

STEM GRADES 9 & 10: 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; trace the source's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the source.</p> <p>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 9-10W2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content. 9-10W2a; Introduce and organize complex ideas, concepts, and information to make important connections and distinctions. 9-10W2b: Develop a topic with well-chosen relevant and sufficient facts, definitions, concrete details, quotations and paraphrased information or other examples appropriate to the audience's knowledge of the topic. Include formatting, graphics, and multimedia when useful to aid comprehension. 9-10W2c: Use precise language and content-specific vocabulary to express the appropriate complexity of a topic. 9-10W2d; Use appropriate and varied transitions to make critical connections and distinctions, create cohesion, and clarify relationships among complex ideas and concepts. 9-10W2e: Provide a concluding statement or section that explains the significance of the information presented. 9-10W2f; Establish and maintain a style 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: Describe purpose and/or point of view when an author is presenting information, describing a procedure, discussing an experiment, etc. Compare an contrast findings presented in a source to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</p> <p>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 #5: Draw Information from Texts 9-10W5: Draw evidence from literary or informational texts to support analysis, reflection, and research. Apply grade 9/10Reading standards to both literary and informational text.</p> <p>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: Assess the extent to which the reasoning and evidence in a source support the author's claim or a recommendation for solving a scientific or technical problem.</p> <p>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 #1: Argumentative Writing Write arguments to support claims that analyze substantive topics or texts, using valid reasoning and relevant and sufficient evidence. 9-10W1a: Introduce precise claim(s), distinguish the claim(s) from counterclaims, establish and organize clear relationships among claim(s), counterclaim(s), reasons, and evidence. 9-10W1b: Develop claim(s) and counterclaims in a balanced manner, supplying evidence for each while pointing out the strengths and limitations of both, anticipating the audience's knowledge of level and concerns. 9-10W1c: Use precise language and content-specific vocabulary to express the appropriate complexity of the topic. 9-10W1d: Use appropriate and varied transitions to make critical connections and distinctions, create cohesion and clarify the relationships among complex ideas and concepts. 9-10W1e: Provide a concluding statement or section that explains the significance of the argument presented. 9-10W1f: Maintain a style and tone appropriate to the writing task.</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</p> <p>Science: RST 7: Translate scientific or technical information expressed as written text into visual form (e.g., a table or chart), and translate information expressed visually or mathematically (e.g., in an equation) into words.</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 9-10W6: Conduct research to answer questions, including self-generated questions, or solve a problem; narrow or broaden the inquiry when appropriate. Synthesize multiple sources, demonstrating understanding of the subject under investigation.</p> <p>9-10W7: Gather relevant information from multiple 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; avoid plagiarism 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 words/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 sources; describe how the inclusion of charts, graphs, diagrams, data influence conclusion(s).</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 9-10W4: 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 divergences from the original when appropriate.</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.</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 Review 9-10W1 & 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>