

GOT YOU COVERED!

NEXT GENERATION SCIENCE STANDARDS

Grades 6-8		Activity				
		1	2	3	4	5
MS-PS1-1.	Develop models to describe the atomic composition of simple molecules and extended structures.				X	X
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.				X	
MS-PS3-3.	Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.			X		
MS-PS4-2.	Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.		X			
MS-ESS3-3.	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.			X		
Grades 9-12						
HS-LS2-7.	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.			X		

NATIONAL SCIENCE STANDARDS

Grades 5-8		Activity				
		1	2	3	4	5
Science as Inquiry	Develop descriptions, explanations, predictions, and models using evidence.		X	X		
	Think critically and logically to make the relationships between evidence and explanations.		X	X	X	
Physical Science	Substances react chemically in characteristic ways with other substances to form new substances (compounds) with different characteristic properties. In chemical reactions, the total mass is conserved. Substances often are placed in categories or groups if they react in similar ways; metals is an example of such a group.				X	X
	Light interacts with matter by transmission (including refraction), absorption, or scattering (including reflection). To see an object, light from that object—emitted by or scattered from it—must enter the eye.		X	X		
	The sun is a major source of energy for changes on the earth's surface. The sun loses energy by emitting light. A tiny fraction of that light reaches the earth, transferring energy from the sun to the earth. The sun's energy arrives as light with a range of wavelengths, consisting of visible light, infrared, and ultraviolet radiation.				X	
Science and Technology	Design a solution or product. Students should make and compare different proposals in the light of the criteria they have selected. They must consider constraints—such as cost, time, trade-offs, and materials needed—and communicate ideas with drawings and simple models.			X		
Science in Personal and Social Perspectives	Human activities also can induce hazards through resource acquisition, urban growth, land-use decisions, and waste disposal. Such activities can accelerate many natural changes.			X		

NATIONAL SCIENCE STANDARDS (CONTINUED)

Grades 9-12		Activity				
		1	2	3	4	5
Science as Inquiry	IDENTIFY QUESTIONS AND CONCEPTS THAT GUIDE SCIENTIFIC INVESTIGATIONS. Students should formulate a testable hypothesis and demonstrate the logical connections between the scientific concepts guiding a hypothesis and the design of an experiment. They should demonstrate appropriate procedures, a knowledge base, and conceptual understanding of scientific investigations.			X		
Physical Science	A large number of important reactions involve the transfer of either electrons (oxidation/reduction reactions) or hydrogen ions (acid/base reactions) between reacting ions, molecules, or atoms. In other reactions, chemical bonds are broken by heat or light to form very reactive radicals with electrons ready to form new bonds. Radical reactions control many processes such as the presence of ozone and greenhouse gases in the atmosphere, burning and processing of fossil fuels, the formation of polymers, and explosions.				X	X
Science in Personal and Social Perspectives	Many factors influence environmental quality. Factors that students might investigate include population growth, resource use, population distribution, overconsumption, the capacity of technology to solve problems, poverty, the role of economic, political, and religious views, and different ways humans view the earth.	X		X	X	

COMMON CORE STANDARDS: LITERACY IN SCIENCE ENGLISH LANGUAGE ARTS STANDARDS — SCIENCE & TECHNICAL SUBJECTS

Grades 5-8		Activity				
		1	2	3	4	5
CCSS.ELA-LITERACY.RST.6-8.3.	Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.		X	X	X	X
CCSS.ELA-LITERACY.RST.6-8.4.	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 <i>grades 6-8 texts and topics</i> .		X	X	X	X
CCSS.ELA-LITERACY.RST.6-8.7.	Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).		X	X		X
Grades 9-10						
CCSS.ELA-LITERACY.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.		X	X	X	X
CCSS.ELA-LITERACY.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 <i>grades 9-10 texts and topics</i> .			X	X	
CCSS.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.				X	