

STEM GRADES 11 & 12: SEMESTER 1

Dates	Prioritized Literacy Standard	Prioritized Writing Standard
Unit 1 Sept. 5- Oct. 18	<p>Reading Anchor Standard #2: Central Idea/Theme Science: RST 2: Determine the key ideas or conclusions of a source; summarize complex concepts, processes, or information presented in a source by paraphrasing in precise and accurate terms. Mathematical Practice #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.</p>	<p>Writing Standard #2: Write Informative/Explanatory 11-12W1: Write arguments to support claims that analyze substantive topics or texts, using valid reasoning and relevant and sufficient evidence. 11-12W1a: Introduce precise claim(s), establish the significance of the claim(s), distinguish the claim(s) from counterclaim(s), and create an organization that logically sequences claims, counterclaims, reasons, and evidence. 11-121b: Develop claim(s) and counterclaim(s) thoroughly and in a balanced manner, supplying the most relevant evidence for each while pointing out the strengths and limitations of both, anticipating the audience’s knowledge level, concerns, values, and possible biases. 11-12W1c: Use precise language, content-specific vocabulary and literary techniques to express the appropriate complexity of the topic. 11-12W1d: Use appropriate and varied transitions, as well as varied syntax, to make critical connections, create cohesion, and clarify the relationships among complex ideas and concepts. 11-12W1e: Provide a concluding statement or section that explains the significance of the argument presented. 11-12W1f: Maintain a style and tone appropriate to the writing task.</p>
Unit 2 Oct. 21- Nov. 27	<p>Reading Anchor Standard #6: Point of View/Author’s Purpose Science: RST 6: Analyze the author’s purpose in providing an explanation, describing a procedure, or discussion an experiment in a text, identifying important issues that remain unresolved. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. Mathematical Practice #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 make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. 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 so solving complex problems and identify correspondences between different approaches.</p>	<p>Writing Standard #1: Argumentative Writing 11-12W1: Write arguments to support claims that analyze substantive topics or texts, using valid reasoning and relevant and sufficient evidence. 11-12W1a: Introduce precise claim(s), establish the significance of the claim(s), distinguish the claim(s) from counterclaim(s), and create an organization that logically sequences claims, counterclaims, reasons, and evidence. 11-121b: Develop claim(s) and counterclaim(s) thoroughly and in a balanced manner, supplying the most relevant evidence for each while pointing out the strengths and limitations of both, anticipating the audience’s knowledge level, concerns, values, and possible biases. 11-12W1c: Use precise language, content-specific vocabulary and literary techniques to express the appropriate complexity of the topic. 11-12W1d: Use appropriate and varied transitions, as well as varied syntax, to make critical connections, create cohesion, and clarify the relationships among complex ideas and concepts. 11-12W1e: Provide a concluding statement or section that explains the significance of the argument presented. 11-12W1f: Maintain a style and tone appropriate to the writing task. Mathematical Practice #8: Express Regularity in Repeated Expression Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. They continually evaluate the reasonableness of the intermediate results.</p>
Unit 3 Dec. 2- Jan. 17	<p>Reading Anchor Standard #8: Claims & Counterclaims Science: RST 8: Evaluate the data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. Mathematical Practice #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 can build a logical progression of statements to explore the truth of their conjectures. They can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They can 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.</p>	<p>Writing Standard #8: Gather Multiple Sources of Evidence Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.</p>

STEM GRADES 9 & 10: SEMESTER 2

Dates		Prioritized Literacy Standard	Prioritized Writing Standard
Unit 4	Jan. 27- March 13	<p>Reading Anchor Standard #7: Technical Analysis Science: RST 7: Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>Mathematical Practice #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.</p>	<p>Writing Standard #6 & 7: Research to Build and Present Knowledge</p> <p>11-12W6: Conduct research through self-generated question, or solve a problem; narrow or broaden the inquiry when appropriate. Synthesize multiple sources, demonstrating understanding and analysis of the subject under investigation.</p> <p>11-12W7: Gather relevant information from multiple sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas; avoid plagiarism, over reliance on one source, and follow a standard format for citation.</p> <p>Mathematical Practice #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.</p>
Unit 5	March 16- May 1	<p>Reading Anchor Standard #4: Determine meaning of key terms/symbols Science: RST 4: Determine the meaning of symbols, key terms, and other content-specific words and phrases as they are used in scientific or technical source.</p> <p>Mathematical Practice #7: Make Use of Structures 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.</p>	<p>Writing Standard #4: Text Types & Connections</p> <p>11-12W4: Create a poem, story, play, art work, or other response to a text, author, theme or personal experience; demonstrate knowledge and understanding of a variety of techniques and genres. Explain connections between the original and the created work.</p>
Unit 6	May 4- June 16	<p>Reading Anchor Standard #3: Development of Ideas Science: RST 3: Analyze how and why scientific ideas and reasoning are developed and modified over the course of a text, source, argument, etc.; analyze/evaluate the results and conclusions based on explanations in the text.</p> <p>Mathematical Practice #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 and express numerical answers with a degree of precision appropriate for the problem context.</p>	<p>Writing Standard: Lifelong Practices of Writers</p> <p>Review 11-12W1 & 2 Standards.</p> <p>Refer to the “Lifelong Practices of Writers” and “Production and Range of Writing” descriptions.</p> <p>Mathematical Practice #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.</p>