Soap and Water Science Module Standard Correlations: Grades 3-7

Next Generation Science Standards

Italics indicate connections between NGSS and Soap and Water Science Module.

Performance Expectation	Disciplinary Core Idea	Science and Engineering Practice	Crosscutting Concept
5-PS1-1: Develop a model to describe that matter is made of particles too small to be seen.	**PS1.A: Structure and Properties of Matter:** Matter of any type can be subdivided into particles that are too small to see, but even then the matter still exists and can be detected by other means. A model showing that gases are made from matter particles that are too small to see and are moving freely around in space can explain many observations, including the inflation and shape of a balloon and the effects of air on larger particles or objects. *Online Activity: Students observe germ/water molecule interaction at a microscopic scale.*	**Developing and Using Models:** Develop a model to describe phenomena. *Online Activity: Students observe a model.*	**Scale, Proportion and Quantity:** Natural objects exist from the very small to the immensely large. *Online Activity: Students observe germs (microorganisms).*
5-PS1-4: Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	**PS1.B: Chemical Reactions:** When two or more different substances are mixed, a new substance with different properties may be formed. *Video: Oil/water/soap mixed.*	**Planning and Carrying Out Investigations:** Conduct an investigation collaboratively to produce data to serve as the basis for evidence, using fair tests in which variables are controlled and the number of trials considered. *N/A*	**Cause and Effect:** Cause and effect relationships are routinely identified, tested, and used to explain change. *Online Activity: Cause and effect of soap and water with germs and dirt.* *Video: Students observe cause and effect relationship between water and oil and water, oil and soap.*
MS-PS1-1: Develop models to describe the atomic composition of simple molecules and extended structures.	**PS1.A: Structure and Properties of Matter:** Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms. *Online Activity: Students observe molecular structure of water molecules.*	**Developing and Using Models:** Develop a model to predict and/or describe phenomena. *Online Activity and Video: Students observe models, but do not predict.*	**Scale, Proportion and Quantity:** Time, space, and energy phenomena can be observed at various scales using models to study systems that are too large or too small. *Online Activity: Models used to observe small phenomena.*

		Critical Thinking Questions (Educator Resources): Students describe soap/water/dirt/germ interaction.	
MS-PS1-2: Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.	**PS1.B: Chemical Reactions:** Substances react chemically in characteristic ways. In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants. *Online Activity and Video: Both address the first sentence of this DCI—students observe how different substances react chemically. The nature of this activity does not involve regrouping of atoms into new molecules, per se.*	**Analyzing and Interpreting Data:** Analyze and interpret data to determine similarities and differences in findings. *N/A*	**Patterns:** Macroscopic patterns are related to the nature of microscopic and atomic-level structure. *N/A*

<u>Common Core ELA Standards</u>

Assumes students read and discuss Critical Thinking Questions (Educator Resources)

3rd Grade	4th Grade	5th Grade	6th Grade	7th Grade
CCSS.ELA-LITERACY.RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. *What did I Learn? Quiz*	CCSS.ELA-LITERACY.RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text. *Online Activity Text*	CCSS.ELA-LITERACY.RI.5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text. *Critical Thinking Questions (Educator Resources)*	CCSS.ELA-LITERACY.RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue. *Online Activity, Video*	CCSS.ELA-LITERACY.SL.7.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly. *Critical Thinking Questions (Educator Resources)*
CCSS.ELA-LITERACY.RI.3.2 Determine the main idea of a text; recount the key	CCSS.ELA-LITERACY.RI.4.4 Determine the meaning of general academic and	CCSS.ELA-LITERACY.RI.5.4 Determine the meaning of general academic and domain-	CCSS.ELA-LITERACY.SL.6.1 Engage effectively in a range of collaborative discussions	

details and explain how they support the main idea. *Online Activity Text*	domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*. *Online Activity Text*	specific words and phrases in a text relevant to a *grade 5 topic or subject area*. *Online Activity Text*	(one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly. *Critical Thinking Questions (Educator Resources)*	
CCSS.ELA-LITERACY.RI.3.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. *Critical Thinking Questions (Educator Resources)*	CCSS.ELA-LITERACY.RI.4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. *Online Activity, Video*	CCSS.ELA-LITERACY.SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly. *Critical Thinking Questions (Educator Resources)*		
CCSS.ELA-LITERACY.RI.3.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 3 topic or subject area*. *Online Activity Text*	CCSS.ELA-LITERACY.SL.4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly. *Critical Thinking Questions (Educator Resources)*	.		

CCSS.ELA-LITERACY.RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). *Online Activity*				
CCSS.ELA-LITERACY.SL.3.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. *Online Activity, Video*				
CCSS.ELA-LITERACY.SL.3.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly. *Critical Thinking Questions (Educator Resources)*				