

Approved Facility Schools
Appendix 1
Science Connections to Common Core State Standards
Grade 9-12 Science

PHYSICAL SCIENCE

ELA/Literacy:

- **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. (HS-PS1-1)
- **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. (HS-PS4-2) (HS-PS4-3) (HS-PS4-4)
- **RST.11-12.1** Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. (HS-PS1-3) (HS-PS1-5) (HS-PS2-1) (HS-PS2-6) (HS-PS3-4) (HS-PS4-2) (HS-PS4-3) (HS-PS4-4)
- **RST.11-12.7** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address question or solve a problem. (HS-PS2-1) (HS-PS4-1) (HS-PS4-4)
- **RST.11-12.8** Evaluate the hypotheses, 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. (HS-PS4-2) (HS-PS4-3) (HS-PS4-4)
- **WHST.9-12.2** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. (HS-PS1- 2) (HS-PS1-5) (HS-PS2-6) (HS-PS4-5)
- **WHST.9-12.5** 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. (HS-PS1-2)
- **WHST.9-12.7** 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. (HS- PS1-3) (HS-PS1-6) (HS-PS2-3) (HS- PS2-5) (HS-PS3-3) (HS-PS3-4) (HS-PS3-5)
- **WHST.9-12.9** Draw evidence from informational texts to support analysis, reflection, and research. (HS-PS1-3) (HS-PS2-1) (HS-PS2-5) (HS-PS3-4) (HS-PS3-5)
- **WHST.11-12.8** Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. (HS-PS1-3) (HS-PS2-5) (HS-PS3-4) (HS-PS3-5) (HS-PS4-4)
- **SL.11-12.5** Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest. (HS-PS1-4) (HS-PS3-1) (HS-PS3-2) (HS-PS3-5)

Approved Facility Schools
Appendix 1
Science Connections to Common Core State Standards
Grade 9-12 Science

Mathematics:

- **MP.2** Reason abstractly and quantitatively. (HS-PS1-5) (HS-PS1-7) (HS-PS2-1) (HS-PS2-2) (HS-PS2-4) (HS-PS3-1) (HS-PS3-2) (HS-PS3-3) (HS-PS3-4) (HS-PS3-5) (HS-PS4-1) (HS-PS4-3)
- **MP.4** Model with mathematics. (HS-PS1-4) (HS-PS1-8) (HS-PS2-1) (HS-PS2-2) (HS-PS2-4) (HS-PS3-1) (HS-PS3-2) (HS-PS3-3) (HS-PS3-4) (HS-PS3-5) (HS-PS4-1)
- **HSN-Q.A.1** Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. (HS-PS1-2) (HS-PS1-3) (HS-PS1-4) (HS-PS1-5) (HS-PS1-7) (HS-PS1-8) (HS-PS2-1) (HS-PS2-2) (HS-PS2-4) (HS-PS2-5) (HS-PS2-6) (HS-PS3-1) (HS-PS3-3)
- **HSN-Q.A.2** Define appropriate quantities for the purpose of descriptive modeling. (HS-PS1-4) (HS-PS1-7) (HS-PS1-8) (HS-PS2-1) (HS-PS2-2) (HS-PS2-4) (HS-PS2-5) (HS-PS2-6) (HS-PS3-1) (HS-PS3-3)
- **HSN-Q.A.3** Choose a level of accuracy appropriate to limitations on measurement when reporting quantities. (HS-PS1-2) (HS-PS1-3) (HS-PS1-4) (HS-PS1-5) (HS-PS1-7) (HS-PS1-8) (HS-PS2-1) (HS-PS2-2) (HS-PS2-4) (HS-PS2-5) (HS-PS2-6) (HS-PS3-1) (HS-PS3-3)
- **HSA-SSE.A.1** Interpret expressions that represent a quantity in terms of its context. (HS-PS2-1) (HS-PS2-4) (HS-PS4-1) (HS-PS4-3)
- **HSA-SSE.B.3** Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. (HS-PS2-1) (HS-PS2-4) (HS-PS4-1) (HS-PS4-3)
- **HSA-CED.A.1** Create equations and inequalities in one variable and use them to solve problems. (HS-PS2-1) (HS-PS2-2)
- **HSA-CED.A.2** Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. (HS-PS2-1) (HS-PS2-2)
- **HSA-CED.A.4** Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. (HS-PS2-1) (HS-PS2-2) (HS-PS4-1) (HS-PS4-3)
- **HSF-IF.C.7** Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. (HS-PS2-1)
- **HSS-ID.A.1** Represent data with plots on the real number line (dot plots, histograms, and box plots). (HS-PS2-1)

**Approved Facility Schools
Appendix 1
Science Connections to Common Core State Standards
Grade 9-12 Science**

ENGINEERING DESIGN

ELA/Literacy:

- **RST.11-12.7** 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. (HS-ETS1-1) (HS-ETS1-3)
- **RST.11-12.8** Evaluate the hypotheses, 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. (HS-ETS1-1) (HS-ETS1-3)
- **RST.11-12.9** 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. (HS-ETS1-1) (HS-ETS1-3)

Mathematics:

- **MP.2** Reason abstractly and quantitatively. (HS-ETS1-1) (HS-ETS1-3) (HS-ETS1-4)
- **MP.4** Model with mathematics. (HS-ETS1-1) (HS-ETS1-2) (HS-ETS1-3) (HS-ETS1-4)