

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

Subjects: Science, Social Studies

Grades: 2, 3, 4, 5, 6

Virtual Field Trips

The Amazon Rainforest - Part 2 - Younger Grades

National Council for the Social Studies (NCSS)

Social Studies

Grade 2 - Adopted: 2010

THEME	NCSS.1. CULTURE
DEFINITION	SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.1. KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	1.1.1. 'Culture' refers to the behaviors, beliefs, values, traditions, institutions, and ways of living together of a group of people.
LEARNING EXPECTATION	1.1.2. Concepts such as: similarities, differences, beliefs, values, cohesion, and diversity.
LEARNING EXPECTATION	1.1.4. How culture may change in response to changing needs and concerns.
LEARNING EXPECTATION	1.1.6. How peoples from different cultures develop different values and ways of interpreting experience.
THEME	NCSS.1. CULTURE
DEFINITION	SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.2. PROCESSES - Learners will be able to:
LEARNING EXPECTATION	1.2.2. Explore and describe similarities and differences in the ways various cultural groups meet similar needs and concerns.
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	2.1. KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	2.1.4. Key people, events, and places associated with the history of the community, nation, 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	3.1.	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.
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.
THEME	NCSS.5.	INDIVIDUALS, GROUPS, AND INSTITUTIONS
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF INTERACTIONS AMONG INDIVIDUALS, GROUPS, AND INSTITUTIONS.
CATEGORY	5.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	5.1.2.	Concepts such as: community, culture, role, competition, cooperation, rules, and norms.
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	9.2.4.	Describe examples in which language, art, music, belief systems, and other cultural elements can facilitate global understanding or cause misunderstanding.

National Council for the Social Studies (NCSS)

Social Studies

Grade 3 - Adopted: 2010

THEME	NCSS.1.	CULTURE
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	1.1.1.	'Culture' refers to the behaviors, beliefs, values, traditions, institutions, and ways of living together of a group of people.
LEARNING EXPECTATION	1.1.2.	Concepts such as: similarities, differences, beliefs, values, cohesion, and diversity.
LEARNING EXPECTATION	1.1.4.	How culture may change in response to changing needs and concerns.

LEARNING EXPECTATION	1.1.6.	How peoples from different cultures develop different values and ways of interpreting experience.
THEME	NCSS.1.	CULTURE
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	1.2.2.	Explore and describe similarities and differences in the ways various cultural groups meet similar needs and concerns.
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	2.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	2.1.4.	Key people, events, and places associated with the history of the community, nation, 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	3.1.	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.
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.
THEME	NCSS.5.	INDIVIDUALS, GROUPS, AND INSTITUTIONS
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF INTERACTIONS AMONG INDIVIDUALS, GROUPS, AND INSTITUTIONS.
CATEGORY	5.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	5.1.2.	Concepts such as: community, culture, role, competition, cooperation, rules, and norms.
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	9.2.4.	Describe examples in which language, art, music, belief systems, and other cultural elements can facilitate global understanding or cause misunderstanding.

National Council for the Social Studies (NCSS)

Social Studies

Grade 4 - Adopted: 2010

THEME	NCSS.1. CULTURE	
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	1.1.1.	'Culture" refers to the behaviors, beliefs, values, traditions, institutions, and ways of living together of a group of people.
LEARNING EXPECTATION	1.1.2.	Concepts such as: similarities, differences, beliefs, values, cohesion, and diversity.
LEARNING EXPECTATION	1.1.4.	How culture may change in response to changing needs and concerns.
LEARNING EXPECTATION	1.1.6.	How peoples from different cultures develop different values and ways of interpreting experience.
THEME	NCSS.1. CULTURE	
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	1.2.2.	Explore and describe similarities and differences in the ways various cultural groups meet similar needs and concerns.
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	2.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	2.1.4.	Key people, events, and places associated with the history of the community, nation, 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	3.1.	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.
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.
THEME	NCSS.5.	INDIVIDUALS, GROUPS, AND INSTITUTIONS
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF INTERACTIONS AMONG INDIVIDUALS, GROUPS, AND INSTITUTIONS.
CATEGORY	5.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	5.1.2.	Concepts such as: community, culture, role, competition, cooperation, rules, and norms.
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	9.2.4.	Describe examples in which language, art, music, belief systems, and other cultural elements can facilitate global understanding or cause misunderstanding.

National Council for the Social Studies (NCSS)

Social Studies

Grade 5 - Adopted: 2010

THEME	NCSS.1.	CULTURE
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	1.1.1.	'Culture" refers to the socially transmitted behaviors, beliefs, values, traditions, institutions, and ways of living together of a group of people.
LEARNING EXPECTATION	1.1.3.	How culture influences the ways in which human groups solve the problems of daily living.
LEARNING EXPECTATION	1.1.6.	That culture may change in response to changing needs, concerns, social, political, and geographic conditions.
LEARNING EXPECTATION	1.1.7.	How people from different cultures develop different values and ways of interpreting experience.
THEME	NCSS.1.	CULTURE
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.2.	PROCESSES - Learners will be able to:
LEARNING	1.2.1.	Ask and find answers to questions related to culture.

EXPECTATION		
LEARNING EXPECTATION	1.2.7.	Draw inferences from data about the ways in which given cultures respond to persistent human issues, and how culture influences those responses.
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	2.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	2.1.6.	The origins and influences of social, cultural, political, and economic systems.
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, region, place, and migration, as well as human and physical systems.
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	3.1.6.	Patterns of demographic and political change, and cultural diffusion in the past and present (e.g., changing national boundaries, migration, and settlement, and the diffusion of and changes in customs and ideas).
LEARNING EXPECTATION	3.1.7.	Human modifications of the environment.
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.
LEARNING EXPECTATION	3.2.3.	Acquire, organize, and analyze information and use geographic tools to draw conclusions about historic or current national and global environmental change.
THEME	NCSS.5.	INDIVIDUALS, GROUPS, AND INSTITUTIONS
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF INTERACTIONS AMONG INDIVIDUALS, GROUPS, AND INSTITUTIONS.
CATEGORY	5.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	5.1.2.	Concepts such as: mores, norms, status, role, socialization, ethnocentrism, cultural diffusion, competition, cooperation, conflict, race, ethnicity, and gender.
LEARNING EXPECTATION	5.1.9.	That groups and institutions influence culture in a variety of ways.
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.	Investigate and explain the ways in which aspects of culture, such as language, beliefs, and traditions, may facilitate understanding, or lead to misunderstanding between cultures.

National Council for the Social Studies (NCSS)

Social Studies

Grade 6 - Adopted: 2010

THEME	NCSS.1. CULTURE	
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	1.1.1.	'Culture" refers to the socially transmitted behaviors, beliefs, values, traditions, institutions, and ways of living together of a group of people.
LEARNING EXPECTATION	1.1.3.	How culture influences the ways in which human groups solve the problems of daily living.
LEARNING EXPECTATION	1.1.6.	That culture may change in response to changing needs, concerns, social, political, and geographic conditions.
LEARNING EXPECTATION	1.1.7.	How people from different cultures develop different values and ways of interpreting experience.
THEME	NCSS.1. CULTURE	
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.
CATEGORY	1.2.	PROCESSES - Learners will be able to:
LEARNING EXPECTATION	1.2.1.	Ask and find answers to questions related to culture.
LEARNING EXPECTATION	1.2.7.	Draw inferences from data about the ways in which given cultures respond to persistent human issues, and how culture influences those responses.
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	2.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	2.1.6.	The origins and influences of social, cultural, political, and economic systems.
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, region, place, and migration, as well as human and physical systems.
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	3.1.6.	Patterns of demographic and political change, and cultural diffusion in the

EXPECTATION		past and present (e.g., changing national boundaries, migration, and settlement, and the diffusion of and changes in customs and ideas).
LEARNING EXPECTATION	3.1.7.	Human modifications of the environment.
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.
LEARNING EXPECTATION	3.2.3.	Acquire, organize, and analyze information and use geographic tools to draw conclusions about historic or current national and global environmental change.
THEME	NCSS.5.	INDIVIDUALS, GROUPS, AND INSTITUTIONS
DEFINITION		SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF INTERACTIONS AMONG INDIVIDUALS, GROUPS, AND INSTITUTIONS.
CATEGORY	5.1.	KNOWLEDGE - Learners will understand:
LEARNING EXPECTATION	5.1.2.	Concepts such as: mores, norms, status, role, socialization, ethnocentrism, cultural diffusion, competition, cooperation, conflict, race, ethnicity, and gender.
LEARNING EXPECTATION	5.1.9.	That groups and institutions influence culture in a variety of ways.
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.	Investigate and explain the ways in which aspects of culture, such as language, beliefs, and traditions, may facilitate understanding, or lead to misunderstanding between cultures.

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).
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.A.	Identify examples of physical processes, as exemplified by being able to
EXPECTATION	PS.7.3.A.1.	Identify different cycles in Earth's systems (e.g., water cycle, carbon cycle, wind or water erosion, weathering, deposition, mass wasting).
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.HS.	Human Systems

STANDARD	HS.13.	How the forces of cooperation and conflict among people influence the division and control of Earth's surface
STRAND	HS.13.3.	Conflict: Conflicts arise when there is disagreement over the division, control, and management of Earth's surface
BENCHMARK	HS.13.3.A.	Analyze examples of disagreements over land uses in their community, as exemplified by being able to
EXPECTATION	HS.13.3.A.2.	Identify local land-use issues in which there are disagreements and analyze the perspectives of the key stakeholders (e.g., protection of environmentally sensitive areas, land use for commercial purposes, locating waste disposal sites).
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.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.
EXPECTATION	ES.16.1.A.3.	Identify the types of nonrenewable resources students and their families use in their everyday lives and identify renewable and flow resources that could be used instead of nonrenewable resources.
ESSENTIAL ELEMENT	NGS.UG.	The Uses of Geography
STANDARD	UG.17.	How to apply geography to interpret the past
STRAND	UG.17.2.	Changes in Geographic Contexts: Places, regions, and environments change over time
BENCHMARK	UG.17.2.A.	Analyze how places, regions, and environments change over time, as exemplified by being able to
EXPECTATION	UG.17.2.A.3.	Describe how the physical environment of a county or state was changed by processes of forest clearing, damming of rivers, cultivation of fields, or land leveling.
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.
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.18.2.	Changes in Geographic Contexts: Places, regions, and environments will continue to change
BENCHMARK	UG.18.2.A.	Describe current changes in places, regions, and environments and predict how these locations may be different in the future, as exemplified by being able to
EXPECTATION	UG.18.2.A.1.	Describe how to plan for the environmental future of a place by completing the following statements: “I will keep....” “I will change....” and “I will remove....”

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).
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.A.	Identify examples of physical processes, as exemplified by being able to
EXPECTATION	PS.7.3.A.1.	Identify different cycles in Earth's systems (e.g., water cycle, carbon cycle, wind or water erosion, weathering, deposition, mass wasting).
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.HS.	Human Systems
STANDARD	HS.13.	How the forces of cooperation and conflict among people influence the division and control of Earth's surface
STRAND	HS.13.3.	Conflict: Conflicts arise when there is disagreement over the division, control, and management of Earth's surface
BENCHMARK	HS.13.3.A.	Analyze examples of disagreements over land uses in their community, as exemplified by being able to
EXPECTATION	HS.13.3.A.2.	Identify local land-use issues in which there are disagreements and analyze the perspectives of the key stakeholders (e.g., protection of environmentally sensitive areas, land use for commercial purposes, locating waste disposal sites).
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.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.
EXPECTATION	ES.16.1.A.3.	Identify the types of nonrenewable resources students and their families use in their everyday lives and identify renewable and flow resources that could be used instead of nonrenewable resources.
ESSENTIAL ELEMENT	NGS.UG.	The Uses of Geography
STANDARD	UG.17.	How to apply geography to interpret the past
STRAND	UG.17.2.	Changes in Geographic Contexts: Places, regions, and environments change over time
BENCHMARK	UG.17.2.A.	Analyze how places, regions, and environments change over time, as exemplified by being able to
EXPECTATION	UG.17.2.A.3.	Describe how the physical environment of a county or state was changed by processes of forest clearing, damming of rivers, cultivation of fields, or land leveling.
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.
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.18.2.	Changes in Geographic Contexts: Places, regions, and environments will continue to change
BENCHMARK	UG.18.2.A.	Describe current changes in places, regions, and environments and predict how these locations may be different in the future, as exemplified by being able to
EXPECTATION	UG.18.2.A.1.	Describe how to plan for the environmental future of a place by

completing the following statements: “I will keep....” “I will change....”
and “I will remove....”

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).
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.A.	Identify examples of physical processes, as exemplified by being able to
EXPECTATION	PS.7.3.A.1.	Identify different cycles in Earth's systems (e.g., water cycle, carbon cycle, wind or water erosion, weathering, deposition, mass wasting).
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.HS.	Human Systems
STANDARD	HS.13.	How the forces of cooperation and conflict among people influence the division and control of Earth's surface
STRAND	HS.13.3.	Conflict: Conflicts arise when there is disagreement over the division, control, and management of Earth's surface
BENCHMARK	HS.13.3.A.	Analyze examples of disagreements over land uses in their community, as exemplified by being able to
EXPECTATION	HS.13.3.A.2.	Identify local land-use issues in which there are disagreements and analyze the perspectives of the key stakeholders (e.g., protection of environmentally sensitive areas, land use for commercial purposes, locating waste disposal sites).
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.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.

Identify the types of nonrenewable resources students and their families use in their everyday lives and identify renewable and flow resources that could be used instead of nonrenewable resources.

ESSENTIAL ELEMENT NGS.UG. The Uses of Geography

STANDARD UG.17. How to apply geography to interpret the past

STRAND UG.17.2. Changes in Geographic Contexts: Places, regions, and environments change over time

BENCHMARK UG.17.2.A. Analyze how places, regions, and environments change over time, as exemplified by being able to

EXPECTATION UG.17.2.A.3. Describe how the physical environment of a county or state was changed by processes of forest clearing, damming of rivers, cultivation of fields, or land leveling.

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.

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.18.2. Changes in Geographic Contexts: Places, regions, and environments will continue to change

BENCHMARK UG.18.2.A. Describe current changes in places, regions, and environments and predict how these locations may be different in the future, as exemplified by being able to

EXPECTATION UG.18.2.A.1. Describe how to plan for the environmental future of a place by completing the following statements: “I will keep....” “I will change....” and “I will remove....”

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 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.8.1.	Components of Ecosystems: Components of ecosystems are interdependent
BENCHMARK	PS.8.1.A.	Describe how the components of ecosystems are connected and contribute to the energy of their own cycles, as exemplified by being able to
EXPECTATION	PS.8.1.A.1.	Describe the flow of energy and the cycling of matter through an ecosystem (e.g., the food chain, photosynthesis).
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.HS.	Human Systems

STANDARD	HS.11.	The patterns and networks of economic interdependence on Earth's surface
STRAND	HS.11.1.	Economic Activities: The functions of different types of economic activities
BENCHMARK	HS.11.1.A.	Describe and analyze the functions of economic activities in the primary, secondary, tertiary, and quaternary sectors, as exemplified by being able to
EXPECTATION	HS.11.1.A.2.	Describe the sequence of activities that occur in the manufacture of products (e.g., in the production of a computerized sewing machine, the iron-ore mining is primary, smelting iron and steel are secondary, selling of the steel sewing machines is tertiary, and advertising is quaternary).
ESSENTIAL ELEMENT	NGS.HS.	Human Systems
STANDARD	HS.12.	The processes, patterns, and functions of human settlement
STRAND	HS.12.4.	Urban Forms and Functions: Land uses in urban areas are systematically arranged
BENCHMARK	HS.12.4.A.	Describe and analyze the spatial patterns of land use in cities, as exemplified by being able to
EXPECTATION	HS.12.4.A.3.	Identify and describe a controversial land-use issue in the community and analyze the advantages and disadvantages of making the change in use (e.g., widening a street for more lanes of traffic, tearing down an old building for a new park, converting green space into a new building complex).
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.2.	Describe how human changes to land cover can have negative impacts on other areas (e.g., deforestation and downstream flooding, siltation, soil erosion).
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).
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: People can have different viewpoints regarding the meaning and use of resources

BENCHMARK	ES.16.1.A.	Describe examples of how cultures differ in their definition and use of resources, as exemplified by being able to
EXPECTATION	ES.16.1.A.1.	Describe differences in the types of resources used in different geographic contexts in various parts of the world (e.g., the use of wood or animal dung versus electricity or natural gas as a cooking fuel, the use of electrical appliances versus doing household chores by hand).
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.16.3.	Sustainable Resource Use and Management: Humans can manage resources to sustain or prolong their use
BENCHMARK	ES.16.3.A.	Explain how renewable resources can be continuously replenished through sustainable use, as exemplified by being able to
EXPECTATION	ES.16.3.A.1.	Describe and explain how sustainable management techniques can be applied in farming, forestry, and fishing (e.g., soil banks and contour plowing, sustainable timber harvesting practices, aquaculture).

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 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.8.1.	Components of Ecosystems: Components of ecosystems are interdependent
BENCHMARK	PS.8.1.A.	Describe how the components of ecosystems are connected and contribute to the energy of their own cycles, as exemplified by being able to
EXPECTATION	PS.8.1.A.1.	Describe the flow of energy and the cycling of matter through an ecosystem (e.g., the food chain, photosynthesis).
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.HS.	Human Systems
STANDARD	HS.11.	The patterns and networks of economic interdependence on Earth's surface
STRAND	HS.11.1.	Economic Activities: The functions of different types of economic activities
BENCHMARK	HS.11.1.A.	Describe and analyze the functions of economic activities in the primary, secondary, tertiary, and quaternary sectors, as exemplified by being able to
EXPECTATION	HS.11.1.A.2.	Describe the sequence of activities that occur in the manufacture of products (e.g., in the production of a computerized sewing machine, the iron-ore mining is primary, smelting iron and steel are secondary, selling of the steel sewing machines is tertiary, and advertising is quaternary).
ESSENTIAL ELEMENT	NGS.HS.	Human Systems
STANDARD	HS.12.	The processes, patterns, and functions of human settlement
STRAND	HS.12.4.	Urban Forms and Functions: Land uses in urban areas are systematically arranged
BENCHMARK	HS.12.4.A.	Describe and analyze the spatial patterns of land use in cities, as exemplified by being able to
EXPECTATION	HS.12.4.A.3.	Identify and describe a controversial land-use issue in the community and analyze the advantages and disadvantages of making the change in use (e.g., widening a street for more lanes of traffic, tearing down an old

		building for a new park, converting green space into a new building complex).
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.2.	Describe how human changes to land cover can have negative impacts on other areas (e.g., deforestation and downstream flooding, siltation, soil erosion).
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).
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: People can have different viewpoints regarding the meaning and use of resources
BENCHMARK	ES.16.1.A.	Describe examples of how cultures differ in their definition and use of resources, as exemplified by being able to
EXPECTATION	ES.16.1.A.1.	Describe differences in the types of resources used in different geographic contexts in various parts of the world (e.g., the use of wood or animal dung versus electricity or natural gas as a cooking fuel, the use of electrical appliances versus doing household chores by hand).
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.16.3.	Sustainable Resource Use and Management: Humans can manage resources to sustain or prolong their use
BENCHMARK	ES.16.3.A.	Explain how renewable resources can be continuously replenished through sustainable use, as exemplified by being able to
EXPECTATION	ES.16.3.A.1.	Describe and explain how sustainable management techniques can be applied in farming, forestry, and fishing (e.g., soil banks and contour plowing, sustainable timber harvesting practices, aquaculture).

National Geography Standards (NGS)

Social Studies

Grade 2 - Adopted: 2012

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.3.	How to analyze the spatial organization of people, places, and environments on Earth's surface
STRAND	WST.3.1.	Spatial Concepts: The meaning and use of fundamental spatial concepts such as location, distance, direction, scale, movement, region, and volume
BENCHMARK	WST.3.1.A.	Describe and explain the spatial organization of people, places, and environments (where things are in relation to other things) using spatial concepts, as exemplified by being able to
EXPECTATION	WST.3.1.A.2.	Describe the meaning of the spatial concepts of distance, direction, and location used in selected literature (e.g., read an account of Paul Revere's ride and describe it in terms of locations [start to end], movement, region of action, distance, direction).
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.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 regions related to climate, landforms, and vegetation zones).
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).
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.A.	Describe examples in which the physical environment provides

opportunities for human activities, as exemplified by being able to
 EXPECTATION ES.15.1.A.2. Identify and describe examples of places that offer vacation activities for people because of the physical environment (e.g., snow skiing, ocean beaches, boating, river rafting).

National Geography Standards (NGS)

Social Studies

Grade 3 - Adopted: 2012

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.3.	How to analyze the spatial organization of people, places, and environments on Earth's surface
STRAND	WST.3.1.	Spatial Concepts: The meaning and use of fundamental spatial concepts such as location, distance, direction, scale, movement, region, and volume
BENCHMARK	WST.3.1.A.	Describe and explain the spatial organization of people, places, and environments (where things are in relation to other things) using spatial concepts, as exemplified by being able to
EXPECTATION	WST.3.1.A.2.	Describe the meaning of the spatial concepts of distance, direction, and location used in selected literature (e.g., read an account of Paul Revere's ride and describe it in terms of locations [start to end], movement, region of action, distance, direction).
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.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 regions related to climate, landforms, and vegetation zones).

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).

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.A.	Describe examples in which the physical environment provides opportunities for human activities, as exemplified by being able to
EXPECTATION	ES.15.1.A.2.	Identify and describe examples of places that offer vacation activities for people because of the physical environment (e.g., snow skiing, ocean beaches, boating, river rafting).

**National Geography Standards (NGS)
Social Studies**

Grade 4 - Adopted: 2012

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.3.	How to analyze the spatial organization of people, places, and environments on Earth's surface
STRAND	WST.3.1.	Spatial Concepts: The meaning and use of fundamental spatial concepts such as location, distance, direction, scale, movement, region, and volume
BENCHMARK	WST.3.1.A.	Describe and explain the spatial organization of people, places, and environments (where things are in relation to other things) using spatial concepts, as exemplified by being able to
EXPECTATION	WST.3.1.A.2.	Describe the meaning of the spatial concepts of distance, direction, and location used in selected literature (e.g., read an account of Paul Revere's ride and describe it in terms of locations [start to end], movement, region of action, distance, direction).

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.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 regions related to climate, landforms, and vegetation zones).
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

ELEMENT		
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).
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.A.	Describe examples in which the physical environment provides opportunities for human activities, as exemplified by being able to
EXPECTATION	ES.15.1.A.2.	Identify and describe examples of places that offer vacation activities for people because of the physical environment (e.g., snow skiing, ocean beaches, boating, river rafting).

National Geography Standards (NGS)

Social Studies

Grade 5 - Adopted: 2012

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.3.	How to analyze the spatial organization of people, places, and environments on Earth's surface
STRAND	WST.3.3.	Spatial Models: Models are used to represent spatial processes that shape human and physical systems
BENCHMARK	WST.3.3.A.	Describe the processes that shape human and physical systems (e.g., diffusion, migration, and plate tectonics) using models, as exemplified by being able to
EXPECTATION	WST.3.3.A.1.	Describe a model that illustrates the diffusion of cultural characteristics (e.g., music styles, clothing styles, fast-food preferences).
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.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.HS.	Human Systems
STANDARD	HS.10.	The characteristics, distribution, and complexity of Earth's cultural mosaics
STRAND	HS.10.1.	Characteristics of Culture: There are many different cultures, each with its own distinctive characteristics
BENCHMARK	HS.10.1.A.	Compare the cultural characteristics of different cultures, as exemplified by being able to
EXPECTATION	HS.10.1.A.3.	Describe and explain the spatial patterns of different cultural characteristics across regions or countries (e.g., the pattern of languages and dialects within a country, the architectural styles predominant in rural areas of European countries, the worldwide distribution of different religions).
ESSENTIAL ELEMENT	NGS.UG.	The Uses of Geography
STANDARD	UG.17.	How to apply geography to interpret the past
STRAND	UG.17.1.	Using Geography to Interpret the Past: A historical event is influenced by the geographic context (the human and physical characteristics of places and environments) in which it occurred
BENCHMARK	UG.17.1.A.	Analyze and explain the influence of the geographic context on historical events, as exemplified by being able to
EXPECTATION	UG.17.1.A.1.	Analyze the significance of physical features that have influenced historical events (e.g., the role of hydrologic features such as the fall line,

Cumberland Gap, the Ohio River, the Ogallala Aquifer, or artesian wells of the Great Plains in the settlement of the United States, the role of ocean currents and prevailing winds in exploration by Columbus, the forced transport of Africans to North and South America).

National Geography Standards (NGS)

Social Studies

Grade 6 - Adopted: 2012

ESSENTIAL ELEMENT	NGS.WST.	The World in Spatial Terms
STANDARD	WST.3.	How to analyze the spatial organization of people, places, and environments on Earth's surface
STRAND	WST.3.3.	Spatial Models: Models are used to represent spatial processes that shape human and physical systems
BENCHMARK	WST.3.3.A.	Describe the processes that shape human and physical systems (e.g., diffusion, migration, and plate tectonics) using models, as exemplified by being able to
EXPECTATION	WST.3.3.A.1.	Describe a model that illustrates the diffusion of cultural characteristics (e.g., music styles, clothing styles, fast-food preferences).
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.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.HS.	Human Systems
STANDARD	HS.10.	The characteristics, distribution, and complexity of Earth's cultural mosaics
STRAND	HS.10.1.	Characteristics of Culture: There are many different cultures, each with its own distinctive characteristics
BENCHMARK	HS.10.1.A.	Compare the cultural characteristics of different cultures, as exemplified by being able to
EXPECTATION	HS.10.1.A.3.	Describe and explain the spatial patterns of different cultural characteristics across regions or countries (e.g., the pattern of languages and dialects within a country, the architectural styles predominant in rural areas of European countries, the worldwide distribution of different religions).
ESSENTIAL ELEMENT	NGS.UG.	The Uses of Geography
STANDARD	UG.17.	How to apply geography to interpret the past
STRAND	UG.17.1.	Using Geography to Interpret the Past: A historical event is influenced by the geographic context (the human and physical characteristics of places and environments) in which it occurred
BENCHMARK	UG.17.1.A.	Analyze and explain the influence of the geographic context on historical events, as exemplified by being able to
EXPECTATION	UG.17.1.A.1.	Analyze the significance of physical features that have influenced historical events (e.g., the role of hydrologic features such as the fall line, Cumberland Gap, the Ohio River, the Ogallala Aquifer, or artesian wells of the Great Plains in the settlement of the United States, the role of ocean currents and prevailing winds in exploration by Columbus, the forced transport of Africans to North and South America).

Next Generation Science Standards (NGSS)

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.

Next Generation Science Standards (NGSS)

Science

Grade 3 - Adopted: 2013

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.

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 5 - Adopted: 2013

STRAND	NGSS.5-LS.	LIFE SCIENCE
TITLE	5-LS2.	Ecosystems: Interactions, Energy, and Dynamics Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	5-LS2-1.	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
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.
STRAND	NGSS.5-ESS.	EARTH AND SPACE SCIENCE
TITLE	5-ESS3.	Earth and Human Activity Students who demonstrate understanding can:

PERFORMANCE 5-ESS3- Obtain and combine information about ways individual communities use
EXPECTATION 1. science ideas to protect the Earth’s resources and environment.

Next Generation Science Standards (NGSS)

Science

Grade 6 - Adopted: 2013

STRAND	NGSS.MS- PS.	PHYSICAL SCIENCE
TITLE	MS-PS1.	Matter and Its Interactions Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-PS1-3.	Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.
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-LS2-3.	Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
PERFORMANCE EXPECTATION	MS-LS2-4.	Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
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-ESS2.	Earth’s Systems Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ESS2- 1.	Develop a model to describe the cycling of Earth’s materials and the flow of energy that drives this process.
STRAND	NGSS.MS- ESS.	EARTH AND SPACE SCIENCE
TITLE	MS-ESS3.	Earth and Human Activity Students who demonstrate understanding can:
PERFORMANCE EXPECTATION	MS-ESS3- 4.	Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth’s systems.