

Standards	Lesson 1: What is Energy?	Lesson 2: Lighting	Lesson 3: Water Heating	Lesson 4: Insulation, Heating, and Cooling	Lesson 5: Appliances
<i>Grade 7: Science</i>					
Scientific Inquiry, Practice and Applications	X	X	X	X	X
Science is a Way of Knowing	X	X	X	X	X
Physical Science: Conservation of Mass and Energy Energy can be transformed or transferred but is never lost	X	X	X	X	
Physical Science: Conservation of Mass and Energy Energy can be transferred through a variety of ways	X	X	X	X	
<i>Grade 7: Math</i>					
The Number System Solve real-world and mathematical problems involving the four operations with rational Numbers	X	X	X	X	
Expressions and Equations Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities	X				
<i>Grade 7: Reading</i>					

Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone	X	X	X	X	
<i>Grade 7: Writing</i>					
Write arguments to support claims with clear reasons and relevant evidence.	X	X	X	X	
Research to Build and Present Knowledge Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.	X	X	X	X	
Draw evidence from literary or informational texts to support analysis, reflection, and research	X	X	X	X	
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 discipline-specific tasks, purposes, and audiences	X	X	X	X	
<i>Grade 7: Speaking and Listening</i>					
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	X	X	X	X	
Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation					X
<i>Grade 8: Science</i>					
Scientific Inquiry, Practice and Applications	X	X	X	X	X
Science is a Way of Knowing	X	X	X	X	X
Science is a Human Endeavor	X	X	X	X	X
Physical Science: Forces and Motion Forces can act to change the motion of objects	X				
Physical Science: Forces and Motion Objects can experience a force due to an external field such as magnetic, electrostatic, or gravitational fields	X				
<i>Grade 8: Math</i>					

<p>Use functions to model relationships between quantities Expressions and Equations Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways</p>		X	X		
<p><i>Grade 8: Reading</i></p>					
<p>Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts</p>	X	X	X	X	
<p><i>Grade 8: Writing</i></p>					
<p>Write arguments to support claims with clear reasons and relevant evidence.</p>	X	X	X	X	
<p>Research to Build and Present Knowledge Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration</p>				X	

Draw evidence from literary or informational texts to support analysis, reflection, and research	X	X	X	X	
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 discipline-specific tasks, purposes, and audiences	X	X	X	X	
<i>Grade 8: Speaking and Listening</i>					
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly	X	X	X	X	
Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation					X
<i>Technology (Grades 6-8)</i>					

<p>Information and Communications Technology Select and use digital learning tools or resources to support planning, implementing, and reflecting upon a defined task.</p>	X	X	X	X	
<p>Use advanced search techniques to locate needed information using digital learning tools and resources.</p>	X	X	X	X	
<p>Create artifacts using digital learning tools and resources to demonstrate knowledge</p>				X	
<p>Society and Technology Analyze an environmental concern and investigate technology solutions to that problem</p>				X	
<p>Apply a complete design process to solve an identified individual or community problem: research, develop, test, evaluate and present several possible solutions, and redesign to improve the solution.</p>				X	
<p><i>High School: Physical Science</i></p>					
<p>Scientific Inquiry, Practice and Applications</p>	X	X	X	X	X
<p>Science is a Way of Knowing</p>	X	X	X	X	X

Science is a Human Endeavor	X	X	X	X	X
Scientific Knowledge is Open to Revision in Light of New Evidence	X	X	X	X	X
Energy and Waves Conservation of energy	X	X	X	X	
Energy and Waves Transfer and transformation of energy (including work	X	X	X	X	
Energy and Waves Thermal energy	X	X	X	X	
<i>High School: Chemistry</i>					
Scientific Inquiry, Practice and Applications	X	X	X	X	X
Science is a Way of Knowing	X	X	X	X	X
Science is a Human Endeavor	X	X	X	X	X
Scientific Knowledge is Open to Revision in Light of New Evidence	X	X	X	X	X
<i>High School: Environmental Science</i>					
Scientific Inquiry, Practice and Applications	X	X	X	X	X
Science is a Way of Knowing	X	X	X	X	X

Science is a Human Endeavor	X	X	X	X	X
Scientific Knowledge is Open to Revision in Light of New Evidence	X	X	X	X	X
Earth's Resources Energy Resources	X	X	X		
Global Environmental Problems and Issues Human population	X				
Global Environmental Problems and Issues Potable water quality, use and availability		X			
Global Environmental Problems and Issues Climate change	X	X			
Global Environmental Problems and Issues Sustainability	X				
<i>High School: Physics</i>					
Energy Gravitational potential energy	X				
Energy Work and power	X		X		
Energy Conservation of energy	X	X	X	X	
<i>High School: Math</i>					
Numbers and Quantity Reason quantitatively and use units to solve problems	X	X	X	X	
Linear, Quadratic and Exponential Models Construct and compare linear, quadratic, and		X	X		

exponential models, and solve problems					
<i>High School: Reading</i>					
Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.	X	X	X	X	
<i>High School: Writing</i>					
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.	X	X	X	X	
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	X	X	X	X	
<i>High School: Speaking and Listening</i>					
Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on	X	X	X	X	

grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively					
Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task	X	X	X	X	
<i>High School: Technology</i>					
Information and Communications Technology Develop strategies for using digital learning tools and resources to plan, implement and reflect upon a complex task	X	X	X	X	
Create artifacts using digital learning tools and resources to demonstrate knowledge				X	
Use advanced search and filtering techniques to locate needed information using digital learning tools and resources	X	X	X	X	