

**Main Criteria:** Minnesota Academic Standards

**Secondary Criteria:** Virtual Field Trips

**Subjects:** Science, Social Studies

**Grade:** 9

**Correlation Options:** Show Correlated

**Minnesota Academic Standards**

**Science**

Grade: 9 - Adopted: 2009

<b>CONTENT STANDARD / DOMAIN</b>	<b>MN.9.1.</b>	<b>The Nature of Science and Engineering</b>
<b>PERFORMANCE INDICATOR / DOMAIN COMPONENT</b>	<b>9.1.1.</b>	<b>The Practice of Science</b>
<b>INDICATORS OF PROGRESS / STRAND</b>	<b>9.1.1.1.</b>	The student will understand that science is a way of knowing about the natural world that is characterized by empirical criteria, logical argument and skeptical review.
<b>INDICATORS OF PROGRESS</b>	<b>9.1.1.1.5.</b>	Identify sources of bias and how bias might influence the direction of research and the interpretation of data.  <u>Virtual Field Trips</u> The Amazon Rainforest - Part 2 - Older Grades
<b>INDICATORS OF PROGRESS</b>	<b>9.1.1.1.6.</b>	Describe how changes in scientific knowledge generally occur in incremental steps that include and build on earlier knowledge.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks - West - Alaska & Hawaii National Parks West - Nevada, California National Parks West - Wyoming, Utah National Parks of the Western Region - Part 1
<b>INDICATORS OF PROGRESS</b>	<b>9.1.1.1.7.</b>	Explain how scientific and technological innovations - as well as new evidence - can challenge portions of, or entire accepted theories and models including, but not limited to: cell theory, atomic theory, theory of evolution, plate tectonic theory, germ theory of disease, and the big bang theory.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks - West - Alaska & Hawaii National Parks West - Nevada, California National Parks West - Wyoming, Utah National Parks of the Western Region - Part 1
<b>CONTENT STANDARD / DOMAIN</b>	<b>MN.9.1.</b>	<b>The Nature of Science and Engineering</b>
<b>PERFORMANCE INDICATOR / DOMAIN COMPONENT</b>	<b>9.1.2.</b>	<b>The Practice of Engineering</b>
<b>INDICATORS OF PROGRESS / STRAND</b>	<b>9.1.2.1.</b>	The student will understand that engineering is a way of addressing human needs by applying science concepts and mathematical techniques to develop new products, tools, processes and systems.
<b>INDICATORS OF PROGRESS</b>	<b>9.1.2.1.1.</b>	Understand that engineering designs and products must be continually checked and critiqued for alternatives, risks, costs and benefits, so that subsequent designs are refined and improved.  <u>Virtual Field Trips</u> The Amazon Rainforest - Part 2 - Older Grades

INDICATORS OF PROGRESS	9.1.2.1.2.	Recognize that risk analysis is used to determine the potential positive and negative consequences of using a new technology or design, including the evaluation of causes and effects of failures.  <u>Virtual Field Trips</u> The Amazon Rainforest - Part 2 - Older Grades
INDICATORS OF PROGRESS	9.1.2.1.3.	Explain and give examples of how, in the design of a device or process, engineers consider how it is to be manufactured, operated, maintained, replaced and disposed of.  <u>Virtual Field Trips</u> The Amazon Rainforest - Part 2 - Older Grades
CONTENT STANDARD / DOMAIN	MN.9.1.	The Nature of Science and Engineering
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.1.3.	Interactions Among Science, Technology, Engineering, Mathematics, and Society
INDICATORS OF PROGRESS / STRAND	9.1.3.1.	The student will understand that natural and designed systems are made up of components that act within a system and interact with other systems.
INDICATORS OF PROGRESS	9.1.3.1.3.	Describe how positive and/or negative feedback occur in systems.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks - West - Alaska & Hawaii National Parks West - Nevada, California
CONTENT STANDARD / DOMAIN	MN.9.1.	The Nature of Science and Engineering
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.1.3.	Interactions Among Science, Technology, Engineering, Mathematics, and Society
INDICATORS OF PROGRESS / STRAND	9.1.3.4.	The student will understand that science, technology, engineering and mathematics rely on each other to enhance knowledge and understanding.
INDICATORS OF PROGRESS	9.1.3.4.1.	Describe how technological problems and advances often create a demand for new scientific knowledge, improved mathematics and new technologies.  <u>Virtual Field Trips</u> The Amazon Rainforest - Part 2 - Older Grades
CONTENT STANDARD / DOMAIN	MN.9.3.	Earth and Space Science
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.3.1.	Earth Structure and Processes
INDICATORS OF PROGRESS / STRAND	9.3.1.1.	The student will understand that the relationships among earthquakes, mountains, volcanoes, fossil deposits, rock layers and ocean features provide evidence for the theory of plate tectonics.
INDICATORS OF PROGRESS	9.3.1.1.4.	Explain how the rock record provides evidence for plate movement.  <u>Virtual Field Trips</u> National Parks West - Wyoming, Utah
INDICATORS OF PROGRESS	9.3.1.1.5.	Describe how experimental and observational evidence led to the theory of plate tectonics.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks - West - Alaska & Hawaii National Parks West - Nevada, California

		National Parks West - Wyoming, Utah National Parks of the Western Region - Part 1
<b>CONTENT STANDARD / DOMAIN</b>	<b>MN.9.3.</b>	<b>Earth and Space Science</b>
<b>PERFORMANCE INDICATOR / DOMAIN COMPONENT</b>	<b>9.3.2.</b>	<b>Interdependence Within the Earth System</b>
<b>INDICATORS OF PROGRESS / STRAND</b>	<b>9.3.2.2.</b>	The student will understand that global climate is determined by distribution of energy from the sun at the Earth's surface.
<b>INDICATORS OF PROGRESS</b>	<b>9.3.2.2.1.</b>	Explain how Earth's rotation, ocean currents, configuration of mountain ranges, and composition of the atmosphere influence the absorption and distribution of energy, which contributes to global climatic patterns.  <u>Virtual Field Trips</u> National Parks West - Nevada, California National Parks of the Western Region - Part 1
<b>INDICATORS OF PROGRESS</b>	<b>9.3.2.2.2.</b>	Explain how evidence from the geologic record, including ice core samples, indicates that climate changes have occurred at varying rates over geologic time and continue to occur today.  <u>Virtual Field Trips</u> National Parks - West - Alaska & Hawaii National Parks of the Western Region - Part 1
<b>CONTENT STANDARD / DOMAIN</b>	<b>MN.9.3.</b>	<b>Earth and Space Science</b>
<b>PERFORMANCE INDICATOR / DOMAIN COMPONENT</b>	<b>9.3.2.</b>	<b>Interdependence Within the Earth System</b>
<b>INDICATORS OF PROGRESS / STRAND</b>	<b>9.3.2.3.</b>	The student will understand that material in the Earth system cycles through different reservoirs, and is powered by the Earth's sources of energy.
<b>INDICATORS OF PROGRESS</b>	<b>9.3.2.3.1.</b>	Trace the cyclical movement of carbon, oxygen and nitrogen through the lithosphere, hydrosphere, atmosphere and biosphere.  <u>Virtual Field Trips</u> The Amazon Rainforest - Part 2 - Older Grades
<b>CONTENT STANDARD / DOMAIN</b>	<b>MN.9.3.</b>	<b>Earth and Space Science</b>
<b>PERFORMANCE INDICATOR / DOMAIN COMPONENT</b>	<b>9.3.3.</b>	<b>The Universe</b>
<b>INDICATORS OF PROGRESS / STRAND</b>	<b>9.3.3.2.</b>	The student will understand that the solar system, sun, and Earth formed over billions of years.
<b>INDICATORS OF PROGRESS</b>	<b>9.3.3.2..</b>	Explain how the Earth evolved into its present habitable form through interactions among the solid earth, the oceans, the atmosphere and organisms.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks - West - Alaska & Hawaii National Parks West - Nevada, California National Parks West - Wyoming, Utah National Parks of the Western Region - Part 1
<b>CONTENT STANDARD / DOMAIN</b>	<b>MN.9.3.</b>	<b>Earth and Space Science</b>
<b>PERFORMANCE INDICATOR / DOMAIN COMPONENT</b>	<b>9.3.4.</b>	<b>Human Interactions with the Earth System</b>

INDICATORS OF PROGRESS / STRAND	9.3.4.1.	The student will understand that people consider potential benefits, costs and risks to make decisions on how they interact with natural systems.
INDICATORS OF PROGRESS	9.3.4.1.2.	Explain how human activity and natural processes are altering the hydrosphere, biosphere, lithosphere and atmosphere, including pollution, topography and climate.  <u>Virtual Field Trips</u> National Parks - West - Alaska & Hawaii National Parks West - Nevada, California National Parks West - Wyoming, Utah National Parks of the Western Region - Part 1
CONTENT STANDARD / DOMAIN	MN.9.4.	Life Science
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.4.1.	Structure and Function in Living Systems
INDICATORS OF PROGRESS / STRAND	9.4.1.1.	The student will understand that organisms use the interaction of cellular processes as well as tissues and organ systems to maintain homeostasis.
INDICATORS OF PROGRESS	9.4.1.1.1.	Explain how cell processes are influenced by internal and external factors, such as pH and temperature, and how cells and organisms respond to changes in their environment to maintain homeostasis.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks West - Nevada, California
INDICATORS OF PROGRESS	9.4.1.1.2.	Describe how the functions of individual organ systems are integrated to maintain homeostasis in an organism.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks West - Nevada, California
CONTENT STANDARD / DOMAIN	MN.9.4.	Life Science
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.4.2.	Interdependence among Living Systems
INDICATORS OF PROGRESS / STRAND	9.4.2.2.	The student will understand that matter cycles and energy flows through different levels of organization of living systems and the physical environment, as chemical elements are combined in different ways.
INDICATORS OF PROGRESS	9.4.2.2.2.	Explain how matter and energy in an ecosystem is transformed and transferred among organisms, and how energy is dissipated as heat into the environment.  <u>Virtual Field Trips</u> La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
CONTENT STANDARD / DOMAIN	MN.9.4.	Life Science
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.4.3.	Evolution in Living Systems
INDICATORS OF PROGRESS / STRAND	9.4.3.3.	The student will understand that evolution by natural selection is a scientific explanation for the history and diversity of life on Earth.
INDICATORS OF PROGRESS	9.4.3.3.1.	Describe how evidence led Darwin to develop the theory of natural selection and common descent to explain evolution.

		<u>Virtual Field Trips</u> Galapagos Islands - Espagnol
INDICATORS OF PROGRESS	9.4.3.3.3.	Recognize that artificial selection has led to offspring through successive generations that can be very different in appearance and behavior from their distant ancestors.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol
INDICATORS OF PROGRESS	9.4.3.3.6.	Explain how genetic variation between two populations of a given species is due, in part, to different selective pressures acting independently on each population and how, over time, these differences can lead to the development of new species.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol
CONTENT STANDARD / DOMAIN	MN.9.4.	Life Science
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.4.4.	Human Interactions with Living Systems
INDICATORS OF PROGRESS / STRAND	9.4.4.1.	The student will understand that human activity has consequences on living organisms and ecosystems.
INDICATORS OF PROGRESS	9.4.4.1.2.	Describe the social, economic and ecological risks and benefits of changing a natural ecosystem as a result of human activity.  <u>Virtual Field Trips</u> Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) National Parks - West - Alaska & Hawaii National Parks West - Nevada, California National Parks West - Wyoming, Utah National Parks of the Western Region - Part 1 The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades

### Minnesota Academic Standards

#### Social Studies

Grade: 9 - Adopted: 2012

CONTENT STANDARD / DOMAIN	MN.9.1.	Citizenship and Government
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.1.4.	Governmental Institutions & Political Processes
INDICATORS OF PROGRESS / STRAND	9.1.4.6.	The United States government has specific functions that are determined by the way that power is delegated and controlled among various bodies: the three levels (federal, state, local) and the three branches (legislative, executive, judicial) of government.
INDICATORS OF PROGRESS	9.1.4.6.5.	Describe the systems of enumerated and implied powers, separation of powers and checks and balances.  <u>Virtual Field Trips</u> Washington, DC - Grades 6 - 12
CONTENT STANDARD / DOMAIN	MN.9.3.	Geography
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.3.2.	Places and Regions

INDICATORS OF PROGRESS / STRAND	9.3.2.3.	Places have physical characteristics (such as climate, topography and vegetation) and human characteristics (such as culture, population, political and economic systems).
INDICATORS OF PROGRESS	9.3.2.3.1.	<p>Make inferences and draw conclusions about the physical and human characteristics of places based on a comparison of maps and other geographic representations and geospatial technologies.</p> <p><u>Virtual Field Trips</u>  Barcelona - English  Barcelona - Espagnol  La Selva Amazonica - Pte 1 (En Espagnol)  National Parks - West - Alaska &amp; Hawaii  National Parks West - Nevada, California  National Parks West - Wyoming, Utah  National Parks of the Western Region - Part 1  Paris - City of Light - Grades 6 - 12  Paris - La Ville Lumiere (En Francais)  The Amazon Rainforest - Part 1 - Older Grades  The Amazon Rainforest - Part 2 - Older Grades</p>
CONTENT STANDARD / DOMAIN	MN.9.3.	Geography
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.3.3.	Human Systems
INDICATORS OF PROGRESS / STRAND	9.3.3.5.	The characteristics, distribution and migration of human populations on the earth's surface influence human systems (cultural, economic and political systems).
INDICATORS OF PROGRESS	9.3.3.5.5.	<p>Describe the factors influencing the growth and spatial distribution of large cities in the contemporary world.</p> <p><u>Virtual Field Trips</u>  Barcelona - English  Barcelona - Espagnol  Paris - City of Light - Grades 6 - 12  Paris - La Ville Lumiere (En Francais)</p>
CONTENT STANDARD / DOMAIN	MN.9.3.	Geography
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.3.3.	Human Systems
INDICATORS OF PROGRESS / STRAND	9.3.3.6.	Geographic factors influence the distribution, functions, growth and patterns of cities and human settlements.
INDICATORS OF PROGRESS	9.3.3.6.1.	<p>Use generally accepted models to explain the internal spatial structure of cities in regions of the United States and other regions in the world.</p> <p><u>Virtual Field Trips</u>  Barcelona - English  Barcelona - Espagnol  Paris - City of Light - Grades 6 - 12  Paris - La Ville Lumiere (En Francais)  Washington, DC - Grades 6 - 12</p>
CONTENT STANDARD / DOMAIN	MN.9.3.	Geography
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.3.3.	Human Systems
INDICATORS OF PROGRESS / STRAND	9.3.3.7.	The characteristics, distribution and complexity of the earth's cultures influence human systems (social, economic and political systems).

INDICATORS OF PROGRESS	9.3.3.7.3.	Explain how social, political and economic processes influence the characteristics of places and regions.  <u>Virtual Field Trips</u> La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
CONTENT STANDARD / DOMAIN	MN.9.3.	Geography
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.3.4.	Human Environment Interaction
INDICATORS OF PROGRESS / STRAND	9.3.4.9.	The environment influences human actions; and humans both adapt to and change, the environment.
INDICATORS OF PROGRESS	9.3.4.9.1.	Analyze the interconnectedness of the environment and human activities (including the use of technology), and the impact of one upon the other.  <u>Virtual Field Trips</u> La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
CONTENT STANDARD / DOMAIN	MN.9.4.	History
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.4.3.	World History
INDICATORS OF PROGRESS / STRAND	9.4.3.8.	The development of interregional systems of communication and trade facilitated new forms of social organization and new belief systems. (Classical Traditions, Belief Systems and Giant Empires: 2000 BCE – 600 CE)
INDICATORS OF PROGRESS	9.4.3.8.3.	Confucianism, Buddhism, Judaism and Christianity. (Classical Traditions, Belief Systems, and Giant Empires: 2000 BCE – 600 CE)  <u>Virtual Field Trips</u> Jerusalem - Then and Now (Older Grades)
CONTENT STANDARD / DOMAIN	MN.9.4.	History
PERFORMANCE INDICATOR / DOMAIN COMPONENT	9.4.4.	United States History
INDICATORS OF PROGRESS / STRAND	9.4.4.22.	Post- World War II United States was shaped by an economic boom, Cold War military engagements, politics and protests, and rights movements to improve the status of racial minorities, women and America’s indigenous peoples. (Post-World War II United States: 1945-1989)
INDICATORS OF PROGRESS	9.4.4.22.6.	Identify obstacles to the success of the various civil rights movements; explain tactics used to overcome the obstacles and the role of key leaders and groups. (Post-World War II United States: 1945-1989)  <u>Virtual Field Trips</u> Washington, DC - Grades 6 - 12