# Reading and Writing Standards for Literacy in Science and Technical Subjects (RST and WHST)

| What the Standards Say: | What the Standards Mean : |
|---|---|
| **Key Ideas and Details**<br>**RST 1:** Cite specific textual evidence to support analysis of science and technical texts.<br><br>**RST 2:** Determine the central ideas or conclusions of a text; provide an accurate summary of the text<br><br>**RST 3:** Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. | Students read scientific or technical text to find out what the author said. They need to:<br>• examine the details<br>• determine main ideas or conclusions<br>• identify the evidence (details) in the text that support the main ideas or conclusions<br>• accurately summarize ideas, procedures or directions in the text<br>• follow a written procedure |
| **Craft and Structure**<br>**RST 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 grade level texts and topics.<br><br>**RST 5:** Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic and the relationships among key terms<br><br>**RST 6:** Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text. | Students read scientific or technical text to understand how the author used language to make a point. They need to<br>• determine the meaning of scientific vocabulary as they read using a variety of strategies.<br>• look at the way the text is organized and how it all fits together<br>• understand the author's purpose(s) in writing the way he or she did |
| **Integration of Knowledge and Ideas**<br>**RST 7:** Integrate, translate and evaluate information presented in diverse formats and media, including visually and quantitatively, as well as in words.*<br><br>**RST 8:** Evaluate the reasoning and evidence in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.<br><br>**RST 9**: Synthesize information from a range of sources into a coherent understanding of a process, phenomenon, or concept | Students compare and contrast the information gained from experiments, simulations, video or multimedia sources with information gained from reading a text on the same topic.<br><br>They need to think about the depth and scope of the content, the author's purpose, whether the source provides new information or summarizes known information, etc. |
| **Range of Reading and Text Complexity**<br>**RST 10:** read and comprehend science/technical texts in the grades level text complexity band independently and proficiently. | Students read and comprehend text in science and technical subjects at the appropriate grade level. |

| What the Standards Say: | What the Standards Mean : |
|---|---|
| **Text Types and Purposes*** <br> **WHST 1:** Write arguments focused on discipline-specific content to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence. <br><br> **WHST 2:** Write informative/explanatory texts including scientific procedures/experiments, or technical processes to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content. | Students write an argument or claim based on a science issue or topic with:<br>• logical reasoning and organization<br>• accurate science content and relevant data<br>• appropriate use of science vocabulary<br>• a concluding statement.<br><br>Students write informational text with<br>• accurate facts, details and examples<br>• appropriate vocabulary<br>• a concluding statement<br><br>Informational text includes writing step-by-step procedures for their experiments that are detailed enough that others would be able to replicate them in order to achieve the same results. |
| **Production and Distribution of Writing** <br> **WHST 4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. <br><br> **WHST 5:** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. <br><br> **WHST 6:** Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others. | Students develop and strengthen their scientific writing by focusing on purpose and audience. Students develop an academic voice and a formal style that is appropriate to science writing. <br><br> Students use technology (Internet, keyboarding skills, formatting, storing) to create and publish writing. |
| **Research to Build and Present Knowledge** <br> **WHST 7:** Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation. <br><br> **WHST 8:** Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism. <br><br> **WHST 9:** Draw evidence from literary or informational texts to support analysis, reflection, and research. | Students conduct short research projects or experiments to answer a question or solve a problem. Students combine information from multiple sources to construct their claims, evidence, and explanations. <br><br> Students use a variety of sources, using and citing information accurately. <br><br> Students use evidence from informational texts to support their claims and explanations. |
| **Range of Writing** <br> **WHST 10:** 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 | Students have multiple opportunities to write about a wide range of science topics aligned to their grade level. Students do many different kinds of writing. |