Sahara Desert
National Standards
NCSS, NGS, NGSS

Main Criteria: Virtual Field Trips
Secondary Criteria: National Council for the Social Studies (NCSS)
Subject: Social Studies
Grades: 2, 3

Virtual Field Trips

The Sahara Desert

National Council for the Social Studies (NCSS)
Social Studies

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

THEME	**NCSS.2.**	**TIME, CONTINUITY, AND CHANGE**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF THE PAST AND ITS LEGACY.**
CATEGORY	**2.2.**	**PROCESSES - Learners will be able to:**
LEARNING EXPECTATION	**2.2.2.**	**Use a variety of sources to learn about the past.**
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	**3.1.2.**	**Concepts such as: location, direction, distance, and scale.**
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.**
LEARNING EXPECTATION	**3.1.9.**	**Tools such as maps, globes, and geospatial technologies in investigating the relationships among people, places, and environments.**
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	**3.2.**	**PROCESSES - Learners will be able to:**
LEARNING EXPECTATION	**3.2.2.**	**Investigate relationships among people, places, and environments in the school, community, state, region, and world through the use of atlases, data bases, charts, graphs, maps, and geospatial technologies.**
LEARNING EXPECTATION	**3.2.3.**	**Gather and interpret information from various representations of Earth, such as maps, globes, geospatial technologies and other geographic tools to inform the study of people, places, and environments, both past and present.**
THEME	**NCSS.9.**	**GLOBAL CONNECTIONS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF GLOBAL CONNECTIONS AND INTERDEPENDENCE.**
CATEGORY	**9.2.**	**PROCESSES - Learners will be able to:**
LEARNING EXPECTATION	**9.2.3.**	**Use maps and databases to look for global patterns, trends, and connections.**

National Council for the Social Studies (NCSS)

Social Studies

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

THEME	**NCSS.2.**	**TIME, CONTINUITY, AND CHANGE**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF THE PAST AND ITS LEGACY.**
CATEGORY	**2.2.**	**PROCESSES - Learners will be able to:**
LEARNING EXPECTATION	**2.2.2.**	**Use a variety of sources to learn about the past.**
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	**3.1.2.**	**Concepts such as: location, direction, distance, and scale.**
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.**
LEARNING EXPECTATION	**3.1.9.**	**Tools such as maps, globes, and geospatial technologies in investigating the relationships among people, places, and environments.**
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	**3.2.**	**PROCESSES - Learners will be able to:**
LEARNING EXPECTATION	**3.2.2.**	**Investigate relationships among people, places, and environments in the school, community, state, region, and world through the use of atlases, data bases, charts, graphs, maps, and geospatial technologies.**
LEARNING EXPECTATION	**3.2.3.**	**Gather and interpret information from various representations of Earth, such as maps, globes, geospatial technologies and other geographic tools to inform the study of people, places, and environments, both past and present.**
THEME	**NCSS.9.**	**GLOBAL CONNECTIONS**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF GLOBAL CONNECTIONS AND INTERDEPENDENCE.**
CATEGORY	**9.2.**	**PROCESSES - Learners will be able to:**
LEARNING EXPECTATION	**9.2.3.**	**Use maps and databases to look for global patterns, trends, and connections.**

Main Criteria: Virtual Field Trips
Secondary Criteria: National Council for the Social Studies (NCSS)
Subject: Social Studies
Grades: 4, 5, 6

Virtual Field Trips

The Sahara Desert

National Council for the Social Studies (NCSS)

Social Studies

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

THEME	**NCSS.2.**	**TIME, CONTINUITY, AND CHANGE**
DEFINITION		**SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF THE PAST AND ITS LEGACY.**

CATEGORY	2.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	2.2.2.	Use a variety of sources to learn about the past.
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	3.1.2.	Concepts such as: location, direction, distance, and scale.
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.
LEARNING EXPECTATION	3.1.9.	Tools such as maps, globes, and geospatial technologies in investigating the relationships among people, places, and environments.
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	3.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	3.2.2.	Investigate relationships among people, places, and environments in the school, community, state, region, and world through the use of atlases, data bases, charts, graphs, maps, and geospatial technologies.
LEARNING EXPECTATION	3.2.3.	Gather and interpret information from various representations of Earth, such as maps, globes, geospatial technologies and other geographic tools to inform the study of people, places, and environments, both past and present.
THEME	NCSS.9.	GLOBAL CONNECTIONS
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF GLOBAL CONNECTIONS AND INTERDEPENDENCE.
CATEGORY	9.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	9.2.3.	Use maps and databases to look for global patterns, trends, and connections.

National Council for the Social Studies (NCSS)

Social Studies

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

THEME	NCSS.2.	TIME, CONTINUITY, AND CHANGE
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF THE PAST AND ITS LEGACY.
CATEGORY	2.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	2.2.2.	Identify and use a variety of primary and secondary sources for reconstructing the past, such as documents, letters, diaries, maps, textbooks, photos, and other sources.
LEARNING EXPECTATION	2.2.3.	Research and analyze past periods, events, and issues, using a variety of primary sources (e.g., documents, letters, artifacts, and testimony) as well as secondary sources; validate and weigh evidence for claims, and evaluate the usefulness and degree of reliability of sources to develop a supportable interpretation.
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).

LEARNING EXPECTATION	3.1.9.	The use of a variety of maps, globes, graphic representations, and geospatial technologies to help investigate the relationships among people, places, and environments.
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	3.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	3.2.2.	Research, organize, analyze, synthesize, and evaluate information from atlases, data bases, grid systems, charts, graphs, maps, geospatial technologies, and other tools to interpret relationships among geographic factors and historic events.

National Council for the Social Studies (NCSS)

Social Studies

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

THEME	NCSS.2.	TIME, CONTINUITY, AND CHANGE
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF THE PAST AND ITS LEGACY.
CATEGORY	2.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	2.2.2.	Identify and use a variety of primary and secondary sources for reconstructing the past, such as documents, letters, diaries, maps, textbooks, photos, and other sources.
LEARNING EXPECTATION	2.2.3.	Research and analyze past periods, events, and issues, using a variety of primary sources (e.g., documents, letters, artifacts, and testimony) as well as secondary sources; validate and weigh evidence for claims, and evaluate the usefulness and degree of reliability of sources to develop a supportable interpretation.
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).
LEARNING EXPECTATION	3.1.9.	The use of a variety of maps, globes, graphic representations, and geospatial technologies to help investigate the relationships among people, places, and environments.
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	3.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	3.2.2.	Research, organize, analyze, synthesize, and evaluate information from atlases, data bases, grid systems, charts, graphs, maps, geospatial technologies, and other tools to interpret relationships among geographic factors and historic events.

Main Criteria: Virtual Field Trips
Secondary Criteria: National Geography Standards (NGS)
Subjects: Science, Social Studies
Grades: 2, 3

Virtual Field Trips

The Sahara Desert

National Geography Standards (NGS)
Science

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

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.16.**	**The changes that occur in the meaning, use, distribution, and importance of resources**
STRAND	**ES.16.1.**	**Types and Meanings of Resources: The characteristics of renewable, nonrenewable, and flow resources**
BENCHMARK	**ES.16.1.A.**	**Identify and explain the characteristics of renewable, nonrenewable, and flow resources, as exemplified by being able to**
EXPECTATION	**ES.16.1.A.1.**	**Explain the meaning of the term "resource" and then illustrate the idea of renewable, nonrenewable, and flow resources by sorting example photographs into each of the three categories.**

National Geography Standards (NGS)
Science

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

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.16.**	**The changes that occur in the meaning, use, distribution, and importance of resources**
STRAND	**ES.16.1.**	**Types and Meanings of Resources: The characteristics of renewable, nonrenewable, and flow resources**
BENCHMARK	**ES.16.1.A.**	**Identify and explain the characteristics of renewable, nonrenewable, and flow resources, as exemplified by being able to**
EXPECTATION	**ES.16.1.A.1.**	**Explain the meaning of the term "resource" and then illustrate the idea of renewable, nonrenewable, and flow resources by sorting example photographs into each of the three categories.**

National Geography Standards (NGS)
Social Studies

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

ESSENTIAL ELEMENT	**NGS.WST.**	**The World in Spatial Terms**
STANDARD	**WST.1.**	**How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information**
STRAND	**WST.1.1.**	**Properties and Functions of Geographic Representations: Properties and functions of geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualization**
BENCHMARK	**WST.1.1.A.**	**Identify and describe the properties (position and orientation, symbols, scale, perspective, coordinate systems) and functions of geographic representations, as exemplified by being able to**
EXPECTATION	**WST.1.1.A.2.**	**Identify and describe the functions of a variety of geographic representations.**

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.1.	How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
STRAND	WST.1.1.	Properties and Functions of Geographic Representations: Properties and functions of geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualization
BENCHMARK	WST.1.1.B.	Describe how properties of geographic representations determine the purposes they can be used for, as exemplified by being able to
EXPECTATION	WST.1.1.B.1.	Identify the maps or types of maps most appropriate for specific purposes, (e.g., to locate physical and/or human features, to determine the shortest route from one town to another town, to compare the number of people living at two or more locations).
EXPECTATION	WST.1.1.B.2.	Describe how a variety of geographic representations (maps, globes, graphs, diagrams, aerial and other photographs, GPS) are used to communicate different types of information.
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).

National Geography Standards (NGS)

Social Studies

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

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.1.	How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
STRAND	WST.1.1.	Properties and Functions of Geographic Representations: Properties and functions of geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualization
BENCHMARK	WST.1.1.A.	Identify and describe the properties (position and orientation, symbols, scale, perspective, coordinate systems) and functions of geographic representations, as exemplified by being able to
EXPECTATION	WST.1.1.A.2.	Identify and describe the functions of a variety of geographic representations.
ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.1.	How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
STRAND	WST.1.1.	Properties and Functions of Geographic Representations: Properties and functions of geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualization
BENCHMARK	WST.1.1.B.	Describe how properties of geographic representations determine the purposes they can be used for, as exemplified by being able to
EXPECTATION	WST.1.1.B.1.	Identify the maps or types of maps most appropriate for specific purposes, (e.g., to locate physical and/or human features, to determine the shortest route from one town to another town, to compare the number of people living at two or more locations).
EXPECTATION	WST.1.1.B.2.	Describe how a variety of geographic representations (maps, globes, graphs, diagrams, aerial and other photographs, GPS) are used to communicate different types of information.

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).

Main Criteria: Virtual Field Trips
Secondary Criteria: National Geography Standards (NGS)
Subjects: Science, Social Studies
Grades: 4, 5, 6

Virtual Field Trips

The Sahara Desert

National Geography Standards (NGS)

Science

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

ESSENTIAL ELEMENT	NGS.ES.	Environment and Society
STANDARD	ES.16.	The changes that occur in the meaning, use, distribution, and importance of resources
STRAND	ES.16.1.	Types and Meanings of Resources: The characteristics of renewable, nonrenewable, and flow resources
BENCHMARK	ES.16.1.A.	Identify and explain the characteristics of renewable, nonrenewable, and flow resources, as exemplified by being able to
EXPECTATION	ES.16.1.A.1.	Explain the meaning of the term "resource" and then illustrate the idea of renewable, nonrenewable, and flow resources by sorting example photographs into each of the three categories.

National Geography Standards (NGS)

Science

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

ESSENTIAL ELEMENT	NGS.ES.	Environment and Society
STANDARD	ES.14.	How human actions modify the physical environment
STRAND	ES.14.1.	Modification of the Physical Environment: Human modifications of the physical environment in one place often lead to changes in other places
BENCHMARK	ES.14.1.A.	Describe and explain how human-induced changes in one place can affect the physical environment in other places, as exemplified by being able to
EXPECTATION	ES.14.1.A.1.	Describe and explain how the construction of dams and levees on rivers in one region affects places downstream (e.g., water availability for human consumption and agriculture, flood control, electricity generation, aquatic and riparian ecosystems).
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.1.	Analyze the positive and negative effects of human actions on the lithosphere (e.g., land degradation and erosion, soil salinization and acidification).
ESSENTIAL ELEMENT	NGS.ES.	Environment and Society
STANDARD	ES.16.	The changes that occur in the meaning, use, distribution, and importance of resources
STRAND	ES.16.2.	Location and Distribution of Resources: The formation and spatial distribution of types of resources
BENCHMARK	ES.16.2.A.	Describe the physical processes that influence the formation and therefore spatial distribution of renewable, nonrenewable, and flow resources, as exemplified by being able to
EXPECTATION	ES.16.2.A.2.	Describe the physical conditions necessary to generate electricity from flow resources (e.g., water, geothermal, solar, wind) and then identify on a US map potential locations for the generation of electricity from these flow resources.

National Geography Standards (NGS)

Science

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

ESSENTIAL ELEMENT	NGS.ES.	Environment and Society
STANDARD	ES.14.	How human actions modify the physical environment
STRAND	ES.14.1.	Modification of the Physical Environment: Human modifications of the physical environment in one place often lead to changes in other places
BENCHMARK	ES.14.1.A.	Describe and explain how human-induced changes in one place can affect the physical environment in other places, as exemplified by being able to
EXPECTATION	ES.14.1.A.1.	Describe and explain how the construction of dams and levees on rivers in one region affects places downstream (e.g., water availability for human consumption and agriculture, flood control, electricity generation, aquatic and riparian ecosystems).
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.1.	Analyze the positive and negative effects of human actions on the lithosphere (e.g., land degradation and erosion, soil salinization and acidification).
ESSENTIAL ELEMENT	NGS.ES.	Environment and Society
STANDARD	ES.16.	The changes that occur in the meaning, use, distribution, and importance of resources
STRAND	ES.16.2.	Location and Distribution of Resources: The formation and spatial distribution of types of resources
BENCHMARK	ES.16.2.A.	Describe the physical processes that influence the formation and therefore spatial distribution of renewable, nonrenewable, and flow resources, as exemplified by being able to
EXPECTATION	ES.16.2.A.2.	Describe the physical conditions necessary to generate electricity from flow resources (e.g., water, geothermal, solar, wind) and then identify on a US map potential locations for the generation of electricity from these flow resources.

National Geography Standards (NGS)

Social Studies

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

ESSENTIAL ELEMENT	**NGS.WST.**	**The World in Spatial Terms**
STANDARD	**WST.1.**	**How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information**
STRAND	**WST.1.1.**	**Properties and Functions of Geographic Representations: Properties and functions of geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualization**
BENCHMARK	**WST.1.1.A.**	**Identify and describe the properties (position and orientation, symbols, scale, perspective, coordinate systems) and functions of geographic representations, as exemplified by being able to**
EXPECTATION	**WST.1.1.A.2.**	**Identify and describe the functions of a variety of geographic representations.**
ESSENTIAL ELEMENT	**NGS.WST.**	**The World in Spatial Terms**
STANDARD	**WST.1.**	**How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information**
STRAND	**WST.1.1.**	**Properties and Functions of Geographic Representations: Properties and functions of geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualization**
BENCHMARK	**WST.1.1.B.**	**Describe how properties of geographic representations determine the purposes they can be used for, as exemplified by being able to**
EXPECTATION	**WST.1.1.B.1.**	**Identify the maps or types of maps most appropriate for specific purposes, (e.g., to locate physical and/or human features, to determine the shortest route from one town to another town, to compare the number of people living at two or more locations).**
EXPECTATION	**WST.1.1.B.2.**	**Describe how a variety of geographic representations (maps, globes, graphs, diagrams, aerial and other photographs, GPS) are used to communicate different types of information.**
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).

National Geography Standards (NGS)

Social Studies

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

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.1.	How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
STRAND	WST.1.1.	Properties and Functions of Geographic Representations: The advantages and disadvantages of using different geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualizations for analyzing spatial distributions and patterns
BENCHMARK	WST.1.1.B.	Evaluate the appropriate use of geospatial representations for specific geographic tasks, such as analyzing spatial distributions and patterns, as exemplified by being able to
EXPECTATION	WST.1.1.B.3.	Compare the patterns shown by geographic representations at different scales (e.g., neighborhood, city, state, country).

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.1.	How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
STRAND	WST.1.4.	Using Geographic Representations: The use of geographic representations to ask and answer geographic questions
BENCHMARK	WST.1.4.A.	Analyze geographic representations to ask and answer questions about spatial distributions and patterns, as exemplified by being able to
EXPECTATION	WST.1.4.A.1.	Analyze printed and digital maps to observe spatial distributions and patterns to generate and answer geographic questions (e.g., use digital census data to determine demographic patterns in a state, or analyze census data and transportation routes to identify and locate services, such as a day-care center or stores needed in a region).
ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.2.	How to use mental maps to organize information about people, places, and environments in a spatial context
STRAND	WST.2.3.	Using Mental Maps: Mental maps are used to answer geographic questions about locations, characteristics, and patterns of places and regions
BENCHMARK	WST.2.3.A.	Identify from memory and describe the locations, characteristics, and patterns of places and regions to answer geographic questions, as exemplified by being able to
EXPECTATION	WST.2.3.A.3.	Identify from memory the distribution, pattern, and characteristics of major world deserts and mountain ranges that can be barriers to travel or settlement.
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.

National Geography Standards (NGS)

Social Studies

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

ESSENTIAL ELEMENT	**NGS.WST.**	**The World in Spatial Terms**
STANDARD	**WST.1.**	**How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information**
STRAND	**WST.1.1.**	**Properties and Functions of Geographic Representations: The advantages and disadvantages of using different geographic representations—such as maps, globes, graphs, diagrams, aerial and other photographs, remotely sensed images, and geographic visualizations for analyzing spatial distributions and patterns**
BENCHMARK	**WST.1.1.B.**	**Evaluate the appropriate use of geospatial representations for specific geographic tasks, such as analyzing spatial distributions and patterns, as exemplified by being able to**
EXPECTATION	**WST.1.1.B.3.**	**Compare the patterns shown by geographic representations at different scales (e.g., neighborhood, city, state, country).**
ESSENTIAL ELEMENT	**NGS.WST.**	**The World in Spatial Terms**
STANDARD	**WST.1.**	**How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information**
STRAND	**WST.1.4.**	**Using Geographic Representations: The use of geographic representations to ask and answer geographic questions**
BENCHMARK	**WST.1.4.A.**	**Analyze geographic representations to ask and answer questions about spatial distributions and patterns, as exemplified by being able to**
EXPECTATION	**WST.1.4.A.1.**	**Analyze printed and digital maps to observe spatial distributions and patterns to generate and answer geographic questions (e.g., use digital census data to determine demographic patterns in a state, or analyze census data and transportation routes to identify and locate services, such as a day-care center or stores needed in a region).**
ESSENTIAL ELEMENT	**NGS.WST.**	**The World in Spatial Terms**
STANDARD	**WST.2.**	**How to use mental maps to organize information about people, places, and environments in a spatial context**
STRAND	**WST.2.3.**	**Using Mental Maps: Mental maps are used to answer geographic questions about locations, characteristics, and patterns of places and regions**
BENCHMARK	**WST.2.3.A.**	**Identify from memory and describe the locations, characteristics, and patterns of places and regions to answer geographic questions, as exemplified by being able to**
EXPECTATION	**WST.2.3.A.3.**	**Identify from memory the distribution, pattern, and characteristics of major world deserts and mountain ranges that can be barriers to travel or settlement.**
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.

Main Criteria: Virtual Field Trips
Secondary Criteria: Next Generation Science Standards (NGSS)
Subject: Science
Grades: 4, 5, 6

Virtual Field Trips

The Sahara Desert

Next Generation Science Standards (NGSS)
Science

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

STRAND	NGSS.4-ESS	EARTH AND SPACE SCIENCE
TITLE	4-ESS3	Earth and Human Activity
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	4-ESS3-1	Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

Next Generation Science Standards (NGSS)
Science

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

STRAND	NGSS.MS-ESS	EARTH AND SPACE SCIENCE
TITLE	MS-ESS3	Earth and Human Activity
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ESS3-1	Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.