

North Dakota Science Content and Achievement Standards

Standard 7

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North Dakota Department of Public Instruction

Dr. Wayne G. Sanstead, State Superintendent

600 E Boulevard Avenue, Dept. 201

Bismarck, North Dakota 58505-0440

www.dpi.state.nd.us



Standard 7: Science and Other Areas

Standard 7: Students understand relations between science and personal, social, and environmental issues.				
Benchmark Expectations	PROFICIENCY DESCRIPTOR			
	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
Kindergarten				
SCIENCE AND PERSONAL HEALTH K.7.1. Identify safety rules for school and home	Students identify an extensive variety of safety rules for school and home.	Students identify a variety of safety rules for school and home.	Students identify some different safety rules for school and home.	Students identify few safety rules for school and home.
Grade 1				
SCIENCE AND PERSONAL HEALTH 1.7.1. Identify personal care practices (e.g., dental care, hand washing, exercise, nutrition) that contribute to a healthy life	Students identify an extensive variety of personal care practices that contribute to a healthy life.	Students identify many different personal care practices that contribute to a healthy life.	Students identify some different personal care practices that contribute to a healthy life.	Students identify few personal care practices that contribute to a healthy life.
SCIENCE AND ENVIRONMENTAL ISSUES 1.7.2. Describe ways that humans influence their environment (e.g., littering, recycling, car pooling)	Students describe an extensive variety of ways that humans influence their environment.	Students describe a variety of ways that humans influence their environment.	Students describe some different ways that humans influence their environment.	Students describe few ways that humans influence their environment.
Grade 2				
SCIENCE AND PERSONAL HEALTH 2.7.1. Identify personal choices (e.g., personal hygiene, nutrition, fitness, safety) that contribute to individual wellness	Students identify an extensive variety of personal choices that contribute to individual wellness.	Students identify a variety of personal choices that contribute to individual wellness.	Students identify some different personal choices that contribute to individual wellness.	Students identify few personal choices that contribute to individual wellness.
2.7.2. Describe some things (e.g., UV Rays, second-hand smoke, pollution) from our environment that are harmful to people	Students describe an extensive variety of things from our environment that are harmful to people.	Students describe a variety of things from our environment that are harmful to people.	Students describe some different things from our environment that are harmful to people.	Students describe few things from our environment that are harmful to people.
SCIENCE AND ENVIRONMENTAL ISSUES <i>No benchmark expectations at this level.</i>				

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	ADVANCED PROFICIENT	PROFICIENT	PARTIALLY PROFICIENT	NOVICE
Grade 3				
SCIENCE AND PERSONAL HEALTH 3.7.1. Identify ways to prevent the spread of germs.	Students identify an extensive variety of ways to prevent the spread of germs.	Students identify many different ways to prevent the spread of germs.	Students identify some different ways to prevent the spread of germs.	Students identify a limited variety of ways to prevent the spread of germs.
SCIENCE AND ENVIRONMENTAL ISSUES 3.7.2. Identify the benefits of recycling, reusing, and reducing	Students identify an extensive variety of benefits of recycling, reusing, and reducing.	Students identify a variety of benefits of recycling, reusing, and reducing.	Students identify some of the benefits of recycling, reusing, and reducing.	Students identify few of the benefits of recycling, reusing, and reducing.
SCIENCE AND SOCIAL ISSUES <i>No benchmark expectations at this level</i>				
Grade 4				
SCIENCE AND PERSONAL HEALTH <i>No benchmark expectations at this level</i>				
SCIENCE AND ENVIRONMENTAL ISSUES 4.7.1. Identify consequences of natural and human-induced environmental changes (e.g., erosion, tsunami, deforestation)	Students identify an extensive variety of consequences of natural and human-induced environmental changes.	Students identify many different consequences of natural and human-induced environmental changes.	Students identify some different consequences of natural and human-induced environmental changes.	Students identify few consequences of natural and human-induced environmental changes.
SCIENCE AND SOCIAL ISSUES 4.7.2. Identify ways in which science and technology have greatly improved human lives (e.g., food quality and quantity, transportation, health, sanitation, communication)	Students identify an extensive variety of ways in which science and technology have greatly improved human lives.	Students identify many different ways in which science and technology have greatly improved human lives.	Students identify some different ways in which science and technology have greatly improved human lives.	Students identify few ways in which science and technology have greatly improved human lives.

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Grade 5				
SCIENCE AND PERSONAL HEALTH				
5.7.1. Identify risks or benefits of personal health choices (e.g., tobacco, alcohol, prescription and illegal drugs, fast foods)	Students identify all of the significant risks or benefits of personal health choices.	Students identify most of the significant risks or benefits of personal health choices.	Students identify some of the significant risks or benefits of personal health choices.	Students identify few of the significant risks or benefits of personal health choices.
SCIENCE AND ENVIRONMENTAL ISSUES				
5.7.2. Explain ways humans benefit from Earth's resources (e.g., air, water, soil, food, fuel, building materials)	Students explain an extensive variety of ways humans benefit from Earth's resources.	Students explain many different ways humans benefit from Earth's resources.	Students explain some different ways humans benefit from Earth's resources.	Students explain few ways humans benefit from Earth's resources.
SCIENCE AND SOCIAL ISSUES <i>No benchmark expectations at this level</i>				
Grade 6				
SCIENCE AND ENVIRONMENTAL ISSUES				
6.7.1. Explain how natural hazards affect populations, resources, and the environment (e.g., floods, storms, hurricanes, volcanoes, earthquakes)	Students explain all of the significant details of how natural hazards affect populations, resources, and the environment.	Students explain most of the significant details of how natural hazards affect populations, resources, and the environment.	Students explain some of the significant details of how natural hazards affect populations, resources, and the environment.	Students explain few of the significant details of how natural hazards affect populations, resources, and the environment.
6.7.2. Explain how recycling and conservation affect populations, resources, and the environment	Students explain all of the significant details of how recycling and conservation affect populations, resources, and the environment.	Students explain most of the significant details of how recycling and conservation affect populations, resources, and the environment.	Students explain some of the significant details of how recycling and conservation affect populations, resources, and the environment.	Students explain few of the significant details of how recycling and conservation affect populations, resources, and the environment.
Grade 7				
SCIENCE AND PERSONAL HEALTH				
7.7.1. Explain how science affects personal health (e.g., injury prevention, immunization, organ transplant, medical scanning devices)	Students explain an extensive variety of ways in which science affects personal health.	Students explain many different ways in which science affects personal health.	Students explain some different ways in which science affects personal health.	Students explain a limited variety of ways in which science affects personal health.

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<p>7.7.2. Identify the factors (e.g., pollution, heredity, diet, virus, bacteria, parasite) that may result in disease.</p> <p>SCIENCE AND ENVIRONMENTAL ISSUES</p>	<p>Students identify an extensive variety of factors that may result in disease.</p>	<p>Students identify many different factors that may result in disease.</p>	<p>Students identify some different factors that may result in disease.</p>	<p>Students identify a limited variety of factors that may result in disease.</p>
<p>7.7.3. Explain how overpopulation affects organisms, resources, and environments (e.g., depletion of food resources, habitat availability, increased loss due to disease, parasites and predators)</p> <p>SCIENCE AND SOCIAL ISSUES</p>	<p>Students provide an insightful explanation of how overpopulation affects organisms, resources, and environments.</p>	<p>Students provide a reasonable explanation of how overpopulation affects organisms, resources, and environments.</p>	<p>Students provide a superficial explanation of how overpopulation affects organisms, resources, and environments.</p>	<p>Students provide an unreasonable explanation of how overpopulation affects organisms, resources, and environments.</p>
<p>7.7.4. Explain the impact of science on food technology (e.g., preservatives, packaging, genetically modified organisms)</p>	<p>Students provide an insightful explanation of the impact of science on food technology.</p>	<p>Students provide a reasonable explanation of the impact of science on food technology.</p>	<p>Students provide a superficial explanation of the impact of science on food technology.</p>	<p>Students provide an unreasonable explanation of the impact of science on food technology.</p>
Grade 8				
<p>SCIENCE AND SOCIAL ISSUES</p>				
<p>8.7.1. Explain the interaction of science and technology with social issues (e.g., mining, natural disasters)</p>	<p>Students provide an insightful explanation of the interaction of science and technology with social issues.</p>	<p>Students provide a reasonable explanation of the interaction of science and technology with social issues.</p>	<p>Students provide superficial explanation of the interaction of science and technology with social issues.</p>	<p>Students provide an unreasonable explanation of the interaction of science and technology with social issues.</p>

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Grade 9-10				
SCIENCE AND PERSONAL HEALTH				
9-10.7.1. Explain how personal health is related to fitness, substance abuse, sexual activity, and nutrition	Students explain all of the significant details of how personal health is related to fitness, substance abuse, sexual activity, and nutrition.	Students explain most of the significant details of how personal health is related to fitness, substance abuse, sexual activity, and nutrition.	Students explain some of the significant details of how personal health is related to fitness, substance abuse, sexual activity, and nutrition.	Students explain few of the significant details of how personal health is related to fitness, substance abuse, sexual activity, and nutrition.
SCIENCE AND ENVIRONMENTAL ISSUES				
9-10.7.2. Identify factors that affect populations (e.g., food webs, carrying capacity, overpopulation, disease, food supply, algal blooms, resources, conservation practices)	Students identify all of the significant details relating factors that affect populations.	Students identify most of the significant details relating factors that affect populations.	Students identify some of the significant details relating factors that affect populations.	Students identify few of the significant details relating factors that affect populations.
SCIENCE AND SOCIAL ISSUES <i>No benchmark expectations at this level</i>				
Grade 11-12				
SCIENCE AND PERSONAL HEALTH <i>No benchmark expectations at this level</i>				
SCIENCE AND ENVIRONMENTAL ISSUES				
11-12.7.1. Explain the impact of environmental laws and policies on the environment and society (e.g., waste/pollutants from industry, carbon dioxide emissions, location and number of animals in a feedlot versus water supply)	Students explain the impact of an extensive variety of environmental laws and policies on the environment and society.	Students explain the impact of a variety of environmental laws and policies on the environment and society.	Students explain the impact of some different environmental laws and policies on the environment and society.	Students explain the impact of few environmental laws and policies on the environment and society.

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11-12.7.2. Explain ways renewable and nonrenewable resources are managed (e.g., land reclamation, forest management, CRP, hunting licenses, energy –conserving technologies)	Students explain, with extensive significant detail, ways renewable and nonrenewable resources are managed.	Students explain, with t significant detail, ways renewable and nonrenewable resources are managed.	Students explain, with some significant detail, ways renewable and nonrenewable resources are managed.	Students explain, with little significant detail, ways renewable and nonrenewable resources are managed.
11-12.7.3. Explain the economic and social impact of using alternative energy resources	Students provide an insightful explanation of the economic and social impact of using alternative energy resources.	Students provide a reasonable explanation of the economic and social impact of using alternative energy resources.	Students provide a superficial explanation of the economic and social impact of using alternative energy resources.	Students provide an unreasonable explanation of the economic and social impact of using alternative energy recourses.
SCIENCE AND SOCIAL ISSUES				
11-12.7.4. Explain how science and technology can influence personal, industrial, and cultural decision-making (e.g., organ transplants, cloning, stem cell research, genetic manipulation, use of genetic profile, archeological discoveries, land management, resource management)	Students explain an extensive variety of ways science and technology can influence personal, industrial, and cultural decision-making.	Students explain a variety of ways science and technology can influence personal, industrial, and cultural decision-making.	Students explain some different ways science and technology can influence personal, industrial, and cultural decision-making.	Students explain few ways science and technology can influence personal, industrial, and cultural decision-making.