

Grades 9-10: Reading and Writing in Science and Technology

Standard	Learning Targets	Units
(RI) Reading for Informational Text: Key Ideas		
RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.	I can locate and cite precise evidence to support my analysis of science and technical texts. [RST.9-10.1]	
RST.9-10.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.	I can determine the central ideas or conclusions of a text and provide an accurate summary of the text. [RST.9-10.2] I can trace a text’s explanation or depiction of a complex process. [RST.9-10.2]	
RST.9-10.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.	I can follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. [RST.9-10.3] I can recognize and attend to special cases or exceptions defined in the text when carrying out experiments, taking measurements, or performing technical tasks. [RST.9-10.3]	
(RI) Reading for Informational Text: Craft and Structure		
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics.	I can determine the meanings of symbols, key terms, and other words and phrases specific to scientific or technical topics. [RST.9-10.4]	
RST.9-10.5 Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy).	I can understand relationships among concepts in a text, including relationships among key terms (e.g., force, friction, reaction force, energy). [RST.9-10.5]	
RST.9-10.6 Analyze the author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.	I can analyze an author’s purpose in providing an explanation, describing a procedure, or discussing an experiment in a text. [RST.9-10.6] I can recognize and define the question an author seeks to address in a given text. [RST.9-10.6]	

Grades 9-10: Reading and Writing in Science and Technology

<p>(RI) Reading for Informational Text: Integration of Knowledge and Ideas</p>		
<p>RST.9-10.7 Translate quantitative or technical information expressed in words in a 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>I can translate quantitative or technical information expressed in words in a text into visual form. [RST.9-10.7]</p> <p>I can translate information expressed visually or mathematically into words. [RST.9-10.7]</p> <p>I can translate quantitative and qualitative information and analysis in a print or digital text. [RST.9-10.7]</p>	
<p>RST.9-10.8 Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.</p>	<p>I can decide to what extent the reasons and evidence support an author's claims or recommendation for solving a problem. [RST.9-10.8]</p>	
<p>RST.9-10.9 Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.</p>	<p>I can compare and contrast findings presented in a text to those from other sources (including my own experiments). [RST.9-10.9]</p> <p>I can compare and contrast findings from a current experiment to those from past experiments. [RST.9-10.9]</p>	
<p>(RI) Reading for Informational: Range of Reading and Level of Text Complexity</p>		
<p>RST.9-10.10 By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.</p>	<p>I can distinguish between portions of a text that I understand versus portions that I don't understand. [RST.9-10.10]</p> <p>I can use various reading and note-taking strategies that will help me locate portions of a text that are difficult for me. [RST.9-10.10]</p> <p>I can list questions I have about a text and ask for help in order to understand portions of a text that are too difficult for me. [RST.9-10.10]</p>	

Grades 9-10: Reading and Writing in Science and Technology

Writing: Science and Technology		
(W) Writing: Text Types and Purposes		
<p>WHST.9-10.1 Write arguments focused on discipline-specific content.</p> <ul style="list-style-type: none"> • Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. • Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. • Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. • Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. • Provide a concluding statement or section that follows from or supports the argument presented. 	<p>I can write arguments to support claims with clear reasons and relevant evidence. [WHST.9-10.1]</p> <p>I can introduce a precise claim and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. [WHST.9-10.1]</p> <p>I can develop claims and counterclaims fairly with data and evidence. [WHST.9-10.1]</p> <p>I can describe the strengths and limitations of both claims and counterclaims. [WHST.9-10.1]</p> <p>I can develop claims and counterclaims in a discipline-appropriate form and in a manner that anticipates my audience's knowledge level and concerns. [WHST.9-10.1]</p> <p>I can use words, phrases, and clauses to link the major sections of the text and create cohesion. [WHST.9-10.1]</p> <p>I can use words, phrases, and clauses to clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. [WHST.9-10.1]</p> <p>I can establish and maintain a formal style and objective tone. [WHST.9-10.1]</p> <p>I can provide a concluding statement or section that follows from or supports the argument. [WHST.9-10.1]</p>	

Grades 9-10: Reading and Writing in Science and Technology

<p>WHST.9-10.2</p> <p>Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p> <ul style="list-style-type: none"> • Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. • Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. • Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. • Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers. • Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. • Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 	<p>I can write informational/explanatory texts that include the narration of historical events, scientific procedures/ experiments, or technical processes. [WHST.9-10.2]</p> <p>I can introduce a topic and organize ideas, concepts, and information to make important connections and distinctions. [WHST.9-10.2]</p> <p>I can incorporate formatting, graphics, and multimedia into my informational/explanatory texts. [WHST.9-10.2]</p> <p>I can develop a topic with well-chosen, relevant facts, extended definitions, concrete details, quotations, and extended examples. [WHST.9-10.2]</p> <p>I can use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts. [WHST.9-10.2]</p> <p>I can use vocabulary specific to what I'm studying to convey the complexity of the topic to an informed reader. [WHST.9-10.2]</p> <p>I can establish and maintain a formal style that is consistent with the discipline in which I'm writing. [WHST.9-10.2]</p> <p>I can provide a concluding statement or section that follows from the information or explanation presented. [WHST.9-10.2]</p>	
---	---	--

Grades 9-10: Reading and Writing in Science and Technology

(W) Writing: Production and Distribution of Writing		
<p>WHST.9-10.3</p> <p>Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.</p>	<p>I can build my knowledge of individuals and events in history by examining narrative accounts of these individuals and events. [WHST.9-10.3]</p> <p>I can analyze individuals and events in history by examining narrative accounts of these individuals and events. [WHST.9-10.3]</p> <p>I can better understand how a procedure or process works by examining and describing each step of the procedure or process. [WHST.9-10.3]</p> <p>I can be objective in describing the various steps of a process or procedure. [WHST.9-10.3]</p>	
<p>WHST.9-10.4</p> <p>Production and Distribution of Writing: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p>I can understand my task, purpose, and audience when I write. [WHST.9-10.4]</p> <p>I can match the development, organization, and style of my writing to my task, audience, and purpose. [WHST.9-10.4]</p>	
<p>WHST.9-10.5</p> <p>Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p>	<p>I can understand writing as a process of planning, revising, editing, and rewriting. [WHST.9-10.5]</p> <p>I can develop and strengthen my writing by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. [WHST.9-10.5]</p>	
<p>WHST.9-10.6</p> <p>Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.</p>	<p>I can use technology, including the internet, to interact and collaborate with others on the writing process. [WHST.9-10.6]</p>	

Grades 9-10: Reading and Writing in Science and Technology

(W) Writing: Research to Build and Present Knowledge		
<p>WHST.9-10.7 Research to Build and Present Knowledge: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>	<p>I can conduct short and sustained research projects to answer a question or solve a problem. [WHST.9-10.7] I can draw on several sources when conducting research and can adapt and refocus my search if necessary. [WHST.9-10.7]</p>	
<p>WHST.9-10.8 Research to Build and Present Knowledge: 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>	<p>I can synthesize information from multiple print and digital sources accurately. [WHST.9-10.8] I can utilize advanced search tools and assess the credibility of each source in answering a research question. [WHST.9-10.8] I can quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation. [WHST.9-10.8]</p>	
<p>WHST.9-10.9 Research to Build and Present Knowledge: Draw evidence from informational texts to support analysis, reflection, and research.</p>	<p>I can draw evidence from informational texts to support my analysis, reflection, and research. [WHST.9-10.9]</p>	
(W) Writing: Range of Writing		
<p>WHST.9-10.10 Range of Writing: Write routinely over extended time frames (time for 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>I can design a work plan to appropriately match the task, purpose, and audience for a piece of writing. [WHST.9-10.10] I can design a work plan that includes time for research, reflection, and revision. [WHST.9-10.10] I can write routinely over shorter time frames for a range of tasks, purposes, and audiences. [WHST.9-10.10] I can write routinely over extended time frames for a range of tasks, purposes, and audiences. [WHST.9-10.10]</p>	