Main Criteria: Maryland College and Career-Ready Standards

Secondary Criteria: Virtual Field Trips Subjects: Science, Social Studies

Grade: 9

Correlation Options: Show Correlated

Maryland College and Career-Ready Standards

Science

Grade: 9 - Adopted: 2007

STRAND / TOPIC / STANDARD	MD.1.	Skills And Processes: The student will demonstrate ways of thinking and acting inherent in the practice of science. The student will use the language and instruments of science to collect, organize, interpret, calculate, and communicate information.
TOPIC / INDICATOR	1.5.	The student will use appropriate methods for communicating in writing and orally the processes and results of scientific investigation.
INDICATOR / PROFICIENCY LEVEL	1.5.7.	The student will use, explain, and/or construct various classification systems. Virtual Field Trips Galapagos Islands - Espagnol
INDICATOR / PROFICIENCY LEVEL	1.5.8.	The student will describe similarities and differences when explaining concepts and/or principles. Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades
STRAND / TOPIC / STANDARD	MD.1.	Skills And Processes: The student will demonstrate ways of thinking and acting inherent in the practice of science. The student will use the language and instruments of science to collect, organize, interpret, calculate, and communicate information.
TOPIC / INDICATOR	1.6.	The student will use mathematical processes.
INDICATOR / PROFICIENCY LEVEL	1.6.1.	The student will use ratio and proportion in appropriate situations to solve problems. Virtual Field Trips La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades
STRAND / TOPIC / STANDARD	MD.1.	Skills And Processes: The student will demonstrate ways of thinking and acting inherent in the practice of science. The student will use the language and instruments of science to collect, organize, interpret, calculate, and communicate information.
TOPIC / INDICATOR	1.7.	The student will show that connections exist both within the various fields of science and among science and other disciplines including mathematics, social studies, language arts, fine arts, and technology.
INDICATOR / PROFICIENCY LEVEL	1.7.2.	The student will identify and evaluate the impact of scientific ideas and/or advancements in technology on society. Virtual Field Trips The Amazon Rainforest - Part 2 - Older Grades
STRAND / TOPIC / STANDARD	MD.2.	Concepts Of Earth/Space Science: The student will demonstrate the ability to use scientific skills and processes (Core Learning Goal 1) to explain the physical behavior of the environment, Earth, and the universe.
TOPIC / INDICATOR	2.3.	The student will explain how the transfer of energy and matter affect Earth systems.

INDICATOR / PROFICIENCY LEVEL	2.3.1.	The student will describe how energy and matter transfer affect Earth systems.
		<u>Virtual Field Trips</u> The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	2.3.2.	The student will explain how global conditions are affected when natural and human-induced change alter the transfer of energy and matter.
		Virtual Field Trips National Parks - West - Alaska & Hawaii National Parks of the Western Region - Part 1 The Amazon Rainforest - Part 2 - Older Grades
STRAND / TOPIC / STANDARD	MD.2.	Concepts Of Earth/Space Science: The student will demonstrate the ability to use scientific skills and processes (Core Learning Goal 1) to explain the physical behavior of the environment, Earth, and the universe.
TOPIC / INDICATOR	2.4.	The student will analyze the dynamic nature of the geosphere.
INDICATOR / PROFICIENCY LEVEL	2.4.3.	The student will explain changes in Earth's surface using plate tectonics.
		<u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks West - Wyoming, Utah
STRAND / TOPIC / STANDARD	MD.2.	Concepts Of Earth/Space Science: The student will demonstrate the ability to use scientific skills and processes (Core Learning Goal 1) to explain the physical behavior of the environment, Earth, and the universe.
TOPIC / INDICATOR	2.5.	The student will investigate methods that geologists use to determine the history of Earth.
INDICATOR / PROFICIENCY LEVEL	2.5.2.	The student will compare events in Earth's history that have been grouped according to similarities.
		<u>Virtual Field Trips</u> National Parks - West - Alaska & Hawaii
STRAND / TOPIC / STANDARD	MD.3.	Concepts Of Biology: The student will demonstrate the ability to use scientific skills and processes (Core Learning Goal 1) and major biological concepts to explain the uniqueness and interdependence of living organisms, their interactions with the environment, and the continuation of life on earth.
TOPIC / INDICATOR	3.5.	The student will investigate the interdependence of diverse living organisms and their interactions with the components of the biosphere.
INDICATOR / PROFICIENCY LEVEL	3.5.1.	The student will analyze the relationships between biotic diversity and abiotic factors in environments and the resulting influence on ecosystems.
		<u>Virtual Field Trips</u> La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades
INDICATOR / PROFICIENCY LEVEL	3.5.2.	The student will analyze the interrelationships and interdependencies among different organisms and explain how these relationships contribute to the stability of the ecosystem.
		Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades
		The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	3.5.3.	The student will investigate how natural and man-made changes in environmental conditions will affect individual organisms and the

		dynamics of populations. Virtual Field Trips 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
INDICATOR / PROFICIENCY LEVEL	3.5.4.	The student will illustrate how all organisms are part of and depend on two major global food webs that are positively or negatively influenced by human activity and technology. Virtual Field Trips Galapagos Islands - Espagnol
STRAND / TOPIC / STANDARD	MD.3.	Concepts Of Biology: The student will demonstrate the ability to use scientific skills and processes (Core Learning Goal 1) and major biological concepts to explain the uniqueness and interdependence of living organisms, their interactions with the environment, and the continuation of life on earth.
TOPIC / INDICATOR	3.6.	The student will investigate a biological issue and develop an action plan.
INDICATOR / PROFICIENCY LEVEL	3.6.1.	The student will analyze the consequences and/or trade-offs between technological changes and their effect on the individual, society, and the environment. They may select topics such as bioethics, genetic engineering, endangered species, or food supply. (NTB) Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) National Parks - West - Alaska & Hawaii The Amazon Rainforest - Part 1 - Older Grades
INDICATOR / PROFICIENCY LEVEL	3.6.2.	The student will investigate a biological issue and be able to defend their position on topics such as animal rights, drug and alcohol abuse, viral diseases (e.g., AIDS), genetic engineering, bioethics, biodiversity, population growth, global sustainability, or origin of life. (NTB) Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) National Parks - West - Alaska & Hawaii The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
STRAND / TOPIC / STANDARD	MD.5.	Concepts Of Physics: The student will demonstrate the ability to use scientific skills and processes (Core Learning Goal 1) to explain and predict the outcome of certain interactions which occur between matter and energy.
TOPIC / INDICATOR	5.1.	The student will know and apply the laws of mechanics to explain the behavior of the physical world.
INDICATOR / PROFICIENCY LEVEL	5.1.2.	The student will use algebraic and geometric concepts to qualitatively and quantitatively describe an object's motion. Virtual Field Trips National Parks - West - Alaska & Hawaii
STRAND / TOPIC / STANDARD	MD.6.	Environmental Science: The student will demonstrate the ability to use the scientific skills and processes (Core Learning Goal 1) and major environmental science concepts to understand

		interrelationships of the natural world and to analyze environmental issues and their solutions.
TOPIC / INDICATOR	6.1.	The student will explain how matter and energy move through the biosphere (lithosphere, hydrosphere, atmosphere and organisms).
INDICATOR / PROFICIENCY LEVEL	6.1.1.	The student will demonstrate that matter cycles through and between living systems and the physical environment constantly being recombined in different ways (At least - nitrogen cycle; carbon cycle; phosphorus cycle (rock/mineral); hydrologic cycle). Virtual Field Trips La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.1.2.	The student will analyze how the transfer of energy between atmosphere, land masses and oceans results in areas of different temperatures and densities that produce weather patterns and establish climate zones around the earth (At least - differential heating and cooling; oceanic and atmospheric circulation patterns; climates and microclimates; biomes). Virtual Field Trips 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
STRAND / TOPIC / STANDARD	MD.6.	Environmental Science: The student will demonstrate the ability to use the scientific skills and processes (Core Learning Goal 1) and major environmental science concepts to understand interrelationships of the natural world and to analyze environmental issues and their solutions.
TOPIC / INDICATOR	6.2.	The student will investigate the interdependence of organisms within their biotic environment.
INDICATOR / PROFICIENCY LEVEL	6.2.1.	The student will explain how organisms are linked by the transfer and transformation of matter and energy at the ecosystem level (At least - Photosynthesis/respiration; Producers, consumers, decomposers; Trophic levels; Pyramid of energy/pyramid of biomass). Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.2.2.	The student will explain why interrelationships & interdependencies of organisms contribute to the dynamics of ecosystems (At least - Interspecific and intraspecific competition; Niche; Cycling of materials among organisms; Equilibrium/cyclic fluctuations; Dynamics of disturbance and recovery; Succession: aquatic and terrestrial). Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) National Parks - West - Alaska & Hawaii National Parks West - Nevada, California The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.2.3.	The student will conclude that populations grow or decline due to a variety of factors (At least - Linear/exponential growth; Carrying

		capacity/limiting factors; Species specific reproductive factors (such as birth rate, fertility rate); Factors unique to the human population (medical, agricultural, cultural); Immigration/emigration; Introduced species). Virtual Field Trips Galapagos Islands - Espagnol National Parks - West - Alaska & Hawaii
INDICATOR / PROFICIENCY LEVEL	6.2.4.	The student will provide examples and evidence showing that natural selection leads to organisms that are well suited for survival in particular environments (At least - coevolutionary relationships, e.g. symbiotic relationships; variation within a species increases survival potential; natural selection provides a mechanism for evolution; adaptations of organisms within biomes).
		<u>Virtual Field Trips</u> La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades
STRAND / TOPIC / STANDARD	MD.6.	Environmental Science: The student will demonstrate the ability to use the scientific skills and processes (Core Learning Goal 1) and major environmental science concepts to understand interrelationships of the natural world and to analyze environmental issues and their solutions.
TOPIC / INDICATOR	6.3.	The student will analyze the relationships between humans and the earth's resources.
INDICATOR / PROFICIENCY LEVEL	6.3.1.	The student will evaluate the interrelationship between humans and air quality (At least - ozone; greenhouse gases; volatile organic compounds (smog); acid rain; indoor air; human health).
		<u>Virtual Field Trips</u> National Parks - West - Alaska & Hawaii National Parks of the Western Region - Part 1
INDICATOR / PROFICIENCY LEVEL	6.3.2.	The student will evaluate the interrelationship between humans and water quality and quantity (At least - fresh water supply; point source/nonpoint source pollution; waste water treatment; thermal pollution; Chesapeake Bay and its watershed; eutrophication; human health).
		<u>Virtual Field Trips</u> National Parks West - Nevada, California National Parks of the Western Region - Part 1
INDICATOR / PROFICIENCY LEVEL	6.3.3.	The student will evaluate the interrelationship between humans and land resources (At least - wetlands; soil conservation; mining; solid waste management; land use planning; human health).
		<u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks - West - Alaska & Hawaii The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.3.4.	The student will evaluate the interrelationship between humans and biological resources (At least - food production/agriculture; forest and wildlife resources; species diversity/genetic resources; integrated pest management; human health).
		<u>Virtual Field Trips</u> Galapagos Islands - Espagnol National Parks West - Nevada, California The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.3.5.	The student will evaluate the interrelationship between humans and energy resources (At least - renewable; nonrenewable; human health).

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		<u>Virtual Field Trips</u> National Parks - West - Alaska & Hawaii The Amazon Rainforest - Part 2 - Older Grades
STRAND / TOPIC / STANDARD	MD.6.	Environmental Science: The student will demonstrate the ability to use the scientific skills and processes (Core Learning Goal 1) and major environmental science concepts to understand interrelationships of the natural world and to analyze environmental issues and their solutions.
TOPIC / INDICATOR	6.4.	The student will develop and apply knowledge and skills gained from an environmental issue investigation to an action project which protects and sustains the environment.
INDICATOR / PROFICIENCY LEVEL	6.4.1.	Identify an environmental issue and formulate related research questions (Methods of gathering information may include: writing letters; performing a literature search; using the internet; interviewing experts). Virtual Field Trips Galapagos Islands - Espagnol
		La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.4.2.	Design and conduct the research (Methods of data collection may include: field or laboratory; questionnaire/opinionnaire).
		Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.4.3.	Interpret the findings to draw conclusions and make recommendations to help resolve the issue.
		Virtual Field Trips Galapagos Islands - Espagnol La Selva Amazonica - Pte 1 (En Espagnol) The Amazon Rainforest - Part 1 - Older Grades The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.4.4.	Apply the conclusions to develop and implement an action project (Methods of implementation may include: physical action; persuasion; consumer action; political action).
		Virtual Field Trips 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 The Amazon Rainforest - Part 2 - Older Grades
INDICATOR / PROFICIENCY LEVEL	6.4.5.	Analyze the effectiveness of the action project in terms of achieving the desired outcomes.
		Virtual Field Trips 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
		The Amazon Rainforest - Part 2 - Older Grades

Grade: 9 - Adopted: 2006

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STRAND / TOPIC / STANDARD	MD.1.0.	American Government (VSC) Political Science: Students will understand the historical development and current status of the fundamental concepts and processes of authority, power, and influence, with particular emphasis on the democratic skills and attitudes necessary to become responsible citizens.
TOPIC / INDICATOR	1.A.	The Foundations and Function of Government
INDICATOR / PROFICIENCY LEVEL	1.A.1.	The student will evaluate how the principles of government assist or impede the functioning of government (1.1.2).
OBJECTIVE	1.A.1.a.	Evaluate the principles of federalism, representative democracy, popular sovereignty, consent of the governed, separation of powers, checks and balances, rule of law, limited government, majority rule and how they protect individual rights and impact the functioning of government Virtual Field Trips
OBJECTIVE	1.A.1.f.	Washington, DC - Grades 6 - 12 Describe how the Constitution provides for checks and balances, such as Legislative overrides of vetoes, the limitations on the powers of the President and the appointment process (Unit 2) <u>Virtual Field Trips</u>
		Washington, DC - Grades 6 - 12
STRAND / TOPIC / STANDARD	MD.1.0.	American Government (VSC) Political Science: Students will understand the historical development and current status of the fundamental concepts and processes of authority, power, and influence, with particular emphasis on the democratic skills and attitudes necessary to become responsible citizens.
TOPIC / INDICATOR	1.A.	The Foundations and Function of Government
INDICATOR / PROFICIENCY LEVEL	1.A.2.	The student will analyze historic documents to determine the basic principles of United States government and apply them to realworld situations (1.1.1).
OBJECTIVE	1.A.2.j.	Apply the principles of federalism, checks and balances, rule of law, judicial review, separation of powers, consent of the governed and majority rule to real world situations Virtual Field Trips
		Washington, DC - Grades 6 - 12
STRAND / TOPIC / STANDARD	MD.4.0.	American Government (VSC) Economics: Students will develop economic reasoning to understand the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers participating in local communities, the nation, and the world.
TOPIC / INDICATOR	4.A.	Scarcity and Economic Decision-making
INDICATOR / PROFICIENCY LEVEL	4.A.1.	The student will utilize the principles of economic costs and benefits and opportunity cost to analyze the effectiveness of government policy in achieving socio-economic goals (4.1.2).
OBJECTIVE	4.A.1.c.	Evaluate the role of government in providing public goods, such as national defense and public education (Unit 1) Virtual Field Trips Barcelona - English Barcelona - Espagnol
STRAND / TOPIC / STANDARD	MD.5.0.	U.S. History (VSC) History: Students will examine significant ideas, beliefs and themes; organize patterns and events; analyze how individuals and societies have changed over time in Maryland and the United States.
TOPIC / INDICATOR	5.B.	Challenges of a New Century (1898-1929)
INDICATOR / PROFICIENCY LEVEL	5.B.1.	Analyze the cultural, economic, political, and social impact of the Progressive Movement (5.2.1).

OBJECTIVE	5.B.1.h.	Analyze conservationism and creation of national parks during the Roosevelt administration (PS, G, E)
		<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

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