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

Grade 4 - West Region Landforms

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	3.1.1.	The theme of people, places, and environments involves the study of location, place, and the interactions of people with their surroundings.
LEARNING EXPECTATION	3.1.3.	Physical and human characteristics of the school, community, state, and region, and the interactions of people in these places with the environment.
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.

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	3.2.1.	Ask and find answers to geographic questions related to the school, community, state, region, and world.

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	**3.3.**	**PRODUCTS - Learners demonstrate understanding by:**
LEARNING EXPECTATION	3.3.1.	Creating illustrations and composing answers to geographic questions about people, places, and environments.

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.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.2.	Identify examples of water features on Earth's surface that comprise the hydrosphere (e.g., oceans, rivers, lakes, water vapor, ground water, different types of precipitation).
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.ES.**	**Environment and Society**
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.2.**	**Environmental Hazards: Environmental hazards affect human activities**
BENCHMARK	**ES.15.2.A.**	**Identify and describe the locations of environmental hazards, as exemplified by being able to**
EXPECTATION	ES.15.2.A.2.	Identify on a map of the Pacific basin the occurrences of earthquakes and volcanoes and describe the pattern that results (e.g., the Pacific Ring of Fire).

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.4.1.**	**The Concept of Place: Places are locations having distinctive characteristics that give them meaning and distinguish them from other locations**
BENCHMARK	**PR.4.1.A.**	**Describe the distinguishing characteristics and meanings of several different places, as exemplified by being able to**
EXPECTATION	PR.4.1.A.1.	Identify and describe categories of characteristics that define a location as a place (e.g., weather characteristics, population density, architectural styles, landforms, vegetation, cultures, types of industry).

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.1.	Describe and compare the climatic conditions at different places in the United States (e.g., deserts, mountains, rainy regions of the Pacific Northwest).
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.PR.	Places and Regions
STANDARD	PR.5.	That people create regions to interpret Earth's complexity
STRAND	PR.5.1.	The Concept of Region: Regions are areas of Earth’s surface with unifying physical and/or human characteristics
BENCHMARK	PR.5.1.A.	Describe the distinguishing characteristics and meanings of several different regions, as exemplified by being able to
EXPECTATION	PR.5.1.A.1.	Identify unifying areas on a map that define those areas as regions (e.g., a zoo map showing how animal exhibits are organized by re□gions related to climate, landforms, and vegetation zones).
EXPECTATION	PR.5.1.A.3.	Describe the characteristics that define a physical region in the state (e.g., Front Range in Colorado, Sand Hills in Nebraska, Hill Country in Texas).

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.8.3.	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.2.	Describe the temperature, precipitation, and vegetation characteris□tics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).

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).

ESSENTIAL ELEMENT	NGS.ES.	Environment and Society
STANDARD	ES.15.	How physical systems affect human systems
STRAND	ES.15.2.	Environmental Hazards: Environmental hazards affect human activities
BENCHMARK	ES.15.2.B.	Describe and analyze the effects of environmental hazards on human activities, as exemplified by being able to
EXPECTATION	ES.15.2.B.1.	Describe how people change their behaviors in response to environmental hazards (e.g., knowing evacuation routes, building a storm shelter, conducting earthquake or tornado drills).

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

Grade 4 - West Region Landforms

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	3.1.1.	The theme of people, places, and environments involves the study of location, place, and the interactions of people with their surroundings.
LEARNING EXPECTATION	3.1.3.	Physical and human characteristics of the school, community, state, and region, and the interactions of people in these places with the environment.
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.

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	3.2.1.	Ask and find answers to geographic questions related to the school, community, state, region, and world.

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	**3.3.**	**PRODUCTS - Learners demonstrate understanding by:**
LEARNING EXPECTATION	3.3.1.	Creating illustrations and composing answers to geographic questions about people, places, and environments.

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.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.2.	Identify examples of water features on Earth's surface that comprise the hydrosphere (e.g., oceans, rivers, lakes, water vapor, ground water, different types of precipitation).
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.ES.**	**Environment and Society**
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.2.**	**Environmental Hazards: Environmental hazards affect human activities**
BENCHMARK	**ES.15.2.A.**	**Identify and describe the locations of environmental hazards, as exemplified by being able to**
EXPECTATION	ES.15.2.A.2.	Identify on a map of the Pacific basin the occurrences of earthquakes and volcanoes and describe the pattern that results (e.g., the Pacific Ring of Fire).

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.4.1.**	**The Concept of Place: Places are locations having distinctive characteristics that give them meaning and distinguish them from other locations**
BENCHMARK	**PR.4.1.A.**	**Describe the distinguishing characteristics and meanings of several different places, as exemplified by being able to**
EXPECTATION	PR.4.1.A.1.	Identify and describe categories of characteristics that define a location as a place (e.g., weather characteristics, population density, architectural styles, landforms, vegetation, cultures, types of industry).

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.1.	Describe and compare the climatic conditions at different places in the United States (e.g., deserts, mountains, rainy regions of the Pacific Northwest).
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.PR.**	**Places and Regions**
STANDARD	**PR.5.**	**That people create regions to interpret Earth's complexity**
STRAND	**PR.5.1.**	**The Concept of Region: Regions are areas of Earth's surface with unifying physical and/or human characteristics**
BENCHMARK	**PR.5.1.A.**	**Describe the distinguishing characteristics and meanings of several different regions, as exemplified by being able to**
EXPECTATION	PR.5.1.A.1.	Identify unifying areas on a map that define those areas as regions (e.g., a zoo map showing how animal exhibits are organized by re□gions related to climate, landforms, and vegetation zones).
EXPECTATION	PR.5.1.A.3.	Describe the characteristics that define a physical region in the state (e.g., Front Range in Colorado, Sand Hills in Nebraska, Hill Country in Texas).

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.8.3.**	**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.2.	Describe the temperature, precipitation, and vegetation characteris□tics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).

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).

ESSENTIAL ELEMENT	NGS.ES.	Environment and Society
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.2.**	**Environmental Hazards: Environmental hazards affect human activities**
BENCHMARK	**ES.15.2.B.**	**Describe and analyze the effects of environmental hazards on human activities, as exemplified by being able to**
EXPECTATION	ES.15.2.B.1.	Describe how people change their behaviors in response to environmental hazards (e.g., knowing evacuation routes, building a storm shelter, conducting earthquake or tornado drills).

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

Grade 4 - West Region Landforms

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	3.1.2.	Concerts such as: location, region, place, and migration, as well as human and physical systems.
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).

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	3.2.1.	Ask and find answers to geographic questions related to regions, nations, and the world in the past and present.

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.B.**	**Analyze and explain patterns of physical features resulting from the interactions of Earth's physical processes, as exemplified by being able to**
EXPECTATION	PS.7.1.B.1.	Analyze maps of tectonic plates to predict the location of physical features (e.g., mountain ranges, volcanoes, rift valleys).

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 generate patterns of features across Earth's surface**
BENCHMARK	**PS.7.3.A.**	**Analyze and explain the patterns that occur on Earth's surface as a result of physical processes, as exemplified by being able to**
EXPECTATION	PS.7.3.A.2.	Explain how physical processes related to plate tectonics form islands (e.g., Hawaiian Islands) or increase the elevation of mountains (e.g., Himalayan Mountains).

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.2.**	**Environmental Hazards: The types, causes, and characteristics of environmental hazards occur at a variety of scales from local to global**
BENCHMARK	**ES.15.2.A.**	**Describe and explain the types and characteristics of hazards, as exemplified by being able to**
EXPECTATION	ES.15.2.A.2.	Construct a table of climate-related and tectonic-related hazards and explain the characteristics of each type of hazard.

ESSENTIAL ELEMENT	**NGS.ES.**	**Environment and Society**
STANDARD	**ES.15.**	**How physical systems affect human systems**
STRAND	**ES.15.2.**	**Environmental Hazards: The types, causes, and characteristics of environmental hazards occur at a variety of scales from local to global**
BENCHMARK	**ES.15.2.B.**	**Explain the causes and locations of various types of environmental hazards, as exemplified by being able to**
EXPECTATION	ES.15.2.B.1.	Describe the physical environmental conditions that create or result in different environmental hazards (e.g., plate tectonics causing earthquakes, sea surface temperatures contributing to hurricane development in the Atlantic, strong frontal systems in thunderstorms spawning tornadoes).
EXPECTATION	ES.15.2.B.2.	Identify the tectonic plate boundaries on a map and analyze the most likely locations of future earthquakes and volcanoes based on an explanation for the causes of these environmental hazards.

National Geography Standards (NGS)

Social Studies

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

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.2.1.**	**Developing Mental Maps: The locations, characteristics, and patterns of physical and human features are the basis for mental maps at local to global scales**
BENCHMARK	**WST.2.1.A.**	**Identify from memory and describe locations, patterns, and characteristics of physical and human features, as exemplified by being able to**
EXPECTATION	WST.2.1.A.3.	Identify from memory and describe the major climate and vegetation regions of the United States.

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.PR.**	**Places and Regions**
STANDARD	**PR.5.**	**That people create regions to interpret Earth's complexity**
STRAND	**PR.5.1.**	**The Concept of Region: Different types of regions are used to organize and interpret areas of Earth's surface**
BENCHMARK	**PR.5.1.A.**	**Identify and explain the criteria used to define formal, functional, and perceptual regions, as exemplified by being able to**
EXPECTATION	PR.5.1.A.1.	Identify and explain the bases for the formal region(s), functional region(s), and perceptual region(s) for the community or state where the students live (e.g., for Michigan, the Kalamazoo-Battle Creek Metropolitan Statistical Area is a formal region, the fruit belt in Southwest Michigan is a functional region, Kalamazoo as the snow belt capital of Lake Michigan is a perceptual region).
EXPECTATION	PR.5.1.A.3.	Analyze collected maps with regional labels as examples of formal, functional, or perceptual regions (e.g., maps of physical regions as formal, weather maps as functional, tourist maps as perceptual).

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.B.**	**Analyze and explain patterns of physical features resulting from the interactions of Earth's physical processes, as exemplified by being able to**
EXPECTATION	PS.7.1.B.1.	Analyze maps of tectonic plates to predict the location of physical features (e.g., mountain ranges, volcanoes, rift valleys).

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 generate patterns of features across Earth's surface**
BENCHMARK	**PS.7.3.A.**	**Analyze and explain the patterns that occur on Earth's surface as a result of physical processes, as exemplified by being able to**
EXPECTATION	PS.7.3.A.2.	Explain how physical processes related to plate tectonics form islands (e.g., Hawaiian Islands) or increase the elevation of mountains (e.g., Himalayan Mountains).

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.15.**	**How physical systems affect human systems**
STRAND	**ES.15.2.**	**Environmental Hazards: The types, causes, and characteristics of environmental hazards occur at a variety of scales from local to global**
BENCHMARK	**ES.15.2.B.**	**Explain the causes and locations of various types of environmental hazards, as exemplified by being able to**
EXPECTATION	ES.15.2.B.1.	Describe the physical environmental conditions that create or result in different environmental hazards (e.g., plate tectonics causing earthquakes, sea surface temperatures contributing to hurricane development in the Atlantic, strong frontal systems in thunderstorms spawning tornadoes).
EXPECTATION	ES.15.2.B.2.	Identify the tectonic plate boundaries on a map and analyze the most likely locations of future earthquakes and volcanoes based on an explanation for the causes of these environmental hazards.

Next Generation Science Standards (NGSS)

Science

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

STRAND	**NGSS.5-ESS**	**EARTH AND SPACE SCIENCE**
TITLE	**5-ESS2**	**Earth's Systems**
		Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	5-ESS2-1	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.