Main Criteria: Virtual Field Trips

Secondary Criteria: National Council for the Social Studies (NCSS), National Geography Standards (NGS), Next Generation Science Standards (NGSS)

Subjects: Science, Social Studies

Grade: 2

Virtual Field Trips

African Safari

National Council for the Social Studies (NCSS)

Social Studies

Grade **2** - Adopted: **2010**

THEME	**NCSS.3.**	**PEOPLE, PLACES, AND ENVIRONMENTS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF PEOPLE, PLACES, AND ENVIRONMENTS.**
CATEGORY	**3.1.**	**KNOWLEDGE - Learners will understand:**
LEARNING EXPECTATION	3.1.5.	Physical changes in community, state, and region, such as seasons, climate, and weather, and their effects on plants and animals.

National Geography Standards (NGS)

Science

Grade **2** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PR.**	**Places and Regions**
STANDARD	**PR.4.**	**The physical and human characteristics of places**
STRAND	**PR.4.2.**	**The Characteristics of Places: Places have physical and human characteristics**
BENCHMARK	**PR.4.2.A.**	**Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to**
EXPECTATION	PR.4.2.A.2.	Describe and compare the vegetation in different places in the world (e.g., deserts, mountains, rain forests, plains).
EXPECTATION	PR.4.2.A.3.	Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)**
BENCHMARK	**PS.7.1.A.**	**Identify attributes of Earth's different physical systems, as exemplified by being able to**
EXPECTATION	PS.7.1.A.3.	Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.3.**	**Physical Processes: Physical processes shape features on Earth's surface**
BENCHMARK	**PS.7.3.B.**	**Describe how physical processes shape features on Earth's surface, as exemplified by being able to**

EXPECTATION	PS.7.3.B.2.	Describe the physical processes that shaped particular landform features using pictures of landforms such as canyons, mesas, and deltas.
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.1.**	**Components of Ecosystems: The components of ecosystems**
BENCHMARK	**PS.8.1.A.**	**Identify the components of different ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.1.A.2.	Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).
EXPECTATION	PS.8.1.A.3.	Describe local ecosystems by surveying and recording the properties of their components.
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Identify and describe the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.1.	Identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.
EXPECTATION	PS.8.2.A.2.	Identify and draw pictures of different plants and animals in various local ecosystems (e.g., a pond, forest, city park).
EXPECTATION	PS.8.2.A.3.	Compare the characteristics of different ecosystems (e.g., pond, deciduous forest, coral reef).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: The characteristics of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe the characteristics of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.1.	Describe the defining characteristics of a biome as a large region of ecosystems with similar climate and vegetation characteristics.
EXPECTATION	PS.8.3.A.2.	Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).
EXPECTATION	PS.8.3.A.3.	Identify the characteristics in photographs of different types of vegetation and match them to the appropriate sections of a world climate map (e.g., cacti and succulents on a desert climate region, tropical forest trees on a tropical climate region, coral in shallow, tropical marine waters).
ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**

STANDARD	**ES.14.**	**How human actions modify the physical environment**
STRAND	**ES.14.3.**	**Consequences for People and Environments: The consequences of human modifications of the physical environment**
BENCHMARK	**ES.14.3.A.**	**Identify and describe examples of how human activities impact the physical environment, as exemplified by being able to**
EXPECTATION	ES.14.3.A.1.	Identify and describe the changes in local habitats that resulted from human activities.

ESSENTIAL ELEMENT	**NGS.UG.**	**The Uses of Geography**
STANDARD	**UG.18.**	**How to apply geography to interpret the present and plan for the future**
STRAND	**UG.18.1.**	**Using Geography to Interpret the Present and Plan for the Future: Geographic contexts (the human and physical characteristics of places and environments) are the settings for current events**
BENCHMARK	**UG.18.1.A.**	**Analyze geographic contexts in which current events and issues occur, as exemplified by being able to**
EXPECTATION	UG.18.1.A.3.	Analyze a current environmental issue in the region (e.g., building or demolishing a dam, building or expansion of freeway system, creation of parks and open spaces, regulatory legislation on industry to prevent further air, water, and land pollution) and describe ways in which people and the environment interact to affect the issue positively and negatively.

National Geography Standards (NGS)

Social Studies

Grade **2** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PR.**	**Places and Regions**
STANDARD	**PR.4.**	**The physical and human characteristics of places**
STRAND	**PR.4.2.**	**The Characteristics of Places: Places have physical and human characteristics**
BENCHMARK	**PR.4.2.A.**	**Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to**
EXPECTATION	PR.4.2.A.3.	Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)**
BENCHMARK	**PS.7.1.A.**	**Identify attributes of Earth's different physical systems, as exemplified by being able to**
EXPECTATION	PS.7.1.A.1.	Identify different attributes of physical systems in photographs (e.g., sky, clouds, plants, soil, oceans, lakes, mountains).
EXPECTATION	PS.7.1.A.3.	Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**

STRAND	**PS.8.1.**	**Components of Ecosystems: The components of ecosystems**
BENCHMARK	**PS.8.1.A.**	**Identify the components of different ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.1.A.1.	Identify the three major components of an ecosystem (i.e., biomass, climate, and soil).
EXPECTATION	PS.8.1.A.2.	Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Identify and describe the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.1.	Identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.
EXPECTATION	PS.8.2.A.3.	Compare the characteristics of different ecosystems (e.g., pond, deciduous forest, coral reef).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: The characteristics of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe the characteristics of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.1.	Describe the defining characteristics of a biome as a large region of ecosystems with similar climate and vegetation characteristics.
EXPECTATION	PS.8.3.A.2.	Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).
EXPECTATION	PS.8.3.A.3.	Identify the characteristics in photographs of different types of vegetation and match them to the appropriate sections of a world climate map (e.g., cacti and succulents on a desert climate region, tropical forest trees on a tropical climate region, coral in shallow, tropical marine waters).
ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.1.**	**Environmental Opportunities and Constraints: The physical environment provides opportunities for and imposes constraints on human activities**
BENCHMARK	**ES.15.1.B.**	**Describe examples in which the physical environment imposes constraints on human activities, as exemplified by being able to**
EXPECTATION	ES.15.1.B.2.	Describe examples in which human activities are limited by different types of climates (e.g., cold or polar, rainy or dry, equatorial).

Science

Grade **2** - Adopted: **2013**

STRAND	**NGSS.2-LS**	**LIFE SCIENCE**
TITLE	**2-LS4**	**Biological Evolution: Unity and Diversity**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	2-LS4-1	Make observations of plants and animals to compare the diversity of life in different habitats.

STRAND	**NGSS.2-ESS**	**EARTH AND SPACE SCIENCE**
TITLE	**2-ESS2**	**Earth's Systems**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	2-ESS2-2	Develop a model to represent the shapes and kinds of land and bodies of water in an area.

Main Criteria: Virtual Field Trips

Secondary Criteria: National Council for the Social Studies (NCSS), National Geography Standards (NGS), Next Generation Science Standards (NGSS)

Subjects: Science, Social Studies

Grade: 3

Virtual Field Trips

African Safari

National Council for the Social Studies (NCSS)

Social Studies

Grade **3** - Adopted: **2010**

THEME	**NCSS.3.**	**PEOPLE, PLACES, AND ENVIRONMENTS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF PEOPLE, PLACES, AND ENVIRONMENTS.**
CATEGORY	**3.1.**	**KNOWLEDGE - Learners will understand:**
LEARNING EXPECTATION	3.1.5.	Physical changes in community, state, and region, such as seasons, climate, and weather, and their effects on plants and animals.

National Geography Standards (NGS)

Science

Grade **3** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PR.**	**Places and Regions**
STANDARD	**PR.4.**	**The physical and human characteristics of places**
STRAND	**PR.4.2.**	**The Characteristics of Places: Places have physical and human characteristics**
BENCHMARK	**PR.4.2.A.**	**Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to**
EXPECTATION	PR.4.2.A.2.	Describe and compare the vegetation in different places in the world (e.g., deserts, mountains, rain forests, plains).
EXPECTATION	PR.4.2.A.3.	Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)**
BENCHMARK	**PS.7.1.A.**	**Identify attributes of Earth's different physical systems, as exemplified by being able to**
EXPECTATION	PS.7.1.A.3.	Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.3.**	**Physical Processes: Physical processes shape features on Earth's surface**
BENCHMARK	**PS.7.3.B.**	**Describe how physical processes shape features on Earth's surface, as exemplified by being able to**

EXPECTATION	PS.7.3.B.2.	Describe the physical processes that shaped particular landform features using pictures of landforms such as canyons, mesas, and deltas.
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.1.**	**Components of Ecosystems: The components of ecosystems**
BENCHMARK	**PS.8.1.A.**	**Identify the components of different ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.1.A.2.	Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).
EXPECTATION	PS.8.1.A.3.	Describe local ecosystems by surveying and recording the properties of their components.
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Identify and describe the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.1.	Identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.
EXPECTATION	PS.8.2.A.2.	Identify and draw pictures of different plants and animals in various local ecosystems (e.g., a pond, forest, city park).
EXPECTATION	PS.8.2.A.3.	Compare the characteristics of different ecosystems (e.g., pond, deciduous forest, coral reef).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: The characteristics of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe the characteristics of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.1.	Describe the defining characteristics of a biome as a large region of ecosystems with similar climate and vegetation characteristics.
EXPECTATION	PS.8.3.A.2.	Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).
EXPECTATION	PS.8.3.A.3.	Identify the characteristics in photographs of different types of vegetation and match them to the appropriate sections of a world climate map (e.g., cacti and succulents on a desert climate region, tropical forest trees on a tropical climate region, coral in shallow, tropical marine waters).
ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**

STANDARD	**ES.14.**	**How human actions modify the physical environment**
STRAND	**ES.14.3.**	**Consequences for People and Environments: The consequences of human modifications of the physical environment**
BENCHMARK	**ES.14.3.A.**	**Identify and describe examples of how human activities impact the physical environment, as exemplified by being able to**
EXPECTATION	ES.14.3.A.1.	Identify and describe the changes in local habitats that resulted from human activities.

ESSENTIAL ELEMENT	**NGS.UG.**	**The Uses of Geography**
STANDARD	**UG.18.**	**How to apply geography to interpret the present and plan for the future**
STRAND	**UG.18.1.**	**Using Geography to Interpret the Present and Plan for the Future: Geographic contexts (the human and physical characteristics of places and environments) are the settings for current events**
BENCHMARK	**UG.18.1.A.**	**Analyze geographic contexts in which current events and issues occur, as exemplified by being able to**
EXPECTATION	UG.18.1.A.3.	Analyze a current environmental issue in the region (e.g., building or demolishing a dam, building or expansion of freeway system, creation of parks and open spaces, regulatory legislation on industry to prevent further air, water, and land pollution) and describe ways in which people and the environment interact to affect the issue positively and negatively.

National Geography Standards (NGS)

Social Studies

Grade **3** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PR.**	**Places and Regions**
STANDARD	**PR.4.**	**The physical and human characteristics of places**
STRAND	**PR.4.2.**	**The Characteristics of Places: Places have physical and human characteristics**
BENCHMARK	**PR.4.2.A.**	**Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to**
EXPECTATION	PR.4.2.A.3.	Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)**
BENCHMARK	**PS.7.1.A.**	**Identify attributes of Earth's different physical systems, as exemplified by being able to**
EXPECTATION	PS.7.1.A.1.	Identify different attributes of physical systems in photographs (e.g., sky, clouds, plants, soil, oceans, lakes, mountains).
EXPECTATION	PS.7.1.A.3.	Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**

STRAND	**PS.8.1.**	**Components of Ecosystems: The components of ecosystems**
BENCHMARK	**PS.8.1.A.**	**Identify the components of different ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.1.A.1.	Identify the three major components of an ecosystem (i.e., biomass, climate, and soil).
EXPECTATION	PS.8.1.A.2.	Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Identify and describe the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.1.	Identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.
EXPECTATION	PS.8.2.A.3.	Compare the characteristics of different ecosystems (e.g., pond, deciduous forest, coral reef).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: The characteristics of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe the characteristics of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.1.	Describe the defining characteristics of a biome as a large region of ecosystems with similar climate and vegetation characteristics.
EXPECTATION	PS.8.3.A.2.	Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).
EXPECTATION	PS.8.3.A.3.	Identify the characteristics in photographs of different types of vegetation and match them to the appropriate sections of a world climate map (e.g., cacti and succulents on a desert climate region, tropical forest trees on a tropical climate region, coral in shallow, tropical marine waters).
ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.1.**	**Environmental Opportunities and Constraints: The physical environment provides opportunities for and imposes constraints on human activities**
BENCHMARK	**ES.15.1.B.**	**Describe examples in which the physical environment imposes constraints on human activities, as exemplified by being able to**
EXPECTATION	ES.15.1.B.2.	Describe examples in which human activities are limited by different types of climates (e.g., cold or polar, rainy or dry, equatorial).

Science

Grade **3** - Adopted: **2013**

STRAND	NGSS.3-LS	LIFE SCIENCE
TITLE	**3-LS2**	**Ecosystems: Interactions, Energy, and Dynamics**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	3-LS2-1	Construct an argument that some animals form groups that help members survive.

STRAND	NGSS.3-LS	LIFE SCIENCE
TITLE	**3-LS4**	**Biological Evolution: Unity and Diversity**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	3-LS4-2	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.
PERFORMANCE EXPECTATION	3-LS4-3	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
PERFORMANCE EXPECTATION	3-LS4-4	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

STRAND	NGSS.3-ESS	EARTH AND SPACE SCIENCE
TITLE	**3-ESS2**	**Earth's Systems**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	3-ESS2-1	Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

Main Criteria: Virtual Field Trips

Secondary Criteria: National Council for the Social Studies (NCSS), National Geography Standards (NGS), Next Generation Science Standards (NGSS)

Subjects: Science, Social Studies

Grade: 4

Virtual Field Trips

African Safari

National Council for the Social Studies (NCSS)

Social Studies

Grade **4** - Adopted: **2010**

THEME	**NCSS.3.**	**PEOPLE, PLACES, AND ENVIRONMENTS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF PEOPLE, PLACES, AND ENVIRONMENTS.**
CATEGORY	**3.1.**	**KNOWLEDGE - Learners will understand:**
LEARNING EXPECTATION	3.1.5.	Physical changes in community, state, and region, such as seasons, climate, and weather, and their effects on plants and animals.

National Geography Standards (NGS)

Science

Grade **4** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PR.**	**Places and Regions**
STANDARD	**PR.4.**	**The physical and human characteristics of places**
STRAND	**PR.4.2.**	**The Characteristics of Places: Places have physical and human characteristics**
BENCHMARK	**PR.4.2.A.**	**Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to**
EXPECTATION	PR.4.2.A.2.	Describe and compare the vegetation in different places in the world (e.g., deserts, mountains, rain forests, plains).
EXPECTATION	PR.4.2.A.3.	Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)**
BENCHMARK	**PS.7.1.A.**	**Identify attributes of Earth's different physical systems, as exemplified by being able to**
EXPECTATION	PS.7.1.A.3.	Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.3.**	**Physical Processes: Physical processes shape features on Earth's surface**
BENCHMARK	**PS.7.3.B.**	**Describe how physical processes shape features on Earth's surface, as exemplified by being able to**

EXPECTATION	PS.7.3.B.2.	Describe the physical processes that shaped particular landform features using pictures of landforms such as canyons, mesas, and deltas.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.1.**	**Components of Ecosystems: The components of ecosystems**
BENCHMARK	**PS.8.1.A.**	**Identify the components of different ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.1.A.2.	Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).
EXPECTATION	PS.8.1.A.3.	Describe local ecosystems by surveying and recording the properties of their components.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Identify and describe the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.1.	Identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.
EXPECTATION	PS.8.2.A.2.	Identify and draw pictures of different plants and animals in various local ecosystems (e.g., a pond, forest, city park).
EXPECTATION	PS.8.2.A.3.	Compare the characteristics of different ecosystems (e.g., pond, deciduous forest, coral reef).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: The characteristics of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe the characteristics of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.1.	Describe the defining characteristics of a biome as a large region of ecosystems with similar climate and vegetation characteristics.
EXPECTATION	PS.8.3.A.2.	Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).
EXPECTATION	PS.8.3.A.3.	Identify the characteristics in photographs of different types of vegetation and match them to the appropriate sections of a world climate map (e.g., cacti and succulents on a desert climate region, tropical forest trees on a tropical climate region, coral in shallow, tropical marine waters).

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**

STANDARD	**ES.14.**	**How human actions modify the physical environment**
STRAND	**ES.14.3.**	**Consequences for People and Environments: The consequences of human modifications of the physical environment**
BENCHMARK	**ES.14.3.A.**	**Identify and describe examples of how human activities impact the physical environment, as exemplified by being able to**
EXPECTATION	ES.14.3.A.1.	Identify and describe the changes in local habitats that resulted from human activities.

ESSENTIAL ELEMENT	**NGS.UG.**	**The Uses of Geography**
STANDARD	**UG.18.**	**How to apply geography to interpret the present and plan for the future**
STRAND	**UG.18.1.**	**Using Geography to Interpret the Present and Plan for the Future: Geographic contexts (the human and physical characteristics of places and environments) are the settings for current events**
BENCHMARK	**UG.18.1.A.**	**Analyze geographic contexts in which current events and issues occur, as exemplified by being able to**
EXPECTATION	UG.18.1.A.3.	Analyze a current environmental issue in the region (e.g., building or demolishing a dam, building or expansion of freeway system, creation of parks and open spaces, regulatory legislation on industry to prevent further air, water, and land pollution) and describe ways in which people and the environment interact to affect the issue positively and negatively.

National Geography Standards (NGS)

Social Studies

Grade **4** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PR.**	**Places and Regions**
STANDARD	**PR.4.**	**The physical and human characteristics of places**
STRAND	**PR.4.2.**	**The Characteristics of Places: Places have physical and human characteristics**
BENCHMARK	**PR.4.2.A.**	**Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to**
EXPECTATION	PR.4.2.A.3.	Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)**
BENCHMARK	**PS.7.1.A.**	**Identify attributes of Earth's different physical systems, as exemplified by being able to**
EXPECTATION	PS.7.1.A.1.	Identify different attributes of physical systems in photographs (e.g., sky, clouds, plants, soil, oceans, lakes, mountains).
EXPECTATION	PS.7.1.A.3.	Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**

STRAND	**PS.8.1.**	**Components of Ecosystems: The components of ecosystems**
BENCHMARK	**PS.8.1.A.**	**Identify the components of different ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.1.A.1.	Identify the three major components of an ecosystem (i.e., biomass, climate, and soil).
EXPECTATION	PS.8.1.A.2.	Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Identify and describe the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.1.	Identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.
EXPECTATION	PS.8.2.A.3.	Compare the characteristics of different ecosystems (e.g., pond, deciduous forest, coral reef).
ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: The characteristics of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe the characteristics of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.1.	Describe the defining characteristics of a biome as a large region of ecosystems with similar climate and vegetation characteristics.
EXPECTATION	PS.8.3.A.2.	Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).
EXPECTATION	PS.8.3.A.3.	Identify the characteristics in photographs of different types of vegetation and match them to the appropriate sections of a world climate map (e.g., cacti and succulents on a desert climate region, tropical forest trees on a tropical climate region, coral in shallow, tropical marine waters).
ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.1.**	**Environmental Opportunities and Constraints: The physical environment provides opportunities for and imposes constraints on human activities**
BENCHMARK	**ES.15.1.B.**	**Describe examples in which the physical environment imposes constraints on human activities, as exemplified by being able to**
EXPECTATION	ES.15.1.B.2.	Describe examples in which human activities are limited by different types of climates (e.g., cold or polar, rainy or dry, equatorial).

Science

Grade **4** - Adopted: **2013**

STRAND	NGSS.4-LS	LIFE SCIENCE
TITLE	**4-LS1**	**From Molecules to Organisms: Structures and Processes**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	4-LS1-1	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Main Criteria: Virtual Field Trips

Secondary Criteria: National Council for the Social Studies (NCSS), National Geography Standards (NGS), Next Generation Science Standards (NGSS)

Subjects: Science, Social Studies

Grade: 5

Virtual Field Trips

African Safari

National Council for the Social Studies (NCSS)

Social Studies

Grade **5** - Adopted: **2010**

THEME	**NCSS.3.**	**PEOPLE, PLACES, AND ENVIRONMENTS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF PEOPLE, PLACES, AND ENVIRONMENTS.**
CATEGORY	**3.1.**	**KNOWLEDGE - Learners will understand:**
LEARNING EXPECTATION	3.1.1.	The theme of people, places, and environments involves the study of the relationships between human populations in different locations and geographic phenomena such as climate, vegetation, and natural resources.
LEARNING EXPECTATION	3.1.3.	Past and present changes in physical systems, such as seasons, climate, and weather, and the water cycle, in both national and global contexts.
LEARNING EXPECTATION	3.1.5.	The concept of regions identifies links between people in different locations according to specific criteria (e.g., physical, economic, social, cultural, or religious).

National Geography Standards (NGS)

Science

Grade **5** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: The four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) are interdependent**
BENCHMARK	**PS.7.1.A.**	**Identify and describe patterns in the environment that result from the interaction of Earth's physical processes, as exemplified by being able to**
EXPECTATION	PS.7.1.A.2.	Identify and describe the patterns that result from the connections between climate and vegetation (e.g., examples of patterns of ecosys□tems and biomes).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.2.**	**Earth-Sun Relationships: Earth-Sun relationships drives physical processes that follow an annual cycle and create patterns on Earth**
BENCHMARK	**PS.7.2.A.**	**Explain how Earth-Sun relationships drive Earth's physical processes and create annual patterns, as exemplified by being able to**
EXPECTATION	PS.7.2.A.1.	Explain the occurrences of weather phenomena in different loca□tions due to annual changes in the Earth-Sun relationship (e.g., hur□ricanes in the fall in subtropical areas, monsoon rainfall, tornadoes in the mid-latitudes during the spring and summer).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**

STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.1.**	**Components of Ecosystems: Components of ecosystems are interdependent**
BENCHMARK	**PS.8.1.B.**	**Construct a model to explain how an ecosystem works, as exemplified by being able to**
EXPECTATION	PS.8.1.B.3.	Construct a flow chart to explain the interactions of components within an ecosystem (e.g., water cycle, oxygen and carbon dioxide exchange, producers, consumers, and decomposers).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Describe and explain how physical processes determine the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.2.	Explain how different locations can have similar ecosystems as a function of temperature, precipitation, elevation, and latitude by using climographs and vegetation maps.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.3.	Explain how biomes do not always follow lines of latitude by identifying the influences of oceans and mountain ranges on the distribution of climate and vegetation.

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.14.**	**How human actions modify the physical environment**
STRAND	**ES.14.3.**	**Consequences for People and Environments: The physical environment can both accommodate and be endangered by human activities**
BENCHMARK	**ES.14.3.A.**	**Analyze the positive and negative consequences of humans changing the physical environment, as exemplified by being able to**
EXPECTATION	ES.14.3.A.3.	Analyze the ways humans can have positive effects on the physical environment (e.g., open green space protection, wetland restoration, sustainable forestry).

National Geography Standards (NGS)

Social Studies

Grade **5** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: The four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) are interdependent**
BENCHMARK	**PS.7.1.A.**	**Identify and describe patterns in the environment that result from the interaction of Earth's physical processes, as exemplified by being able to**

EXPECTATION	PS.7.1.A.2.	Identify and describe the patterns that result from the connections between climate and vegetation (e.g., examples of patterns of ecosystems and biomes).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Describe and explain how physical processes determine the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.2.	Explain how different locations can have similar ecosystems as a function of temperature, precipitation, elevation, and latitude by using climographs and vegetation maps.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.3.	Explain how biomes do not always follow lines of latitude by identifying the influences of oceans and mountain ranges on the distribution of climate and vegetation.

Next Generation Science Standards (NGSS)

Science

Grade **5** - Adopted: **2013**

STRAND	**NGSS.5-ESS**	**EARTH AND SPACE SCIENCE**
TITLE	**5-ESS3**	**Earth and Human Activity**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	5-ESS3-1	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Main Criteria: Virtual Field Trips

Secondary Criteria: National Council for the Social Studies (NCSS), National Geography Standards (NGS), Next Generation Science Standards (NGSS)

Subjects: Science, Social Studies

Grade: 6

Virtual Field Trips

African Safari

National Council for the Social Studies (NCSS)

Social Studies

Grade **6** - Adopted: **2010**

THEME	**NCSS.3.**	**PEOPLE, PLACES, AND ENVIRONMENTS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF PEOPLE, PLACES, AND ENVIRONMENTS.**
CATEGORY	**3.1.**	**KNOWLEDGE - Learners will understand:**
LEARNING EXPECTATION	3.1.1.	The theme of people, places, and environments involves the study of the relationships between human populations in different locations and geographic phenomena such as climate, vegetation, and natural resources.
LEARNING EXPECTATION	3.1.3.	Past and present changes in physical systems, such as seasons, climate, and weather, and the water cycle, in both national and global contexts.
LEARNING EXPECTATION	3.1.5.	The concept of regions identifies links between people in different locations according to specific criteria (e.g., physical, economic, social, cultural, or religious).

National Geography Standards (NGS)

Science

Grade **6** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: The four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) are interdependent**
BENCHMARK	**PS.7.1.A.**	**Identify and describe patterns in the environment that result from the interaction of Earth's physical processes, as exemplified by being able to**
EXPECTATION	PS.7.1.A.2.	Identify and describe the patterns that result from the connections between climate and vegetation (e.g., examples of patterns of ecosys□tems and biomes).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.2.**	**Earth-Sun Relationships: Earth-Sun relationships drives physical processes that follow an annual cycle and create patterns on Earth**
BENCHMARK	**PS.7.2.A.**	**Explain how Earth-Sun relationships drive Earth's physical processes and create annual patterns, as exemplified by being able to**
EXPECTATION	PS.7.2.A.1.	Explain the occurrences of weather phenomena in different loca□tions due to annual changes in the Earth-Sun relationship (e.g., hur□ricanes in the fall in subtropical areas, monsoon rainfall, tornadoes in the mid-latitudes during the spring and summer).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**

STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.1.**	**Components of Ecosystems: Components of ecosystems are interdependent**
BENCHMARK	**PS.8.1.B.**	**Construct a model to explain how an ecosystem works, as exemplified by being able to**
EXPECTATION	PS.8.1.B.3.	Construct a flow chart to explain the interactions of components within an ecosystem (e.g., water cycle, oxygen and carbon dioxide exchange, producers, consumers, and decomposers).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Describe and explain how physical processes determine the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.2.	Explain how different locations can have similar ecosystems as a function of temperature, precipitation, elevation, and latitude by using climographs and vegetation maps.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.3.	Explain how biomes do not always follow lines of latitude by identifying the influences of oceans and mountain ranges on the distribution of climate and vegetation.

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.14.**	**How human actions modify the physical environment**
STRAND	**ES.14.3.**	**Consequences for People and Environments: The physical environment can both accommodate and be endangered by human activities**
BENCHMARK	**ES.14.3.A.**	**Analyze the positive and negative consequences of humans changing the physical environment, as exemplified by being able to**
EXPECTATION	ES.14.3.A.3.	Analyze the ways humans can have positive effects on the physical environment (e.g., open green space protection, wetland restoration, sustainable forestry).

National Geography Standards (NGS)

Social Studies

Grade **6** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: The four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) are interdependent**
BENCHMARK	**PS.7.1.A.**	**Identify and describe patterns in the environment that result from the interaction of Earth's physical processes, as exemplified by being able to**

EXPECTATION	PS.7.1.A.2.	Identify and describe the patterns that result from the connections between climate and vegetation (e.g., examples of patterns of ecosystems and biomes).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Describe and explain how physical processes determine the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.2.	Explain how different locations can have similar ecosystems as a function of temperature, precipitation, elevation, and latitude by using climographs and vegetation maps.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.3.	Explain how biomes do not always follow lines of latitude by identifying the influences of oceans and mountain ranges on the distribution of climate and vegetation.

Next Generation Science Standards (NGSS)

Science

Grade **6** - Adopted: **2013**

STRAND	**NGSS.MS-LS**	**LIFE SCIENCE**
TITLE	**MS-LS2**	**Ecosystems: Interactions, Energy, and Dynamics**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-LS2-2	Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
PERFORMANCE EXPECTATION	MS-LS2-5	Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

STRAND	**NGSS.MS-ESS**	**EARTH AND SPACE SCIENCE**
TITLE	**MS-ESS3**	**Earth and Human Activity**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Main Criteria: Virtual Field Trips

Secondary Criteria: National Council for the Social Studies (NCSS), National Geography Standards (NGS), Next Generation Science Standards (NGSS)

Subjects: Science, Social Studies

Grade: 7

Virtual Field Trips

African Safari

National Council for the Social Studies (NCSS)

Social Studies

Grade **7** - Adopted: **2010**

THEME	**NCSS.3.**	**PEOPLE, PLACES, AND ENVIRONMENTS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF PEOPLE, PLACES, AND ENVIRONMENTS.**
CATEGORY	**3.1.**	**KNOWLEDGE - Learners will understand:**
LEARNING EXPECTATION	3.1.1.	The theme of people, places, and environments involves the study of the relationships between human populations in different locations and geographic phenomena such as climate, vegetation, and natural resources.
LEARNING EXPECTATION	3.1.3.	Past and present changes in physical systems, such as seasons, climate, and weather, and the water cycle, in both national and global contexts.
LEARNING EXPECTATION	3.1.5.	The concept of regions identifies links between people in different locations according to specific criteria (e.g., physical, economic, social, cultural, or religious).

National Geography Standards (NGS)

Science

Grade **7** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: The four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) are interdependent**
BENCHMARK	**PS.7.1.A.**	**Identify and describe patterns in the environment that result from the interaction of Earth's physical processes, as exemplified by being able to**
EXPECTATION	PS.7.1.A.2.	Identify and describe the patterns that result from the connections between climate and vegetation (e.g., examples of patterns of ecosys□tems and biomes).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.2.**	**Earth-Sun Relationships: Earth-Sun relationships drives physical processes that follow an annual cycle and create patterns on Earth**
BENCHMARK	**PS.7.2.A.**	**Explain how Earth-Sun relationships drive Earth's physical processes and create annual patterns, as exemplified by being able to**
EXPECTATION	PS.7.2.A.1.	Explain the occurrences of weather phenomena in different loca□tions due to annual changes in the Earth-Sun relationship (e.g., hur□ricanes in the fall in subtropical areas, monsoon rainfall, tornadoes in the mid-latitudes during the spring and summer).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**

STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.1.**	**Components of Ecosystems: Components of ecosystems are interdependent**
BENCHMARK	**PS.8.1.B.**	**Construct a model to explain how an ecosystem works, as exemplified by being able to**
EXPECTATION	PS.8.1.B.3.	Construct a flow chart to explain the interactions of components within an ecosystem (e.g., water cycle, oxygen and carbon dioxide exchange, producers, consumers, and decomposers).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Describe and explain how physical processes determine the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.2.	Explain how different locations can have similar ecosystems as a function of temperature, precipitation, elevation, and latitude by using climographs and vegetation maps.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.3.	Explain how biomes do not always follow lines of latitude by identifying the influences of oceans and mountain ranges on the distribution of climate and vegetation.

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.14.**	**How human actions modify the physical environment**
STRAND	**ES.14.3.**	**Consequences for People and Environments: The physical environment can both accommodate and be endangered by human activities**
BENCHMARK	**ES.14.3.A.**	**Analyze the positive and negative consequences of humans changing the physical environment, as exemplified by being able to**
EXPECTATION	ES.14.3.A.3.	Analyze the ways humans can have positive effects on the physical environment (e.g., open green space protection, wetland restoration, sustainable forestry).

National Geography Standards (NGS)

Social Studies

Grade **7** - Adopted: **2012**

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.7.**	**The physical processes that shape the patterns of Earth's surface**
STRAND	**PS.7.1.**	**Components of Earth's Physical Systems: The four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) are interdependent**
BENCHMARK	**PS.7.1.A.**	**Identify and describe patterns in the environment that result from the interaction of Earth's physical processes, as exemplified by being able to**

EXPECTATION	PS.7.1.A.2.	Identify and describe the patterns that result from the connections between climate and vegetation (e.g., examples of patterns of ecosystems and biomes).

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.2.**	**Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems**
BENCHMARK	**PS.8.2.A.**	**Describe and explain how physical processes determine the characteristics of ecosystems, as exemplified by being able to**
EXPECTATION	PS.8.2.A.2.	Explain how different locations can have similar ecosystems as a function of temperature, precipitation, elevation, and latitude by using climographs and vegetation maps.

ESSENTIAL ELEMENT	**NGS.PS.**	**Physical Systems**
STANDARD	**PS.8.**	**The characteristics and spatial distribution of ecosystems and biomes on Earth's surface**
STRAND	**PS.8.3.**	**Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes**
BENCHMARK	**PS.8.3.A.**	**Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to**
EXPECTATION	PS.8.3.A.3.	Explain how biomes do not always follow lines of latitude by identifying the influences of oceans and mountain ranges on the distribution of climate and vegetation.

Next Generation Science Standards (NGSS)

Science

Grade **7** - Adopted: **2013**

STRAND	**NGSS.MS-LS**	**LIFE SCIENCE**
TITLE	**MS-LS2**	**Ecosystems: Interactions, Energy, and Dynamics**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-LS2-2	Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.
PERFORMANCE EXPECTATION	MS-LS2-5	Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

STRAND	**NGSS.MS-ESS**	**EARTH AND SPACE SCIENCE**
TITLE	**MS-ESS3**	**Earth and Human Activity**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ESS3-3	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.