

**AAAS Science Benchmarks**  
**Grades 9-12**

	Warming Up to Global Warming	What Factors Impact a Greenhouse	Greenhouse Gasses	Climate and CO <sub>2</sub>	Carbon Cycle in the Lab	CO <sub>2</sub> and You	Earth's Energy Cycle: Albedo	Albedo	Reflecting on Reflectivity	Daisy World	Atmospheric Perturbations	The Polar Regions	What Effect Does Climate Have on Wildlife	Climate Change: Boon or Bust for Northern Waters	Experimenting With Ice Melt	Signs of Change: Studying Tree Rings	Ice Cores	Stabilization Wedges	Ahimsa Media's Reducing CO <sub>2</sub> Emissions
<b>The Nature of Science</b>																			
<i>1B: Scientific Inquiry</i>		X					X	X	X	X	X				X	X	X	X	
<b>The Nature of Mathematics</b>																			
<i>2B: Mathematics, Science and Technology</i>			X																
<b>The Nature of Technology</b>																			
<i>3B: Design and Systems</i>									X										
<i>3C: Issues in Technology</i>													X	X					X
<b>The Physical Setting</b>																			
<i>4B: The Earth</i>		X					X												
<i>4C: Processes that Shape the Earth</i>					X												X		

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<b>The Living Environment</b>																			
<i>5A: Diversity of Life</i>													X						
<i>5D: Interdependence of Life</i>	X				X				X				X	X				X	
<i>5E: Flow of Matter and Energy</i>					X	X													
<b>Human Society</b>																			
<i>7A: Cultural Effects on Behavior</i>														X					
<i>7B: Group Behavior</i>														X					
<i>7C: Social Change</i>	X			X															
<i>7D: Social Trade-Offs</i>														X				X	
<b>The Designed World</b>																			
<i>8C: Energy Sources and Use</i>						X												X	
<b>The Mathematical World</b>																			
<i>9B: Symbolic Relationships</i>		X	X			X	X	X		X	X					X			

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<b>Historical Perspectives</b>																			
<i>10E: Moving the Continents</i>												X							
<b>Common Themes</b>																			
<i>11A: Systems</i>				X					X	X									
<i>11B: Models</i>								X											
<i>11C: Constancy and Change</i>		X	X				X		X	X									
<b>Habits of Mind</b>																			
<i>12B: Computation and Estimation</i>						X													
<i>12C: Manipulation and Observation</i>								X											
<i>12D: Communication Skills</i>	X	X					X												

**National Science Education Standards  
Grades 9-12**

	<b>Warming Up to Global Warming</b>	<b>What Factors Impact a Greenhouse</b>	<b>Greenhouse Gasses</b>	<b>Climate and CO<sub>2</sub></b>	<b>Carbon Cycle in the Lab</b>	<b>CO<sub>2</sub> and You</b>	<b>Earth's Energy Cycle: Albedo</b>	<b>Albedo (w/extension)</b>	<b>Reflecting on Reflectivity</b>	<b>Daisy World</b>	<b>Atmospheric Perturbations</b>	<b>The Polar Regions</b>	<b>What Effect Does Climate Have on Wildlife</b>	<b>Climate Change: Boon or Bust for Northern Waters</b>	<b>Experimenting With Ice Melt</b>	<b>Signs of Change: Studying Tree Rings</b>	<b>Ice Cores</b>	<b>Stabilization Wedges</b>	<b>Ahimsa Media's Reducing CO<sub>2</sub> Emissions</b>
<b>Unifying Concepts and Processes</b>																			
<i>Systems, order, and organization</i>																		<b>X</b>	
<i>Evidence, models, and explanation</i>		<b>X</b>																	
<i>Change, constancy, and measurement</i>			<b>X</b>	<b>X</b>															
<b>Science as Inquiry</b>																			
<i>Abilities necessary to do scientific inquiry</i>								<b>X</b>	<b>X</b>		<b>X</b>				<b>X</b>			<b>X</b>	
<i>Understandings about scientific inquiry</i>																<b>X</b>	<b>X</b>	<b>X</b>	
<b>Physical Science</b>																			
<i>Chemical reactions</i>			<b>X</b>	<b>X</b>															
<i>Interactions of energy and matter</i>							<b>X</b>	<b>X</b>	<b>X</b>										

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<b>Life Science</b>																			
<i>Interdependence of organisms</i>													X	X					
<i>Matter, energy, and organization in living things</i>				X					X	X						X			
<b>Earth and Space Science</b>																			
<i>Energy in the earth system</i>		X					X	X	X	X									
<i>Geochemical cycles</i>					X	X													
<b>Science and Technology</b>																			
<i>Abilities of technological design</i>														X				X	
<i>Understandings about science and technology</i>						X												X	

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<b>Science in Personal and Social Perspectives</b>																			
<i>Environmental quality</i>				X									X	X	X				
<i>Natural and human-induced hazards</i>	X			X									X	X	X	X			
<i>Science and technology in local, national, and global challenges</i>			X	X	X	X													