• Lesson Seeds</li> <li>• Model Lessons</li> <li>• Model Units</li> <li>• Assessments</li> <li>• Prerequisite skills</li> <li>• Resources</li> </ul>	<p>Continue toolkit item development for Maryland Common Core State Curriculum, including lesson seeds, and model lessons based on priorities identified by Maryland educators</p> <p>Participate in PARCC collaboration on assessment development and curriculum support</p> <p>Integrate resources from LEA's for toolkit inclusion</p> <p>Create tools (not yet identified) for Geometry: Geometry, Statistics and Probability, and Modeling Standards</p> <p>Create tools (not yet identified) for Algebra I: Number and Quantity, Functions, and Modeling Standards</p> <p>Begin development of sample tasks based on PARCC prototype models</p>	<p>Continue toolkit item development for Maryland Common Core State Curriculum, including lesson seeds, and model lessons based on priorities identified by Maryland educators</p> <p>Continue identification of text passages for use in toolkit</p> <p>Participate in PARCC collaboration on assessment development and curriculum support</p> <p>Integrate resources from LEA's for toolkit inclusion</p> <p>Begin development of sample tasks based on PARCC prototype models</p>
<p><b>Implementation Considerations</b></p> <ul style="list-style-type: none"> <li>• System staff determine expectations at spring meetings</li> </ul>		

Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

Cluster: Text Types and Purposes		Grade 5	
W1 CCR Anchor Standard		Grade 4	
Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.			
Grade 3		Grade 4	
<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons.</p> <p><b>W1.a</b> Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, apply the prewriting and planning stages of the writing process, e.g.,               <ul style="list-style-type: none"> <li>gather information on a specific topic (See SLM 2A1, as needed.)</li> <li>generate a point of view or opinion,</li> <li>brainstorm reasons that support the point of view or opinion. (See CCSS 3 W4, W5, W6.)</li> </ul> </li> <li>With guidance and support, draft an introduction that               <ul style="list-style-type: none"> <li>establishes the focus with a topic sentence,</li> <li>orients the reader to the topic or text,</li> <li>states a point of view or opinion, and</li> <li>anticipates an organizational structure, e.g., one or more paragraphs, as appropriate. (See CCSS 3 W4, W6.)</li> </ul> </li> </ul> <p><b>W1.b</b> Provide reasons that support the opinion.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Differentiate among reasons, opinion(s), and facts.</li> <li>Organize reasons to best support an opinion, e.g., least to most important, most to least important.</li> <li>With guidance and support, draft the body to support an opinion or point of view through effective organization of reasons. (See CCSS 3 W4, W6.)               <ul style="list-style-type: none"> <li>Establish the focus of a paragraph/ each paragraph with a topic sentence.</li> </ul> </li> </ul>	<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> <p><b>W1.a</b> Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With support, apply the prewriting and planning stages of the writing process, including               <ul style="list-style-type: none"> <li>formulating an opinion,</li> <li>generating support that includes facts and details, (See SLM, GR 4-5: 2A1, as needed.)</li> <li>grouping support by categories or ideas, and</li> <li>linking the support to the writing purpose, i.e., to argue a point of view. (See CCSS 4 W4, W5, W6.)</li> </ul> </li> <li>With support, draft an introduction that               <ul style="list-style-type: none"> <li>orients the reader to the topic or text,</li> <li>states the point of view or opinion,</li> <li>addresses an audience and the writing purpose, and</li> <li>anticipates an organizational structure, e.g., several paragraphs, as appropriate. (See CCSS 4 W4, W6.)</li> </ul> </li> </ul> <p><b>W1.b</b> Provide reasons that are supported by facts and details.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Differentiate facts or reasons from opinion(s) and select facts and/or details that support reasons.</li> <li>Establish categories of support organized by ideas and their supporting facts, details, or other information.</li> <li>With support, draft the body to argue an opinion or point of view through effective organization of support. (See CCSS 4 W4, W6.)               <ul style="list-style-type: none"> <li>Establish the focus of each paragraph with a topic sentence.</li> </ul> </li> </ul>		
<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> <p><b>W1.a</b> Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply the prewriting and planning stages of the writing process, including               <ul style="list-style-type: none"> <li>formulating an opinion,</li> <li>generating support that includes facts and details, (See SLM, GR 4-5: 2A1, as needed.)</li> <li>grouping support logically by categories or ideas, and</li> <li>linking the support to the writing purpose, i.e., to argue a point of view. (See CCSS 5 W4, W5, W6.)</li> </ul> </li> <li>Draft an introduction that               <ul style="list-style-type: none"> <li>orients the reader to the topic or text,</li> <li>states the point of view or opinion,</li> <li>addresses audience needs and the writing purpose, and</li> <li>anticipates an organizational structure, e.g., several paragraphs, as appropriate. (See CCSS 5 W4, W6.)</li> </ul> </li> </ul> <p><b>W1.b</b> Provide logically ordered reasons that are supported by facts and details.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Differentiate facts or reasons from opinion(s) and select facts and/or details that support reasons.</li> <li>Establish a hierarchy of support organized by ideas and their supporting facts, details, or other information.</li> <li>Draft the body to argue an opinion or point of view through effective organization of support. (See CCSS 5 W4, W6.)               <ul style="list-style-type: none"> <li>Establish the focus of each paragraph with a topic sentence.</li> </ul> </li> </ul>			

Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

Cluster: Text Types and Purposes		
W1 CCR Anchor Standard		
Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.		
Grade 3	Grade 4	Grade 5
<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons.</p> <p><b>W1.b</b> Provide reasons that support the opinion.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Organize paragraph(s) effectively, e.g., list, cause/effect, order of importance)</li> <li>Use coordinating and subordinating conjunctions. (CCSS 3 L1.h)</li> <li>Produce simple, compound, and complex sentences. (CCSS 3 L1.i.)</li> <li>Use commas in addresses. (CCSS 3 L2.b)</li> <li>Recognize and observe differences between the conventions of spoken and written standard English. (CCSS 3 L3.b)</li> </ul>	<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> <p><b>W1.b</b> Provide reasons that are supported by facts and details. <b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Organize paragraphs effectively, e.g., list, cause/effect, order of importance)</li> <li>Use relative pronouns (who, whose, whom, which, that) and relative adverbs (where, when, why.) (CCSS 4 L1.a)</li> <li>Form and use prepositional phrases. (CCSS 4 L1.e)</li> <li>Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion.) (CCSS 4 L3.c)</li> </ul>	<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> <p><b>W1.b</b> Provide logically ordered reasons that are supported by facts and details. <b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Organize paragraphs effectively, e.g., list, cause/effect, order of importance)</li> <li>Ensure subject-verb and pronoun-antecedent agreement.* (CCSS 3 L1.f)</li> <li>Correctly use frequently-confused words.* (CCSS 4 L1.g)</li> <li>Use correlative conjunctions (e.g., either/or, neither/nor). (CCSS 5 L1.e)</li> </ul>
<p><b>W1.c</b> Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Identify and explain relationships, e.g., cause/effect, example.</li> <li>Apply academic vocabulary to express relationships correctly. (See CCSS 3 L6.)</li> </ul>	<p><b>W1.c</b> Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition).</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply academic vocabulary to express relationships correctly and precisely. (See CCSS 4 L6.)</li> </ul>	<p><b>W1.c</b> Link opinion and reasons using words, phrases, and clauses (e.g., consequently, specifically).</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply academic vocabulary to express relationships correctly and precisely. (See CCSS 5 L6.)</li> </ul>
<p><b>W1.d</b> Provide a concluding statement or section.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, draft a conclusion that paraphrases the opinion or point of view. (See CCSS 3 W4, W6.)</li> </ul>	<p><b>W1.d</b> Provide a concluding statement or section related to the opinion presented.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With support, draft a conclusion that paraphrases the opinion or point of view. (See CCSS 3 W4, W6.)</li> </ul>	<p><b>W1.d</b> Provide a concluding statement or section related to the opinion presented.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Draft a conclusion that paraphrases the opinion or point of view. (See CCSS 3 W4, W6.)</li> </ul>

Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

Cluster: Text Types and Purposes		Grade 5	
W1 CCR Anchor Standard		Grade 4	
Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.			
Grade 3		Grade 4	
<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons.</p> <p><b>W1.d</b> Provide a concluding statement or section.</p> <p><b>cont'd</b></p> <ul style="list-style-type: none"> <li>With guidance and support, apply the revision and editing stages of the writing process. (See CCSS 3 W5, W6.) <ul style="list-style-type: none"> <li>Revise to <ul style="list-style-type: none"> <li>ensure a clear statement of opinion supported by a list of reasons</li> <li>choose words and phrases for effect, e.g., persuasive language* (See CCSS 3 L3.a.)</li> <li>Edit to correct errors in <ul style="list-style-type: none"> <li>the use of linking words and phrases (See CCSS 3 W1.c.)</li> <li>regular and irregular plural nouns and regular and irregular verbs (See CCSS 3 L1.b, d.)</li> <li>subject-verb and pronoun-antecedent agreement* (See CCSS 3 L1.f.)</li> <li>capitalization in titles (See CCSS 3 L2.a.)</li> <li>conventional spelling of high-frequency words (See CCSS 3 L2.e.)</li> </ul> </li> </ul> </li> <li>Consult reference materials and spelling patterns and generalizations to check and correct spellings. (CCSS 3 L2.f, g)</li> <li>With guidance and support, prepare the final product for presentation and/or publication, including using word processing technology, writing written products legibly, and doing oral presentations. (See CCSS 3 W6; CCSS 3 SL4, 5, 6; SLM, GR 2-3: 5A1.)</li> </ul> </li> </ul>	<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> <p><b>W1.d</b> Provide a concluding statement or section related to the opinion presented.</p> <p><b>cont'd</b></p> <ul style="list-style-type: none"> <li>With support, apply the revision and editing stages of the writing process. (See CCSS 4 W5, W6.) <ul style="list-style-type: none"> <li>Revise to <ul style="list-style-type: none"> <li>ensure a clear statement of opinion supported by an organized list of related ideas and reasons</li> <li>choose words and phrases for effect and to convey ideas precisely* (See CCSS 3 L3.a; CCSS 4 L3.a.)</li> <li>Edit to correct errors in <ul style="list-style-type: none"> <li>subject-verb and pronoun-antecedent agreement* (See CCSS 3 L1.f.)</li> <li>inappropriate fragments and run-ons* (See CCSS 4 L1.f.)</li> <li>capitalization (See CCSS 4 L2.a.)</li> <li>frequently confused words* (See CCSS 4 L1.g.)</li> <li>punctuation of compound sentences joined by a coordinating conjunction (See CCSS 4 L2.c.)</li> <li>spelling of grade-appropriate words, consulting references as needed (See CCSS 4 L2.d.)</li> </ul> </li> </ul> </li> <li>With support, prepare the final product for presentation and/or publication. (See CCSS 4 W6; CCSS 4 SL4, 5, 6; SLM, GR 4-5: 5A1.)</li> </ul> </li> </ul>	<p><b>W1</b> Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> <p><b>W1.d</b> Provide a concluding statement or section related to the opinion presented.</p> <p><b>cont'd</b></p> <ul style="list-style-type: none"> <li>Apply the revision and editing stages of the writing process. (See CCSS 5 W5, W6.) <ul style="list-style-type: none"> <li>Revise to <ul style="list-style-type: none"> <li>ensure a clear statement of opinion supported by ideas and reasons presented logically</li> <li>choose words and phrases for effect and to convey ideas precisely* (See CCSS 3 L3.a; CCSS 4 L3.a.)</li> <li>expand, combine, and reduce sentences for meaning, interest, and style* (See CCSS 5 L3.a.)</li> <li>Edit to correct errors in <ul style="list-style-type: none"> <li>sentence fragments and run-ons* (See CCSS 4 L1.f.)</li> <li>use of a comma to set off an introductory element (See CCSS 5 L2.b.)</li> <li>shifts in verb tense* (See CCSS 5 L1.d.)</li> <li>spelling of grade-appropriate words, consulting references as needed (See CCSS 5 L2.e.)</li> </ul> </li> </ul> </li> <li>Prepare the final product for presentation and/or publication. (See CCSS 5 W6; CCSS 5 SL4, 5, 6; SLM, GR 4-5: 5A1.)</li> </ul> </li> </ul>	

Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

Cluster: Text Types and Purposes		Grade 5	
W2 CCR Anchor Standard		Grade 4	
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.			
<p><b>W2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p>	<p><b>W2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p>	<p><b>W2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p>	<p><b>W2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p>
<p><b>W2.a</b> Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, apply the prewriting stage of the writing process, e.g.,               <ul style="list-style-type: none"> <li>gather information on a topic; (See SLM 2A1, as needed.)</li> <li>group information by topic or idea;</li> <li>identify and select supportive text features, as necessary. (See CCSS 3 W4, W5, W6, W7.)</li> </ul> </li> </ul>	<p><b>W2.a</b> Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With support, apply the prewriting stage of the writing process:               <ul style="list-style-type: none"> <li>gather information on a topic; (See SLM 2A1, as needed.)</li> <li>organize information by paragraphs or sections with topic sentences or controlling ideas;</li> <li>select and apply formatting and/or text features and/or multimedia to clarify ideas or information, as necessary. (See CCSS 4 W4, W5, W6, W7.)</li> </ul> </li> </ul>	<p><b>W2.a</b> Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply the prewriting stage of the writing process:               <ul style="list-style-type: none"> <li>gather information on a topic; (See SLM 2A1, as needed.)</li> <li>formulate a controlling idea or thesis,</li> <li>organize information by paragraphs or sections with topic sentences or controlling ideas,</li> <li>select and apply formatting and/or text features and/or multimedia to clarify ideas or information, as necessary. (See CCSS 5 W4, W5, W6, W7.)</li> </ul> </li> </ul>	<p><b>W2.a</b> Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Draft an introduction that               <ul style="list-style-type: none"> <li>orients the reader to the topic,</li> <li>establishes a controlling idea or thesis,</li> <li>follows a logical organizational structure by paragraphs or sections, and</li> <li>incorporates formatting, text features and/or multimedia effectively, and</li> <li>handles copyrighted material appropriately. (See CCSS 5 W4, W6; SLM, GR 4-5, 3C2.)</li> </ul> </li> </ul>
<p><b>W2.b</b> Develop the topic with facts, definitions, and details.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Differentiate between a fact and an opinion.</li> <li>Differentiate between relevant and irrelevant information when researching a specific topic.</li> </ul>	<p><b>W2.b</b> Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Differentiate between a paraphrase and a direct quotation.</li> <li>Differentiate between a concrete detail and a more general or abstract idea</li> </ul>	<p><b>W2.b</b> Provide logically ordered reasons that are supported by facts and details.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Organize a hierarchy of information from reasons to facts, details, quotations, etc.</li> </ul>	<p><b>W2.b</b> Provide logically ordered reasons that are supported by facts and details.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Organize a hierarchy of information from reasons to facts, details, quotations, etc.</li> </ul>

Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

Cluster: Text Types and Purposes		
W2 CCR Anchor Standard		
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.		
Grade 3	Grade 4	Grade 5
<p><b>W2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <p><b>W2.b</b> Develop the topic with facts, definitions, and details.</p> <p><b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• With guidance and support, draft the body to examine a topic with well-organized facts, definitions, and details. (See CCSS 3 W4, W6.)               <ul style="list-style-type: none"> <li>◦ Use coordinating and subordinating conjunctions. (CCSS 3 L1.h)</li> <li>◦ Produce simple, compound, and complex sentences. (CCSS 3 L1.i.)</li> <li>◦ Recognize and observe differences between the conventions of spoken and written standard English. (CCSS 3 L3.b)</li> </ul> </li> </ul>	<p><b>W2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <p><b>W2.b</b> Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. <b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• With support, draft the body to examine a topic and convey ideas with effectively organized facts, definitions, concrete details, and other information. (See CCSS 4 W4, W6.)               <ul style="list-style-type: none"> <li>◦ Select appropriate organizational patterns for paragraphs or sections, e.g., list, cause/effect, comparison/contrast, time order.</li> <li>◦ Use relative pronouns (who, whose, whom, which, that) and relative adverbs (where, when, why.) (CCSS 4 L1.a)</li> <li>◦ Form and use prepositional phrases. (CCSS 4 L1.e)</li> <li>◦ Use commas and quotation marks to punctuate quotations from a text. (See CCSS 4 L2.b.)</li> <li>◦ Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion.) (CCSS 4 L3.c)</li> </ul> </li> </ul>	<p><b>W2</b> Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <p><b>W2.b</b> Provide logically ordered reasons that are supported by facts and details.</p> <p><b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Draft the body by applying a logical organizational pattern of reasons supported by facts and details. (See CCSS 5 W4, W6.)               <ul style="list-style-type: none"> <li>◦ Select appropriate organizational patterns for paragraphs or sections, e.g., list, cause/effect, comparison/contrast, time order.</li> <li>◦ Ensure subject-verb and pronoun-antecedent agreement.* (CCSS 3 L1.f)</li> <li>◦ Use correlative conjunctions (e.g., either/or, neither/nor). (CCSS 5 L1.e)</li> <li>◦ Correctly use frequently-confused words.* (CCSS 4 L1.g)</li> </ul> </li> </ul>
<p><b>W2.c</b> Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Organize information by categories and correctly link ideas within each category.</li> <li>• Apply academic vocabulary to express relationships correctly. (See CCSS 3 L6.)</li> </ul>	<p><b>W2.c</b> Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Apply academic vocabulary to express relationships correctly. (See CCSS 4 L6.)</li> </ul>	<p><b>W2.c</b> Link opinion and reasons using words, phrases, and clauses (e.g., consequently, specifically).</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Apply academic vocabulary to express relationships correctly. (See CCSS 4 L6.)</li> </ul>



Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

<b>Cluster: Text Types and Purposes</b>	
<b>W2 CCR Anchor Standard</b> Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.	<b>Grade 5</b>
<b>Grade 3</b> W2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. See <b>W2.d</b> below. <b>Essential Skills and Knowledge</b>	W2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. W2.d Use precise language and domain-specific vocabulary to inform about or explain the topic. <b>Essential Skills and Knowledge</b> (See CCSS 4 L3.a, L6.)
<b>Grade 4</b> W2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. W2.d Use precise language and domain-specific vocabulary to inform about or explain the topic. <b>Essential Skills and Knowledge</b> (See CCSS 4 L3.a, L6.)	W2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly. W2.d Use precise language and domain-specific vocabulary to inform about or explain the topic. <b>Essential Skills and Knowledge</b> (See CCSS 4 L3.a, L6.)
<b>Grade 5</b> W2.d Provide a concluding statement or section. <b>Essential Skills and Knowledge</b> • With guidance and support, draft a conclusion that draws inferences or conclusions from the information presented. (See CCSS 3 W4, W6.) • With guidance and support, apply the revision and editing stages of the writing process. (See CCSS 3 W5, W6.) ◦ Revise to ♦ ensure a clear statement of the topic and clearly conveyed ideas and information ♦ choose words and phrases for effect* (CCSS 3 L3.a) ◦ Edit to correct errors in ♦ the use of linking words and phrases (See CCSS 3 W1.c.) ♦ regular and irregular plural nouns and regular and irregular verbs (See CCSS 3 L1.b, d.) ♦ subject-verb and pronoun-antecedent agreement* (See CCSS 3 L1.f.) ♦ conventional spelling of high-frequency words (See CCSS 3 L2.e.) • Consult reference materials and spelling patterns and generalizations to check and correct spellings. (See CCSS 3 L2.f, g.) • With guidance and support, prepare the final product for presentation and/or publication, including using word processing technology, writing written products legibly, and doing oral presentations. (See CCSS 3 W6; CCSS 3 SL4, 5, 6; SLM, GR 2-3: 5A1.)	W2.e Provide a concluding statement or section related to the information or explanation presented. <b>Essential Skills and Knowledge</b> • Draft a conclusion that draws inferences or conclusions or makes generalizations from the information presented. (See CCSS 5 W4, W6.) • Apply the revision and editing stages of the writing process. (See CCSS 5 W5, W6.) ◦ Revise to ♦ ensure a clear statement of the topic and clearly conveyed and organized ideas and information ♦ choose words and phrases for effect and to convey ideas precisely* (See CCSS 3 L3.a; CCSS 4 L3.a.) ♦ expand, combine, and reduce sentences for meaning, interest, and style* (See CCSS 5 L3.a.) ◦ Edit to correct errors in ♦ sentence fragments and run-ons* (See CCSS 4 L1.f.) ♦ use of a comma to set off an introductory element (See CCSS 5 L2.b.) ♦ shifts in verb tense* (See CCSS 5 L1.d.) ♦ spelling of grade-appropriate words, consulting references as needed (See CCSS 5 L2.e.) • Prepare the final product for presentation and/or publication. (See CCSS 5 W6; CCSS 5 SL4, 5, 6; SLM, GR 4-5: 5A1.)

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<b>Cluster: Text Types and Purposes</b>		<b>Grade 5</b>	
<b>W3 CCR Anchor Standard</b> Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.		<b>Grade 4</b>	
<b>Grade 3</b>		<b>Grade 5</b>	
<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p><b>W3.a</b> Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, apply the prewriting stage of the writing process, e.g.,               <ul style="list-style-type: none"> <li>select and narrow an event or situation,</li> <li>identify the characters and the problem,</li> <li>order the events by sequence. (See CCSS 3 W4, W5, W6.)</li> </ul> </li> <li>With guidance and support, draft an introduction that               <ul style="list-style-type: none"> <li>orients the reader to the narrator and/or the characters, and</li> <li>establishes the situation or problem. (See CCSS 3 W4, W6.)</li> </ul> </li> <li>Apply knowledge of characters. (See CCSS RL 3.)</li> <li>Apply knowledge of story structure, e.g., problem and solution. (See CCSS 3 RL 5.)</li> </ul> <p><b>W3.b</b> Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, draft the body using a plausible sequence of events and effective descriptions of characters. (See CCSS 3 W4, W6.)</li> <li>Apply knowledge of characterization. (See CCSS RL 3.)</li> </ul>	<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p><b>W3.a</b> Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With support, apply the prewriting stage of the writing process:               <ul style="list-style-type: none"> <li>select and narrow an event or situation,</li> <li>establish the narrator and/or the characters</li> <li>explain the problem</li> <li>organize a plausible sequence of events. (See CCSS 4 W4, W5, W6.)</li> </ul> </li> <li>With support, draft an introduction that               <ul style="list-style-type: none"> <li>establishes the narrator and/or the characters,</li> <li>orients the reader to the setting,</li> <li>explains the situation or problem, and</li> <li>anticipates a logical sequence of events. (See CCSS 5 W4, W6.)</li> </ul> </li> </ul> <p><b>W3.b</b> Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Draft the body using a plausible sequence of events and effective descriptions of characters, setting, and events. (See CCSS 5 W4, W6.)</li> <li>Apply knowledge of narrative elements, e.g., point of view, characters, conflict, plot, setting, rising action, climax, falling action, resolution. (See CCSS 5 RL3, RL 5, RL6.)</li> </ul>		

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<b>Cluster: Text Types and Purposes</b>		
<b>W3 CCR Anchor Standard</b>	<b>Grade 4</b>	<b>Grade 5</b>
Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.	Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
<b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	<b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	<b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
<b>W3.b</b> Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations. <b>cont'd</b>	<b>W3.b</b> Use dialogue and description to develop experiences and events or show the responses of characters to situations. <b>cont'd</b>	<b>W3.b</b> Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations. <b>cont'd</b>
<ul style="list-style-type: none"> <li>Apply knowledge of story structure, e.g., problem and solution, rise and fall of action, etc. (See CCSS 3 RL 5.)</li> <li>Form and use the simple verb tenses. (See CCSS 3 L1.e.)</li> <li>Form and use comparative and superlative adjectives and adverbs. (See CCSS 3 L1.g.)</li> <li>Use commas and quotation marks in dialogue. (CCSS 3 L2.c)</li> <li>Form and use possessives. (CCSS 3 L2.d)</li> </ul>	<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply knowledge of story structure, e.g., problem and solution, rise and fall of action, resolution, etc. 4 L1.b.)</li> <li>Form and use the progressive verb tenses. (See CCSS 4 L1.b.)</li> <li>Use commas and quotation marks to indicate direct speech. (See CCSS 4 L2.b)</li> </ul>	<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Form and use the perfect verb tenses. (See CCSS 5 L1.b.)</li> <li>Use verb tenses to convey various times, sequences, states, and conditions. (CCSS 5 L1.c.)</li> <li>Use punctuation to separate items in a series.* (CCSS 5 L2.a)</li> </ul>
<b>W3.c</b> Use temporal words and phrases to signal event order.	<b>W3.c</b> Use a variety of transitional words and phrases to manage the sequence of events.	<b>W3.c</b> Use a variety of transitional words, phrases, and clauses to manage the sequence of events.
<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply academic vocabulary to express chronological and sequential relationships correctly. (See CCSS 3 L6.)</li> </ul>	<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply academic vocabulary to express chronological and sequential relationships correctly and control the sequence of events. (See CCSS 4 L6.)</li> </ul>	<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Apply academic vocabulary in order to express and control a narrative sequence. (See CCSS 5 L6.)</li> </ul>
(See W3.d below.)	<b>W3.d</b> Use concrete words and phrases and sensory details to convey experiences and events precisely.	<b>W3.d</b> Use concrete words and phrases and sensory details to convey experiences and events precisely.
<p><b>Essential Skills and Knowledge</b></p>	<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Differentiate between specific and concrete, vague and general, and literal and nonliteral language. (See CCSS 3 RL4.)</li> <li>Recognize and use words and phrases that appeal to the senses.</li> <li>Order adjectives within sentences according to conventional patterns (e.g., a small red bag rather than a red small bag.) (CCSS 4 L1.d)</li> </ul>	<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>(See CCSS 5 RL4.)</li> </ul>

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Cluster: Text Types and Purposes		
W3 CCR Anchor Standard		
Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.		
Grade 3	Grade 4	Grade 5
<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p><b>W3.d</b> Provide a sense of closure.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• With guidance and support, draft a conclusion that provides an ending to the narrative. (See CCSS 3 W4, W6.)</li> <li>• With guidance and support, apply the revision and editing stages of the writing process to the narrative piece. (See CCSS 3 W4, W6.)               <ul style="list-style-type: none"> <li>◦ Revise to                   <ul style="list-style-type: none"> <li>◆ ensure that characters and events are clearly described (See CCSS 3 RL3.)</li> <li>◆ ensure that the narrative is organized chronologically and has a clear beginning, middle, and end (See CCSS 3 RL5.)</li> <li>◆ choose words and phrases for effect and for precision* (See CCSS 3 L1.c, L3.a, L5.c)</li> </ul> </li> <li>◦ Edit to correct errors in                   <ul style="list-style-type: none"> <li>◆ temporal words and phrases (See CCSS 3 W3.c)</li> <li>◆ formation and use of simple verb tenses (See CCSS 3 L1.e.)</li> <li>◆ subject-verb and pronoun-antecedent agreement* (See CCSS 3 L1.f.)</li> <li>◆ punctuation of dialogue (See CCSS 3 L2.c.)</li> <li>◆ formation and use of possessives (CCSS 3 L2.d)</li> <li>◆ conventional spelling of high-frequency words (See CCSS 3 L2.e.)</li> </ul> </li> <li>◦ Consult reference materials and spelling patterns and generalizations to check and correct spellings. (See CCSS 3 L2.f, g.)</li> </ul> </li> </ul>	<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p><b>W3.e</b> Provide a conclusion that follows from the narrated experiences or events.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• With support, draft a plausible conclusion that follows naturally from the sequence of events in the narrative. (See CCSS 4 W4, W6.)</li> <li>• With support, apply the revision and editing stages of the writing process to the narrative piece. (See CCSS 4 W4, W6.)               <ul style="list-style-type: none"> <li>◦ Revise to                   <ul style="list-style-type: none"> <li>◆ ensure that characters and events are effectively described</li> <li>◆ ensure that the narrative is fully developed and logically organized</li> <li>◆ choose words and phrases to convey ideas precisely* (CCSS 4 L3.a)</li> <li>◆ choose punctuation for effect* (CCSS 4 L3.b)</li> </ul> </li> <li>◦ Edit to correct errors in                   <ul style="list-style-type: none"> <li>◆ transitional words and phrases (See CCSS 4 W3.c)</li> <li>◆ subject-verb and pronoun-antecedent agreement* (See CCSS 3 L1.f.)</li> <li>◆ inappropriate fragments and run-ons* (See CCSS 4 L1.f.)</li> <li>◆ frequently confused words* (See CCSS 4 L1.g.)</li> <li>◆ commas and quotation marks in direct speech (See CCSS 4 L2.b)</li> <li>◆ punctuation of compound sentences joined by a coordinating conjunction (See CCSS 4 L2.c.)</li> <li>◆ spelling of grade-appropriate words, consulting references as needed (See CCSS 4 L2.d.)</li> </ul> </li> </ul> </li> </ul>	<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p><b>W3.e</b> Provide a conclusion that follows from the narrated experiences or events.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Draft a plausible conclusion that follows naturally from the sequence of events in the narrative. (See CCSS 5 W4, W6.)</li> <li>• Apply the revision and editing stages of the writing process to the narrative piece. (See CCSS 5 W4, W6.)               <ul style="list-style-type: none"> <li>◦ Revise to                   <ul style="list-style-type: none"> <li>◆ ensure that the narrative demonstrates full development, logical organization and effective use of language</li> <li>◆ choose words and phrases to convey ideas precisely* (CCSS 4 L3.a)</li> <li>◆ expand, combine, and reduce sentences for meaning, interest, and style* (See CCSS 5 L3.a.)</li> </ul> </li> <li>◦ Edit to correct errors in                   <ul style="list-style-type: none"> <li>◆ transitional words and phrases (See CCSS 5 W3.c.)</li> <li>◆ subject-verb and pronoun-antecedent agreement* (See CCSS 3 L1.f.)</li> <li>◆ inappropriate fragments and run-ons* (See CCSS 4 L1.f.)</li> <li>◆ frequently confused words* (See CCSS 4 L1.g.)</li> <li>◆ spelling of grade-appropriate words, consulting references as needed (See CCSS 4 L2.d.)</li> </ul> </li> </ul> </li> </ul>

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<p><b>Cluster: Text Types and Purposes</b></p>		
<p><b>W3 CCR Anchor Standard</b> Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.</p>		
<p><b>Grade 3</b></p>	<p><b>Grade 4</b></p>	<p><b>Grade 5</b></p>
<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p>	<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p>	<p><b>W3</b> Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p>
<p><b>W3.d</b> Provide a sense of closure. <b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, prepare the final product for presentation and/or publication, including using word processing technology, writing written products legibly, and doing oral presentations. (See CCSS 3 W6; CCSS 3 SL4, 5, 6; SLM, GR 2-3: 5A1; TL, GR 3: 3B1, 4b1)</li> </ul>	<p><b>W3.e</b> Provide a conclusion that follows from the narrated experiences or events. <b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With support, prepare the final product for presentation and/or publication. (See CCSS 4 W6; CCSS 4 SL4, 5, 6; SLM, GR 4-5: 5A1; TL, GR 4: 3B1, 4B1.)</li> </ul>	<p><b>W3.e</b> Provide a conclusion that follows from the narrated experiences or events. <b>cont'd</b></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Prepare the final product for presentation and/or publication. (See CCSS 5 W6; CCSS 4 SL4, 5, 6; SLM, GR 4-5: 5A1; TL, GR 5: 3B1, 4B1.)</li> </ul>

<p><b>Cluster: Production and Distribution of Writing</b></p>		
<p><b>W4 CCR Anchor Standard</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>		
<p><b>Grade 3</b></p>	<p><b>Grade 4</b></p>	<p><b>Grade 5</b></p>
<p><b>W4</b> 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 standards 1–3 above.)</p> <p><b>Essential Skills and Knowledge</b></p> <p>See W1, W2, W3, and W7 of CCSC Framework for specific application.</p>	<p><b>W4</b> Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p> <p><b>Essential Skills and Knowledge</b></p> <p>See W1, W2, W3, and W7 of CCSC Framework for specific application.</p>	<p><b>W4</b> Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p> <p><b>Essential Skills and Knowledge</b></p> <p>See W1, W2, W3, and W7 of CCSC Framework for specific application.</p>

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<p><b>Cluster: Production and Distribution of Writing</b>  <b>W5 CCR Anchor Standard</b>          Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p>		
<p><b>Grade 3</b></p>	<p><b>Grade 4</b></p>	<p><b>Grade 5</b></p>
<p><b>W5</b> 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 1–3 up to and including grade 3 on pages 28 and 29.)</p> <p><b>Essential Skills and Knowledge</b>          See W1, W2, W3, and W7 of CCSC Framework for specific application.</p>	<p><b>W4</b> Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p> <p><b>Essential Skills and Knowledge</b>          See W1, W2, W3, and W7 of CCSC Framework for specific application.</p>	<p><b>W4</b> Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p> <p><b>Essential Skills and Knowledge</b>          See W1, W2, W3, and W7 of CCSC Framework for specific application.</p>

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Cluster: Production and Distribution of Writing		
Grade 3	Grade 4	Grade 5
<p><b>W6</b> 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.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• See W1, W2, W3, and W7 of CCSC Framework for specific application.</li> <li>• Apply computer literacy and keyboarding skills at the Basic level as defined in "A Companion to the Maryland Technology Literacy Standards for Students"</li> <li>• Apply appropriate posture, hand, arm and fingering positions when keyboarding. (TL, GR 3: 1A1c)</li> <li>• Use technology to enhance learning. (TL, GR 3: 2B1, 2B2, 2B2, 2B3, 3A1, 3B1, 3C1)</li> <li>• Use technology for communication. (TL, GR 3: 4A1, 4A2)</li> <li>• Use technology to collaborate and to express ideas. (TL, GR 3: 3B1, 4b1)</li> <li>• Use technology to locate, evaluate, and gather information and/or data. (TL, GR 3: 5A1)</li> <li>• Use and evaluate technology tools to organize information. (TL: GR 3: 5B1)</li> <li>• Use technology to develop strategies to solve problems and make informed decisions. (TL, GR 3: 6A1, 6A2, 6A3, 6A4, 6A5, 6B)</li> </ul>	<p><b>W6</b> With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• See W1, W2, W3, and W7 of CCSC Framework for specific application.</li> <li>• Apply computer literacy and keyboarding skills at the Basic level as defined in "A Companion to the Maryland Technology Literacy Standards for Students."</li> <li>• Apply appropriate posture, hand, arm and fingering positions when keyboarding (TL, GR 4: 1A1a)</li> <li>• Use technology to enhance learning (TL, GR 4: 3A1, 3B1, 3C1)</li> <li>• Use technology for communication (TL, GR 4: 4A1, 4A2)</li> <li>• Use technology to collaborate and to express ideas (TL, GR 4: 3B1, 4B1)</li> <li>• Use technology to locate, evaluate, and gather information and/or data (TL, GR 4: 5A1)</li> <li>• Use and evaluate technology tools to organize information (TL: GR 4: 5B1)</li> <li>• Use technology to develop strategies to solve problems and make informed decisions (TL, GR 4: 6A1, 6A2, 6A3, 6A4, 6A5, 6B)</li> </ul>	<p><b>W6</b> With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• See W1, W2, W3, and W7 of CCSC Framework for specific application.</li> <li>• Apply computer literacy and keyboarding skills at the Basic level as defined in "A Companion to the Maryland Technology Literacy Standards for Students."</li> <li>• Apply appropriate posture, hand, arm and fingering positions when keyboarding (TL, GR 5: 1A1a)</li> <li>• Use technology to enhance learning (TL, GR 5: 3A1, 3B1, 3C1)</li> <li>• Use technology for communication (TL, GR 5: 4A1, 4A2)</li> <li>• Use technology to collaborate and to express ideas (TL, GR 5: 3B1, 4B1)</li> <li>• Use technology to locate, evaluate, and gather information and/or data (TL, GR 5: 5A1)</li> <li>• Use and evaluate technology tools to organize information (TL: GR 5: 5B1)</li> <li>• Use technology to develop strategies to solve problems and make informed decisions (TL, GR 5: 6A1, 6A2, 6A3, 6A4, 6A5, 6B)</li> </ul>

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<b>Cluster: Research to Build and Present Knowledge</b>		
W7 CCR Anchor Standard Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.		
Grade 3	Grade 4	Grade 5
<p>W7 Conduct short research projects that build knowledge about a topic.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Follow an inquiry process. (SLM, GR 2-3: 1A1; TL, GR 3: 6A, 6B)</li> <li>Define a problem, formulate questions, and refine a problem and/or question. (SLM, GR 2-3: 1B1, 1B2, 1B3)</li> <li>Locate and evaluate resources. (SLM, GR 2-3: 2A1)</li> <li>Use safe practices when online. (SLM, GR 2-3: 2A2)</li> <li>Locate and select sources to meet the information need (SLM, GR 2-3: 2B1)</li> <li>Evaluate sources to meet the information need (SLM, GR 2-3: 2B2)</li> <li>Find data and/or information within a variety of sources (SLM, GR 2-3: 3A1)</li> <li>Use a variety of formats to prepare findings/conclusions for sharing (SLM GR 2-3: 5A1)</li> <li>Share findings and/or conclusions (SLM, GR 2-3: 5A2)</li> <li>Cite a source as appropriate.</li> </ul>	<p>W7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Follow an inquiry process (SLM, GR 4-5: 1A; TL, GR 4: 6A, 6B)</li> <li>Define a problem, formulate questions, and refine a problem and/or question (SLM, GR 4-5: 1B1, 1B2, 1B3)</li> <li>Locate and evaluate resources (SLM, GR 4-5: 2A1)</li> <li>Use safe practices when online (SLM, GR 4-5: 2A2)</li> <li>Locate and select sources to meet the information need (SLM, GR 4-5: 2B1)</li> <li>Evaluate sources to meet the information need (SLM, GR 4-5: 2B2)</li> <li>Find data and/or information within a variety of sources (SLM, GR 4-5: 3A1)</li> <li>Use a variety of formats to prepare findings/conclusions for sharing (SLM GR 4-5: 5A1)</li> <li>Share findings and/or conclusions (SLM, GR 4-5: 5A2)</li> <li>Differentiate between original and borrowed ideas and cite sources appropriately.</li> </ul>	<p>W7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>Follow an inquiry process (SLM, GR 4-5: 1A1; TL, GR 5: 6A, 6B)</li> <li>Define a problem, formulating questions, and refining a problem and/or question (SLM, GR 4-5: 1B1, 1B2, 1B3)</li> <li>Locate and evaluate resources (SLM, GR 4-5: 2A1)</li> <li>Use safe practices when online (SLM, GR 4-5: 2A2)</li> <li>Locate and select sources to meet the information need (SLM, GR 4-5: 2B1)</li> <li>Evaluate sources to meet the information need (SLM, GR 4-5: 2B2)</li> <li>Find data and/or information within a variety of sources (SLM, GR 4-5: 3A1)</li> <li>Use a variety of formats to prepare findings/conclusions for sharing (SLM GR 4-5: 5A1)</li> <li>Share findings and/or conclusions (SLM, GR 4-5: 5A2)</li> <li>Differentiate between original and borrowed ideas and cite sources appropriately.</li> </ul>



Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

<b>Cluster: Research to Build and Present Knowledge</b>	
<b>W8 CCR Anchor Standard</b> Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.	
<b>Grade 3</b>	<b>Grade 4</b>
<p><b>W8</b> Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Access prior knowledge, e.g., from science investigations, personal experiences, interactions with others, etc.</li> <li>• Find data and/or information within a variety of sources. (SLM, GR 2-3: 3A1)</li> <li>• Take purposeful notes in a variety of formats that meet the demands of the writing task and medium, e.g., differentiate between relevant and irrelevant or important and unimportant information based on the need (SLM, GR 2-3: 3C1)</li> <li>• Evaluate and analyze the quality, accuracy, and sufficiency of notes (SLM, GR 2-3: 4A)</li> <li>• Sort evidence into specified categories (SLM, GR 2-3: 4A2)</li> <li>• Synthesize information from within a source.</li> </ul>	<p><b>W8</b> Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Access prior knowledge, e.g., from science investigations, personal experiences, interactions with others, etc.</li> <li>• Find data and/or information within a variety of sources. (SLM, GR 4-5: 3A1)</li> <li>• Take purposeful notes in a variety of formats that meet the demands of the writing task and medium, e.g., differentiate between relevant and irrelevant or important and unimportant information based on the need (SLM, GR 4-5: 3C1)</li> <li>• Evaluate and analyze the quality, accuracy, and sufficiency of notes (SLM, GR 4-5: 4A)</li> <li>• Sort evidence into specified categories (SLM, GR 4-5: 4A2)</li> <li>• Synthesize information from a source and/or multiple sources.</li> </ul>
	<p><b>Grade 5</b></p> <p><b>W8</b> Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.</p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Access prior knowledge, e.g., from science investigations, personal experiences, interactions with others, etc.</li> <li>• Find data and/or information within a variety of sources. (SLM, GR 4-5: 3A1)</li> <li>• Take purposeful notes in a variety of formats that meet the demands of the writing task and medium, e.g., differentiate between relevant and irrelevant or important and unimportant information based on the need (SLM, GR 4-5: 3C1)</li> <li>• Evaluate and analyze the quality, accuracy, and sufficiency of notes (SLM, GR 4-5: 4A)</li> <li>• Sort evidence into specified categories (SLM, GR 4-5: 4A2)</li> <li>• Generate a list of sources (SLM GR 4-5: 3C2)</li> <li>• Synthesize information from a source and/or multiple sources.</li> </ul>

Maryland Common Core State Curriculum Framework  
English Language Arts

Standards for Writing (W)

<p><b>Cluster: Research to Build and Present Knowledge</b></p> <p><b>W9 CCR Anchor Standard</b> Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>		
<p><b>Grade 3</b></p> <p><b>W9</b> (Begins in grade 4.)</p>	<p><b>Grade 4</b></p> <p><b>W9</b> Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>W9.a Apply grade 4 Reading standards to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character's thoughts, words, or actions].").</p> <p>W9.b Apply grade 4 Reading standards to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text").</p>	<p><b>Grade 5</b></p> <p><b>W9</b> Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>W9.a Apply grade 5 Reading standards to literature (e.g., "Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text [e.g., how characters interact]").</p> <p>W9.b Apply grade 5 Reading standards to informational texts (e.g., "Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point[s]").</p>
<p><b>Essential Skills and Knowledge</b></p> <p>N/A</p>		

<p><b>Cluster: Range of Writing</b></p> <p><b>W10 CCR Anchor Standard</b> Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.</p>		
<p><b>Grade 3</b></p> <p><b>W10</b> 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.</p>	<p><b>Grade 4</b></p> <p><b>W10</b> 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.</p>	<p><b>Grade 5</b></p> <p><b>W10</b> 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.</p>
<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, adjust the writing process as appropriate for different writing tasks, purposes, and audiences and time frames.</li> <li>Set personal goals and conference regularly with adults to improve writing.</li> </ul>		
<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, adjust the writing process as appropriate for different writing tasks, purposes, and audiences and time frames.</li> <li>Set and adjust personal goals and conference regularly with adults to identify and address writing deficiencies.</li> </ul>		
<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>With guidance and support, adjust the writing process as appropriate for different writing tasks, purposes, and audiences and time frames.</li> <li>Set and adjust personal goals and conference regularly with adults and peers to identify and address writing deficiencies.</li> </ul>		

# Grade 8

DOMAIN: EXPRESSIONS AND EQUATIONS (EE)		
Cluster	Standard	Mathematical Practices
<p>Work with radicals and integer exponents.</p>	<p><b>8EE1:</b> Know and apply the properties of integer exponents to generate equivalent numerical expressions. <i>For example, <math>3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27</math>.</i></p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• Product/Quotient of Powers</li> <li>• Negative Exponents</li> <li>• Zero Exponents</li> <li>• Power of Powers</li> <li>• <b>Apply combination of rules to show equivalency.</b> <i>For example: <math>3^2 (3^{-2})^3 = 3^2 (3^{-6}) = 3^{-4} = 1/3^4 = 1/81</math></i></li> </ul> <p><b>8EE2:</b> Use square root and cube root symbols to represent solutions to equations of the form <math>x^2 = p</math> and <math>x^3 = p</math>, where <math>p</math> is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that <math>\sqrt{2}</math> is irrational.</p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• Perfect Squares</li> <li>• Perfect Cubes</li> <li>• Square Roots (Symbol Notation)</li> <li>• Cube Roots (Symbol Notation)</li> <li>• Principal/Negative Roots</li> <li>• <b>Knowledge of inverse relationships of square/square roots and cube/cube roots</b></li> <li>• <b>Model with squares and cubes.</b> <i>For example, volume of a cube is <math>64m^3</math>. What is the value of the edge length?</i></li> </ul> <p><b>8EE3:</b> Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. <i>For example, estimate the population of the United States as <math>3 \times 10^8</math> and the population of the world as <math>7 \times 10^9</math>, and determine that the world population is more than 20 times larger.</i></p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• Powers of 10 and Place Value</li> <li>• Comparing large and small numbers using quotient and power rules</li> </ul>	<ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>2. Reason abstractly and quantitatively.</li> <li>3. Construct viable arguments and critique the reasoning of others.</li> <li>4. Model with mathematics.</li> <li>5. Use appropriate tools strategically.</li> <li>6. Attend to precision.</li> <li>7. Look for and make use of structure.</li> <li>8. Look for and express regularity in repeated reasoning.</li> </ol>

DOMAIN: EXPRESSIONS AND EQUATIONS (EE)... continued		
Cluster	Standard	Mathematical Practices
<p>Work with radicals and integer exponents.</p> <p>(continued)</p>	<p><b>8EE4:</b> Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.</p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• <b>Decimal/Scientific Notation</b></li> <li>• <b>Add, subtract, multiply, and divide with scientific notation</b></li> <li>• <b>Unit Comparison.</b> For example, <math>0.0063 \text{ m/yr} = 6.3 \text{ mm/yr}</math></li> <li>• <b>Computation.</b> For example, given <math>6.3 \times 10^{-3} \text{ m/yr}</math>, how long would it take to spread 2.5m?</li> <li>• <b>Reading scientific notation on a calculator.</b> For example, <math>6.3 \text{ E } 8 = 6.3 \times 10^8</math></li> </ul>	<ol style="list-style-type: none"> <li>1. <b>Make sense of problems and persevere in solving them.</b></li> <li>2. <b>Reason abstractly and quantitatively.</b></li> <li>3. <b>Construct viable arguments and critique the reasoning of others.</b></li> <li>4. <b>Model with mathematics.</b></li> <li>5. <b>Use appropriate tools strategically.</b></li> <li>6. <b>Attend to precision.</b></li> <li>7. <b>Look for and make use of structure.</b></li> <li>8. <b>Look for and express regularity in repeated reasoning.</b></li> </ol>
Cluster	Standard	
<p>Understand the connections between proportional relationships, lines, and linear equations.</p>	<p><b>8EE5:</b> Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.</p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• <b>Relating graphic, symbolic, numerical representations of proportional relationships</b></li> <li>• <b>Calculate slope/rate of change of a line graphically</b></li> <li>• <b>Use different strategies in comparing different proportional relationships</b></li> <li>• <b>Understand that all proportional relationships start at the origin</b></li> </ul> <p><b>8EE6:</b> Use similar triangles to explain why the slope <math>m</math> is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation <math>y = mx</math> for a line through the origin, and the equation <math>y = mx + b</math> for a line intercepting the vertical axis at <math>b</math>.</p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• <b>Direct Variation</b></li> <li>• <b>Similar Right Triangles (provide diagram of graphical notation) to establish that slope is constant for a non-vertical line</b></li> <li>• <b>Graphically derive equations <math>y = mx</math> and <math>y = mx + b</math></b></li> </ul>	

	<ul style="list-style-type: none"> <li>• Discuss zero slope and undefined slope line</li> <li>• Introduce intercepts using families of graphs</li> </ul>	
<b>DOMAIN: EXPRESSIONS AND EQUATIONS (EE)... continued</b>		
<b>Cluster</b>	<b>Standard</b>	<b>Mathematical Practices</b>
Analyze and solve linear equations and pairs of simultaneous linear equations.	<p><b>8EE7: Solve linear equations in one variable</b></p> <p><b>7a.</b> Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form <math>x = a</math>, <math>a = a</math>, or <math>a = b</math> results (<math>a</math> and <math>b</math> are different numbers).</p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• Substitution to justify a solution</li> <li>• Infinitely Many Solutions</li> <li>• No Solutions</li> <li>• Inverse Operations</li> <li>• Balanced Equations</li> <li>• Equivalent Equations</li> </ul> <p><b>7b.</b> Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.</p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• Distributive Property</li> <li>• Use distributive property efficiently. <i>For example, <math>4(x + 2) = 7.2(x - 4)</math> vs. non-example, <math>4(x + 5) = 32</math></i></li> <li>• Dividing Fractions</li> <li>• Collecting (Combining) Like Terms</li> <li>• Solve equations with rational numbers</li> </ul> <p><b>8EE8: Analyze and solve pairs of simultaneous linear equations</b></p> <p><b>8a.</b> Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.</p> <p><u>Essential Skills and Knowledge</u></p> <ul style="list-style-type: none"> <li>• Solving systems of equations by graphing</li> <li>• Justifying numerically</li> </ul> <p><b>8b.</b> Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. <i>For example, <math>3x + 2y = 5</math> and <math>3x + 2y = 6</math> have no solution because <math>3x + 2y</math> cannot simultaneously be 5 and 6.</i></p>	<ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>2. Reason abstractly and quantitatively.</li> <li>3. Construct viable arguments and critique the reasoning of others.</li> <li>4. Model with mathematics.</li> <li>5. Use appropriate tools strategically.</li> <li>6. Attend to precision.</li> <li>7. Look for and make use of structure.</li> <li>8. Look for and express regularity in repeated reasoning.</li> </ol>

	<p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Estimate solutions graphically, then solve using substitution and elimination</li> </ul>	
<b>DOMAIN: EXPRESSIONS AND EQUATIONS (EE)... continued</b>		
Cluster	Standard	Mathematical Practices
<p>Analyze and solve linear equations and pairs of simultaneous linear equations.</p> <p>(continued)</p>	<ul style="list-style-type: none"> <li>• Discuss efficient solution methods with a system of equations - graphically and algebraically</li> <li>• In addition to solving simple cases by inspection, discuss the fact that linear equations of parallel lines have the same slope</li> </ul> <p><b>8c.</b> Solve real-world and mathematical problems leading to two linear equations in two variables. <i>For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.</i></p> <p><b>Essential Skills and Knowledge</b></p> <ul style="list-style-type: none"> <li>• Write an equation given two points</li> <li>• Compare slopes</li> <li>• Write equations from context</li> </ul>	<ol style="list-style-type: none"> <li>1. Make sense of problems and persevere in solving them.</li> <li>2. Reason abstractly and quantitatively.</li> <li>3. Construct viable arguments and critique the reasoning of others.</li> <li>4. Model with mathematics.</li> <li>5. Use appropriate tools strategically.</li> <li>6. Attend to precision.</li> <li>7. Look for and make use of structure.</li> <li>8. Look for and express regularity in repeated reasoning.</li> </ol>

# Standards for Mathematical Practices

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

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

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

## **2. Reason abstractly and quantitatively.**

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

## **3. Construct viable arguments and critique the reasoning of others.**

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

## **4. Model with mathematics.**

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to

# Standards for Mathematical Practices

simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

## 5. Use appropriate tools strategically.

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

## 6. Attend to precision.

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

## 7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see  $7 \times 8$  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  $y$ .

## 8. Look for and express regularity in repeated reasoning.

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



## TOOLKIT Components - DRAFT

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- **Activities for Mathematical Practices:** This tool provides sample tasks and procedures that integrate a Mathematical Practice with the Standard.
- **Clarification:** Each clarification provides an explanation of the content in the Standard so that teachers better understand the concepts and skills addressed in the Standard.
- **Instructional Connections:** This tool provides examples of how the concepts and skills of the Standard are associated with concepts and skills of other Standards.
- **Model Lessons:** The model lesson is directly aligned to the Standard and is based on the components of an exemplary lesson. It includes ideas for differentiation, project and homework ideas, and varied levels of questioning.
- **Lesson Seeds:** The lesson seeds are ideas that can be used to build a lesson for the Standard. Lesson seeds are not meant to be all-inclusive, nor are they substitutes for instruction.
  - NOTES:
    - Ideas for putting the mathematics in real-world context
    - Ideas for differentiation – scaffolding, Enrichment and Enhancement, co-teaching for Special Education and ELL, etc.
- **Prerequisite Skills:** The prerequisite skills describe the prior skills and knowledge a student needs to have mastered before working on the concepts in the Standard.
- **Public Release Items:** Inactive until Common Core Assessment Items are available for Public Release.
- **Formative Assessments:** (This tool would be for educator use only.) Assessments used to inform instruction.
- **Resources:** This tool shows resource links that offer instructional materials and know-how for the Standard such as e-Tools, instructional strategies, research literature, video clips, links to websites, etc.
- **Sample Items:** Each sample item, which has been provided for public use, gives an idea of how the Standard can be practiced and/or assessed.
- **Levels of Questions:** This tool shares examples of questions related to the Standard at various levels of cognitive demand.
- **Technology and Manipulatives:** This tool provides ways technology and manipulatives will enhance the teaching and learning of the Standard.
- **Future Connections:** This tool provides information about where concepts and skills of the Standard are applied in future mathematics.
- **Vocabulary:** This tool defines the key mathematical terms for the Standard.

## **Draft** Proposal for Assessment Design by PARCC

PARCC has proposed design models for the new assessments in English Language Arts and Mathematics. There is a commitment to an “evidence-based” design; the assessments will measure the content mastery attained by the student in the identified standards. The following information is a synthesis of the preliminary descriptions presented by PARCC. It is important to remember this is DRAFT information as of March 31, 2011.

- In both disciplines, there will be through course assessments at various points throughout the year to provide teacher and student feedback during the school year
- Some or all of the through course (TC) assessments in English Language Arts and the end of year assessment (EOY) will be combined to determine a single summative score for the year.
- Some or all of the through course assessments in Mathematics will be combined to determine a single summative score for the year. Not all assessments will be weighted equally.
- The assessments are scheduled throughout the year and
  - The EOY assessment will be administered after 90% of instruction has occurred

### **English Language Arts/Literacy (Grades 3 – 8)**

- Three Master Claims. “They are those claims for which the assessment would provide sufficient evidence to yield scalable scores for making longitudinal comparisons.”
  - Students are “on track” to career and college readiness in literacy.
  - Students read and comprehend a range of sufficiently complex texts independently.
  - Students write effectively when analyzing sources.
- Through Course Assessment Proposals
  - The first through course assessment (TC1) is still under consideration. It may not count at all. Students will write a short essay in response to a given selection and answer a few machine-scorable items. This is designed so that it would be possible to distinguish between students’ abilities to read and comprehend the passage and their abilities to write effectively.
  - The second through course assessment (TC2) may have students read two passages and write two essays. They would read one literature passage and write an essay in response to that passage. They would also read one informational passage and write an essay in response to that passage. Like TC1, there would be a few machine-scorable items.
  - The third through course assessment (TC3) will be a “research task that includes a comparison and synthesis of sources, including a mix

of print and diverse media (which could include listening/viewing); priority will be placed on researching historical and scientific informational text". Students will write one short essay that requires analysis of one source. Students will write a longer essay that requires a research question and integrates the source from the first essay with shorter sources.

- Speaking and Listening
  - PARCC is proposing that a fourth TC be administered to assess speaking and listening standards. This assessment would not be part of the single summative score for the year. The score could be incorporated in the student's grade in other ways. Teachers would score the assessment with a common rubric, but they are also looking at the potential for automated scoring models. It is possible that this would be required in certain grade levels.
- End of Year Assessment Proposal
  - The EOY will include a full range of reading passages, including literature and informational text.
  - Reading comprehension, vocabulary, and grammatical conventions will be assessed through machine-scorable items.
  - It will have the greatest single weight of all four assessments.
- Distinctions in Assessment by Grade-Band
  - The balance of text on the EOY assessment-literature to informational text-should shift by grade band:
    - For grades 3-5, the distribution of texts should be 50% literature and 50% informational text.
    - For grades 6-8, the distribution of texts should be 40% literature and 60% informational text.
  - The type of writing-narrative to analytic-should shift by grade band:
    - For grades 3-5, allow a mix of narrative and analytic writing (argument and writing to inform/explain).
    - For grades 6-8, focus only on analytic writing or arguments and writing to inform/explain.
  - The recommended passage length for each grade follows the NAEP guidelines.
- Academic Vocabulary
  - Vocabulary will occur in the context of the passages; vocabulary will not be tested in isolation. The words selected will be academic vocabulary – also referred to as Tier 2 words.
  - The recommendation is to follow the 2009 NAEP guidelines for selecting words for item development.

- Scoring
  - Scoring presents many issues and concerns
  - The TC assessments require writing to be scored multiple times per year. One solution is to have combined automated and human scoring,
  - TC3 presents scoring security concerns because it is administered over multiple sessions. Other issues to be considered are safe access to the web and the technology infrastructure necessary to administer and score this assessment.
  
- High School Assessment Design
  - Representatives from higher education felt that independence, stamina, and persistence should be part of any assessment.
  - The design of the high school assessment is in its beginning stages but many of the assessment priorities for grades 3 – 8 were voiced in the high school discussion.

### **Mathematics (Grades 3- 8)**

- Two Master Claims.
  - Students are on track to be college and career based on overall score
  - Students have mastered the domains assessed in that grade
    - At each grade level, one or two domains will be highlighted.
    - The other domains would receive proper emphasis so that no domain is neglected at a grade level.
    - All domains will contribute to the overall summative score.
  
- Mathematical Fluency
  - Fluency measures whether students can perform calculations and solve problems quickly and accurately.
  - There are one or two fluencies at each grade level
  - Fluency will be assessed in the fourth quarter, using short tasks.
  
- Standards for Mathematical Practice
  - The recommendation is not to separate a practice score from the content score because it sends the wrong message.
  - Assessing the practices will be challenging and it may be that individual growth in mathematical practice must be measured over a multi-year time scale.
  
- Three Task Type Proposals
  - Short Tasks
    - Routine problems with short chains of reasoning
    - Brief answers, but not necessarily multiple-choice
    - Focus on fluencies, concepts, and procedures
    - Response time required is short

- Scaffolded Tasks
  - Several short tasks that build in difficulty, and require longer chains of reasoning
  - Brief answers that may include explanation and/or justification
  - Focus on pure mathematics or modeling and application
  - Response time required is longer~10 minutes
- Unscaffolded Tasks
  - Non-routine tasks that require longer chains of reasoning
  - Longer responses and explanations
  - Focus on modeling, application and non-routine mathematical situations
  - Response time is greatest~15 minutes
- Quarterly Assessment Proposal
  - First Quarter (Q1) will be a short test concentrating on a fairly small number of topics. As in English Language Arts, the first assessment may not be required.
  - Second Quarter (Q2) will focus on the content taught during the first half of the year. Third Quarter (Q3) will include scaffolded and unscaffolded items on the content from the first half of the year. The content taught during the third quarter will be assessed in the fourth quarter assessment (Q4).
  - Fourth Quarter (Q4) will consist entirely of short tasks so that it can be scored quickly and inexpensively. It will focus on the scope of content from the second half-year of instruction. “Key take-always” necessary to be prepared for the next grade will be strongly represented in Q4.
- High School Assessment
  - The design of the high school assessment is in its beginning stages.
  - Higher education faculty communicated that they prize the ability to apply knowledge and skills and solve non-routine problems.