

# National Science Education Standards (Abstract)

## Science as Inquiry Standards

<b>Grades K-4</b> -Abilities necessary to do scientific inquiry -Understanding about scientific inquiry	<b>Grades 5-8</b> -Abilities necessary to do scientific inquiry -Understanding about scientific inquiry
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## Physical Science Standards

<b>Grades K-4</b> -Properties of objects and materials -Position and motion of objects -Light, heat, electricity, and magnetism	<b>Grades 5-8</b> -Properties and changes of properties in matter -Motions and forces -Transfer of energy
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## Life Science Standards

<b>Grades K-4</b> -Characteristics of organisms -Life cycles of organisms -Organisms and environments	<b>Grades 5-8</b> -Structure and function in living systems -Reproduction and heredity -Regulation and behavior -Populations and ecosystems -Diversity and adaptations of organisms
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## Earth and Space Science Standards

<b>Grades K-4</b> -Properties of earth materials -Objects in the sky -Changes in earth and sky	<b>Grades 5-8</b> Structures of the earth system Earth's history Earth in the solar system
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## Science and Technology Standards

<b>Grades K-4</b> -Abilities to distinguish between natural objects and objects made by humans -Abilities of technological design -Understanding about science and technology	<b>Grades 5-8</b> -Abilities of technological design -Understanding about science and technology
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### Science in Personal and Social Perspectives Standards

<p><b>Grades K-4</b></p> <ul style="list-style-type: none"> <li>-Personal health</li> <li>-Characteristics and changes in populations</li> <li>-Types of resources</li> <li>-Changes in environments</li> <li>-Science and technology in local challenges</li> </ul>	<p><b>Grades 5-8</b></p> <ul style="list-style-type: none"> <li>-Personal health</li> <li>-Populations, resources, and environments</li> <li>-Natural hazards</li> <li>-Risks and benefits</li> <li>-Science and technology in society</li> </ul>
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### History and Nature of Science Standards

<p><b>Grades K-4</b></p> <ul style="list-style-type: none"> <li>-Science as human endeavor</li> </ul>	<p><b>Grades 5-8</b></p> <ul style="list-style-type: none"> <li>-Science as human endeavor</li> <li>-Nature of science</li> <li>-History of science</li> </ul>
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### Content Standards, Grades K-4

<p><b>Unifying Concepts and Processes</b></p> <ul style="list-style-type: none"> <li>-Systems, order, and organization</li> <li>-Evidence, models, and explanation</li> <li>-Change, constancy and measurement</li> <li>-Evolution and Equilibrium</li> <li>-Form and function</li> </ul>	<p><b>Science as Inquiry</b></p> <ul style="list-style-type: none"> <li>-Abilities necessary to do scientific inquiry</li> <li>-Understandings about scientific inquiry</li> </ul>	<p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>-Properties of objects and materials</li> <li>-Position and motion of objects</li> <li>-Light, heat, electricity, and magnetism</li> </ul>	<p><b>Life Science</b></p> <ul style="list-style-type: none"> <li>-Characteristics of organisms</li> <li>-Life cycles of organisms</li> <li>-Organisms and environments</li> </ul>
<p><b>Earth and Space Science</b></p> <ul style="list-style-type: none"> <li>-Properties of earth materials</li> <li>-Objects in the sky</li> <li>-Changes in earth and sky</li> </ul>	<p><b>Science and Technology</b></p> <ul style="list-style-type: none"> <li>-Abilities of technological design</li> <li>-Understandings about science and technology</li> <li>-Abilities to distinguish between natural objects and objects made by humans</li> </ul>	<p><b>Science in Personal and Social Perspectives</b></p> <ul style="list-style-type: none"> <li>-Personal health</li> <li>-Characteristics and changes in populations</li> <li>-Types of resources</li> <li>-Changes in environments</li> <li>-Science and technology in local challenges</li> </ul>	<p><b>History and Nature of Science</b></p> <ul style="list-style-type: none"> <li>-Science as human endeavor</li> </ul>

**Content Standards, Grades 5-8**

<p><b>Unifying Concepts and Processes</b></p> <ul style="list-style-type: none"> <li>-Systems, order and organization</li> <li>-Evidence models, and explanation</li> <li>-Change, constancy, and measurement</li> <li>-Evolution and equilibrium</li> </ul>	<p><b>Science as Inquiry</b></p> <ul style="list-style-type: none"> <li>-Abilities necessary to do scientific inquiry</li> <li>-Understandings about scientific inquiry</li> </ul>	<p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>-Properties and changes</li> <li>-Motions and forces</li> <li>-Transfer and energy</li> </ul>	<p><b>Life Science</b></p> <ul style="list-style-type: none"> <li>-Structure and function in living systems</li> <li>-Reproduction and heredity</li> <li>-Regulation and behavior</li> <li>-Populations and ecosystems</li> </ul>
<p><b>Earth and Space Science</b></p> <ul style="list-style-type: none"> <li>-Structure of the earth system</li> <li>-Earth's history</li> <li>-Earth in the solar system</li> </ul>	<p><b>Science and Technology</b></p> <ul style="list-style-type: none"> <li>-Abilities of technological design</li> <li>-Understandings about science and technology</li> </ul>	<p><b>Science in Personal and Social Perspectives</b></p> <ul style="list-style-type: none"> <li>-Personal health</li> <li>-Populations, resources, and environments</li> <li>-Natural hazards</li> <li>-Risks and Benefits</li> <li>-Science and technology in society</li> </ul>	<p><b>History and Nature of Science</b></p> <ul style="list-style-type: none"> <li>-Science as a human endeavor</li> <li>-Nature of science</li> <li>-History of science</li> </ul>