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**

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.

1.1.2. Concepts such as: similarities, differences, beliefs, values, cohesion, and diversity.

1.1.4. How culture may change in response to changing needs and concerns.

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 3.1.5. Physical changes in community, state, and region, such as seasons, climate, and weather, and their effects on plants and animals.

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.

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

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 3.1.5. Physical changes in community, state, and region, such as seasons, climate, and weather, and their effects on plants and animals.

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.
THAT PROVIDE FOR THE STUDY OF CULTURE AND CULTURAL DIVERSITY.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>1.2.</th>
<th>PROCESSES - Learners will be able to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING EXPECTATION</td>
<td>1.2.1.</td>
<td>Ask and find answers to questions related to culture.</td>
</tr>
<tr>
<td>LEARNING EXPECTATION</td>
<td>1.2.7.</td>
<td>Draw inferences from data about the ways in which given cultures respond to persistent human issues, and how culture influences those responses.</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>2.1.</th>
<th>KNOWLEDGE - Learners will understand:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING EXPECTATION</td>
<td>2.1.6.</td>
<td>The origins and influences of social, cultural, political, and economic systems.</td>
</tr>
</tbody>
</table>

THEME NCSS.3. PEOPLE, PLACES, AND ENVIRONMENTS

DEFINITION SOCIAL STUDIES PROGRAMS SHOULD INCLUDE EXPERIENCES THAT PROVIDE FOR THE STUDY OF PEOPLE, PLACES, AND ENVIRONMENTS.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>3.1.</th>
<th>KNOWLEDGE - Learners will understand:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING EXPECTATION</td>
<td>3.1.1.</td>
<td>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.</td>
</tr>
<tr>
<td>LEARNING EXPECTATION</td>
<td>3.1.3.</td>
<td>Past and present changes in physical systems, such as seasons, climate, and weather, and the water cycle, in both national and global contexts.</td>
</tr>
<tr>
<td>LEARNING EXPECTATION</td>
<td>3.1.5.</td>
<td>The concept of regions identifies links between people in different locations according to specific criteria (e.g., physical, economic, social, cultural, or religious).</td>
</tr>
<tr>
<td>LEARNING EXPECTATION</td>
<td>3.1.7.</td>
<td>Human modifications of the environment.</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>5.1.</th>
<th>KNOWLEDGE - Learners will understand:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARNING EXPECTATION</td>
<td>5.1.2.</td>
<td>Concepts such as: mores, norms, status, role, socialization, ethnocentrism, cultural diffusion, competition, cooperation, conflict, race, ethnicity, and gender.</td>
</tr>
<tr>
<td>LEARNING EXPECTATION</td>
<td>5.1.9.</td>
<td>That groups and institutions influence culture in a variety of ways.</td>
</tr>
</tbody>
</table>

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:
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.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 3.1.1. 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 3.1.3. Past and present changes in physical systems, such as seasons, climate, and
EXCEPTATION

weather, and the water cycle, in both national and global contexts.

LEARNING EXPECTATION 3.1.5.
The concept of regions identifies links between people in different locations according to specific criteria (e.g., physical, economic, social, cultural, or religious).

LEARNING EXPECTATION 3.1.7.
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 3.2.3.
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).

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).

<table>
<thead>
<tr>
<th>ESSENTIAL ELEMENT</th>
<th>NGS.PS.</th>
<th>Physical Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDARD PS.7.</td>
<td>The physical processes that shape the patterns of Earth's surface</td>
<td></td>
</tr>
<tr>
<td>STRAND PS.7.1.</td>
<td>Components of Earth’s Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)</td>
<td></td>
</tr>
<tr>
<td>BENCHMARK PS.7.1.A.</td>
<td>Identify attributes of Earth's different physical systems, as exemplified by being able to 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).</td>
<td></td>
</tr>
<tr>
<td>EXPECTATION PS.7.1.A.2.</td>
<td>Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).</td>
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<tr>
<td>STRAND PS.7.3.</td>
<td>Physical Processes: Physical processes shape features on Earth’s surface</td>
<td></td>
</tr>
<tr>
<td>BENCHMARK PS.7.3.B.</td>
<td>Describe how physical processes shape features on Earth’s surface, as exemplified by being able to describe the physical processes that shaped particular landform features using pictures of landforms such as canyons, mesas, and deltas.</td>
<td></td>
</tr>
<tr>
<td>EXPECTATION PS.7.3.B.2.</td>
<td></td>
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<tr>
<td>STANDARD PS.8.</td>
<td>The characteristics and spatial distribution of ecosystems and biomes on Earth's surface</td>
<td></td>
</tr>
<tr>
<td>STRAND PS.8.1.</td>
<td>Components of Ecosystems: The components of ecosystems</td>
<td></td>
</tr>
<tr>
<td>BENCHMARK PS.8.1.A.</td>
<td>Identify the components of different ecosystems, as exemplified by being able to identify the three major components of an ecosystem (i.e., biomass, climate, and soil).</td>
<td></td>
</tr>
<tr>
<td>EXPECTATION PS.8.1.A.1.</td>
<td>Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).</td>
<td></td>
</tr>
<tr>
<td>EXPECTATION PS.8.1.A.2.</td>
<td>Describe local ecosystems by surveying and recording the properties of their components.</td>
<td></td>
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<tr>
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<td>The characteristics and spatial distribution of ecosystems and biomes on Earth's surface</td>
<td></td>
</tr>
<tr>
<td>STRAND PS.8.2.</td>
<td>Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems</td>
<td></td>
</tr>
<tr>
<td>BENCHMARK PS.8.2.A.</td>
<td>Identify and describe the characteristics of ecosystems, as exemplified by being able to identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.</td>
<td></td>
</tr>
<tr>
<td>EXPECTATION PS.8.2.A.1.</td>
<td>Identify and draw pictures of different plants and animals in various local ecosystems (e.g., a pond, forest, city park).</td>
<td></td>
</tr>
<tr>
<td>EXPECTATION PS.8.2.A.3.</td>
<td>Compare the characteristics of different ecosystems (e.g., pond, deciduous...</td>
<td></td>
</tr>
</tbody>
</table>
The characteristics and spatial distribution of ecosystems and biomes on Earth's surface

Characteristics and Geographic Distribution of Biomes: The characteristics of biomes

Describe the characteristics of biomes, as exemplified by being able to

Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).

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).

Identify and describe examples of how human activities impact the physical environment, as exemplified by being able to

Identify and describe the changes in local habitats that resulted from human activities.

Analyze geographic contexts in which current events and issues occur, as exemplified by being able to

Analyze a current environmental issue in the region (e.g., building or demolishing a dam, building or expansion of freeway system, creation of parks and open spaces, regulatory legislation on industry to prevent further air, water, and land pollution) and describe ways in which people and the environment interact to affect the issue positively and negatively.

National Geography Standards (NGS)

Science

Grade 3 - Adopted: 2012

The physical and human characteristics of places

The Characteristics of Places: Places have physical and human characteristics
| BENCHMARK | PR.4.2.A. | Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to |
| EXPECTATION | PR.4.2.A.2. | Describe and compare the vegetation in different places in the world (e.g., deserts, mountains, rain forests, plains). |
| EXPECTATION | PR.4.2.A.3. | Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas). |
| ESSENTIAL ELEMENT | NGS.PS. | Physical Systems |
| STANDARD | PS.7. | The physical processes that shape the patterns of Earth's surface |
| STRAND | PS.7.1. | Components of Earth's Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) |
| BENCHMARK | PS.7.1.A. | Identify attributes of Earth's different physical systems, as exemplified by being able to |
| EXPECTATION | PS.7.1.A.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.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). |
| EXPECTATION | PS.8.1.A.3. | Describe local ecosystems by surveying and recording the properties of their components. |
| ESSENTIAL ELEMENT | NGS.PS. | Physical Systems |
| STANDARD | PS.8. | The characteristics and spatial distribution of ecosystems and biomes on Earth's surface |
| STRAND | PS.8.2. | Characteristics and Geographic Distribution of Ecosystems: The characteristics of ecosystems |
| BENCHMARK | PS.8.2.A. | Identify and describe the characteristics of ecosystems, as exemplified by being able to |
EXPECTATION PS.8.2.A.1. Identify and describe the characteristics of an ecosystem (specific types of plants, climate, and soil) in which a favorite or interesting creature lives.

EXPECTATION PS.8.2.A.2. Identify and draw pictures of different plants and animals in various local ecosystems (e.g., a pond, forest, city park).

EXPECTATION PS.8.2.A.3. Compare the characteristics of different ecosystems (e.g., pond, deciduous forest, coral reef).

ESSENTIAL ELEMENT NGS.PS. Physical Systems

STANDARD PS.8. The characteristics and spatial distribution of ecosystems and biomes on Earth's surface

STRAND PS.8.3. Characteristics and Geographic Distribution of Biomes: The characteristics of biomes

BENCHMARK PS.8.3.A. Describe the characteristics of biomes, as exemplified by being able to

EXPECTATION PS.8.3.A.1. Describe the defining characteristics of a biome as a large region of ecosystems with similar climate and vegetation characteristics.

EXPECTATION PS.8.3.A.2. Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannahs, temperate forests, tropical forests, arctic tundra).

EXPECTATION PS.8.3.A.3. Identify the characteristics in photographs of different types of vegetation and match them to the appropriate sections of a world climate map (e.g., cacti and succulents on a desert climate region, tropical forest trees on a tropical climate region, coral in shallow, tropical marine waters).

ESSENTIAL ELEMENT NGS.ES. Environment and Society

STANDARD ES.14. How human actions modify the physical environment

STRAND ES.14.3. Consequences for People and Environments: The consequences of human modifications of the physical environment

BENCHMARK ES.14.3.A. Identify and describe examples of how human activities impact the physical environment, as exemplified by being able to

EXPECTATION ES.14.3.A.1. Identify and describe the changes in local habitats that resulted from human activities.

ESSENTIAL ELEMENT NGS.UG. The Uses of Geography

STANDARD UG.18. How to apply geography to interpret the present and plan for the future

STRAND UG.18.1. Using Geography to Interpret the Present and Plan for the Future: Geographic contexts (the human and physical characteristics of places and environments) are the settings for current events

BENCHMARK UG.18.1.A. Analyze geographic contexts in which current events and issues occur, as exemplified by being able to

EXPECTATION UG.18.1.A.3. Analyze a current environmental issue in the region (e.g., building or demolishing a dam, building or expansion of freeway system, creation of parks and open spaces, regulatory legislation on industry to prevent further air, water, and land pollution) and describe ways in which people and the environment interact to affect the issue positively and negatively.

National Geography Standards (NGS)
Science
Grade 4 - Adopted: 2012

**ESSENTIAL ELEMENT**

<table>
<thead>
<tr>
<th>NGS.PR.</th>
<th>Places and Regions</th>
</tr>
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**STANDARD**

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<th>PR.4.</th>
<th>The physical and human characteristics of places</th>
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</table>

**STRAND**

<table>
<thead>
<tr>
<th>PR.4.2.</th>
<th>The Characteristics of Places: Places have physical and human characteristics</th>
</tr>
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</table>

**BENCHMARK**

<table>
<thead>
<tr>
<th>PR.4.2.A.</th>
<th>Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to</th>
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</table>

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<thead>
<tr>
<th>PR.4.2.A.2.</th>
<th>Describe and compare the vegetation in different places in the world (e.g., deserts, mountains, rain forests, plains).</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).</td>
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<th>The physical processes that shape the patterns of Earth's surface</th>
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**STRAND**

<table>
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<tr>
<th>PS.7.1.</th>
<th>Components of Earth’s Physical Systems: There are four components of Earth’s physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)</th>
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**BENCHMARK**

<table>
<thead>
<tr>
<th>PS.7.1.A.</th>
<th>Identify attributes of Earth's different physical systems, as exemplified by being able to 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).</th>
</tr>
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</table>

**EXPECTATION**

<table>
<thead>
<tr>
<th>PS.7.1.A.2.</th>
<th>Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).</th>
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<tr>
<th>PS.7.3.</th>
<th>Physical Processes: Physical processes shape features on Earth’s surface</th>
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**BENCHMARK**

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<tr>
<th>PS.7.3.B.</th>
<th>Describe how physical processes shape features on Earth’s surface, as exemplified by being able to describe the physical processes that shaped particular landform features using pictures of landforms such as canyons, mesas, and deltas.</th>
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**EXPECTATION**

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<th>PS.8.1.A.3.</th>
<th>Describe local ecosystems by surveying and recording the properties of their components.</th>
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</table>
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
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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 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.7. The physical processes that shape the patterns of Earth's surface
STRAND PS.7.2. Earth-Sun Relationships: Earth-Sun relationships drives physical processes that follow an annual cycle and create patterns on Earth
BENCHMARK PS.7.2.A. Explain how Earth-Sun relationships drive Earth’s physical processes and create annual patterns, as exemplified by being able to explain why the hours of visible sunlight changes with seasons (e.g., the equatorial region experiences approximately 12 hours of sunlight year round while places in the Arctic and Antarctic circles vary from 0 to 24 hours of visible sunlight). Describe how the angle of the Sun’s rays changes at different latitudes by shining a light directly on the equator of a globe and noting the change in the location (on the tropic lines) and angle of the direct rays as the tilted globe is moved to represent the different seasons.

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 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
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).

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.

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
STRUAND 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).

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<td>STRAND</td>
<td>PS.8.2.</td>
<td>Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems</td>
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<td>EXPECTATION</td>
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<td>Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes</td>
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<td>STRAND</td>
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<td>Describe and explain how climate (temperature and rainfall) primarily</td>
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Explain how biomes do not always follow lines of latitude by identifying the influences of oceans and mountain ranges on the distribution of climate and vegetation.

**National Geography Standards (NGS)**

**Social Studies**

**Grade 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.4.2.** The Characteristics of Places: Places have physical and human characteristics

**BENCHMARK**

**PR.4.2.A.** Describe and compare the physical characteristics of places at a variety of scales, local to global, as exemplified by being able to

**EXPECTATION**

**PR.4.2.A.3.** Describe and compare the physical environments and landforms of different places in the world (e.g., mountains, islands, valleys or canyons, mesas).

**ESSENTIAL ELEMENT**

**NGS.PS.** Physical Systems

**STANDARD**

**PS.7.** The physical processes that shape the patterns of Earth's surface

**STRAND**

**PS.7.1.** Components of Earth’s Physical Systems: There are four components of Earth's physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere)

**BENCHMARK**

**PS.7.1.A.** Identify attributes of Earth's different physical systems, as exemplified by being able to

**EXPECTATION**

**PS.7.1.A.1.** Identify different attributes of physical systems in photographs (e.g., sky, clouds, plants, soil, oceans, lakes, mountains).

**EXPECTATION**

**PS.7.1.A.3.** Identify examples of landforms on Earth's surface (e.g., mountains, volcanoes, valleys, plains).

**ESSENTIAL ELEMENT**

**NGS.PS.** Physical Systems

**STANDARD**

**PS.8.** The characteristics and spatial distribution of ecosystems and biomes on Earth's surface

**STRAND**

**PS.8.1.** Components of Ecosystems: The components of ecosystems

**BENCHMARK**

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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

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ESSENTIAL ELEMENT NGS.PS. Physical Systems

STANDARD PS.8. The characteristics and spatial distribution of ecosystems and biomes on Earth's surface

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BENCHMARK PS.8.3.A. Describe the characteristics of biomes, as exemplified by being able to

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Describe the temperature, precipitation, and vegetation characteristics of various biomes, (e.g., deserts, grasslands, savannas, 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).

ESSENTIAL ELEMENT NGS.ES. Environment and Society

STANDARD ES.15. How physical systems affect human systems

STRAND ES.15.1. Environmental Opportunities and Constraints: The physical environment provides opportunities for and imposes constraints on human activities

BENCHMARK ES.15.1.B. Describe examples in which the physical environment imposes constraints on human activities, as exemplified by being able to

EXPECTATION ES.15.1.B.2. Describe examples in which human activities are limited by different types of climates (e.g., cold or polar, rainy or dry, equatorial).
National Geography Standards (NGS)

Social Studies

Grade 3 - Adopted: 2012

ESSENTIAL ELEMENT

NGS.WST. The World in Spatial Terms
STANDARD WST.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.4.2. The Characteristics of Places: Places have physical and human characteristics
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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)
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ESSENTIAL ELEMENT

NGS.PS. Physical Systems
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National Geography Standards (NGS)

Social Studies
Grade 4 - Adopted: 2012

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<td>BENCHMARK</td>
<td>WST.3.1.A</td>
<td>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</td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>WST.3.1.A.2</td>
<td>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).</td>
</tr>
</tbody>
</table>

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

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

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<td>STANDARD</td>
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<td>The characteristics and spatial distribution of ecosystems and biomes on Earth's surface</td>
</tr>
<tr>
<td>STRAND</td>
<td>PS.8.1.</td>
<td>Components of Ecosystems: The components of ecosystems</td>
</tr>
<tr>
<td>BENCHMARK</td>
<td>PS.8.1.A.</td>
<td>Identify the components of different ecosystems, as exemplified by being able to</td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>PS.8.1.A.1</td>
<td>Identify the three major components of an ecosystem (i.e., biomass, climate, and soil).</td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>PS.8.1.A.2</td>
<td>Identify examples of each ecosystem component (e.g., pine trees versus grasslands, low versus high rainfall, clay versus sandy soils).</td>
</tr>
</tbody>
</table>
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).

ESSENTIAL ELEMENT  NGS.ES.  Environment and Society
STANDARD     ES.15.  How physical systems affect human systems
STRAND       ES.15.1.  Environmental Opportunities and Constraints: The physical environment provides opportunities for and imposes constraints on human activities
BENCHMARK    ES.15.1.B.  Describe examples in which the physical environment imposes constraints on human activities, as exemplified by being able to
EXPECTATION  ES.15.1.B.2.  Describe examples in which human activities are limited by different types of climates (e.g., cold or polar, rainy or dry, equatorial).

National Geography Standards (NGS)  
Social Studies

Grade 5 - Adopted: 2012
<table>
<thead>
<tr>
<th>ESSENTIAL ELEMENT</th>
<th>NGS.WST.</th>
<th>The World in Spatial Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDARD</td>
<td>WST.3.</td>
<td>How to analyze the spatial organization of people, places, and environments on Earth's surface</td>
</tr>
<tr>
<td>STRAND</td>
<td>WST.3.3.</td>
<td>Spatial Models: Models are used to represent spatial processes that shape human and physical systems</td>
</tr>
<tr>
<td>BENCHMARK</td>
<td>WST.3.3.A.</td>
<td>Describe the processes that shape human and physical systems (e.g., diffusion, migration, and plate tectonics) using models, as exemplified by being able to</td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>WST.3.3.A.1</td>
<td>Describe a model that illustrates the diffusion of cultural characteristics (e.g., music styles, clothing styles, fast-food preferences).</td>
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<td>STRAND</td>
<td>PS.7.1.</td>
<td>Components of Earth’s Physical Systems: The four components of Earth’s physical systems (the atmosphere, biosphere, hydrosphere, and lithosphere) are interdependent</td>
</tr>
<tr>
<td>BENCHMARK</td>
<td>PS.7.1.A.</td>
<td>Identify and describe patterns in the environment that result from the interaction of Earth’s physical processes, as exemplified by being able to</td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>PS.7.1.A.2</td>
<td>Identify and describe the patterns that result from the connections between climate and vegetation (e.g., examples of patterns of ecosystems and biomes).</td>
</tr>
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<td>The characteristics and spatial distribution of ecosystems and biomes on Earth's surface</td>
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<tr>
<td>STRAND</td>
<td>PS.8.2.</td>
<td>Characteristics and Geographic Distribution of Ecosystems: Physical processes determine the characteristics of ecosystems</td>
</tr>
<tr>
<td>BENCHMARK</td>
<td>PS.8.2.A.</td>
<td>Describe and explain how physical processes determine the characteristics of ecosystems, as exemplified by being able to</td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>PS.8.2.A.2</td>
<td>Explain how different locations can have similar ecosystems as a function of temperature, precipitation, elevation, and latitude by using climographs and vegetation maps.</td>
</tr>
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<td>The characteristics and spatial distribution of ecosystems and biomes on Earth's surface</td>
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<tr>
<td>STRAND</td>
<td>PS.8.3.</td>
<td>Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes</td>
</tr>
<tr>
<td>BENCHMARK</td>
<td>PS.8.3.A.</td>
<td>Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to</td>
</tr>
<tr>
<td>EXPECTATION</td>
<td>PS.8.3.A.3</td>
<td>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.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>ESSENTIAL ELEMENT</th>
<th>NGS.UG.</th>
<th>The Uses of Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDARD</td>
<td>UG.17.</td>
<td>How to apply geography to interpret the past</td>
</tr>
<tr>
<td>STRAND</td>
<td>UG.17.1.</td>
<td>Using Geography to Interpret the Past: A historical event is influenced by</td>
</tr>
</tbody>
</table>
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
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).

EXPECTATION UG.17.1.A.1.

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.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 NGS.PS. Physical Systems
The characteristics and spatial distribution of ecosystems and biomes on Earth’s surface.

Characteristics and Geographic Distribution of Biomes: Climate primarily determines the characteristics and geographic distribution of biomes. Describe and explain how climate (temperature and rainfall) primarily determines the characteristics and geographic distribution of biomes, as exemplified by being able to 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.

The Uses of Geography

How to apply geography to interpret the past.

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. Analyze and explain the influence of the geographic context on historical events, as exemplified by being able to 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

LIFE SCIENCE

2-LS4. Biological Evolution: Unity and Diversity

Students who demonstrate understanding can:

Make observations of plants and animals to compare the diversity of life in different habitats.

EARTH AND SPACE SCIENCE

2-ESS2. Earth’s Systems

Students who demonstrate understanding can:

Develop a model to represent the shapes and kinds of land and bodies of water in an area.

Obtain information to identify where water is found on Earth and that it can be solid or liquid.
Grade 3 - Adopted: 2013

Science

<table>
<thead>
<tr>
<th>STRAND</th>
<th>NGSS.3-LS.</th>
<th>LIFE SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TITLE</td>
<td>3-LS4.</td>
<td>Biological Evolution: Unity and Diversity</td>
</tr>
<tr>
<td>PERFORMANCE EXPECTATION</td>
<td>3-LS4-2.</td>
<td>Students who demonstrate understanding can:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>PERFORMANCE EXPECTATION</td>
<td>3-LS4-3.</td>
<td>Organisms can survive well, some survive less well, and some cannot survive at all.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRAND</th>
<th>NGSS.3-ESS.</th>
<th>EARTH AND SPACE SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TITLE</td>
<td>3-ESS2.</td>
<td>Earth’s Systems</td>
</tr>
<tr>
<td>PERFORMANCE EXPECTATION</td>
<td>3-ESS2-2.</td>
<td>Students who demonstrate understanding can:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Obtain and combine information to describe climates in different regions of the world.</td>
</tr>
</tbody>
</table>

Next Generation Science Standards (NGSS)

Science

Grade 4 - Adopted: 2013

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

Next Generation Science Standards (NGSS)

Science

Grade 5 - Adopted: 2013

<table>
<thead>
<tr>
<th>STRAND</th>
<th>NGSS.5-LS.</th>
<th>LIFE SCIENCE</th>
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</thead>
<tbody>
<tr>
<td>TITLE</td>
<td>5-LS2.</td>
<td>Ecosystems: Interactions, Energy, and Dynamics</td>
</tr>
<tr>
<td>PERFORMANCE EXPECTATION</td>
<td>5-LS2-1.</td>
<td>Students who demonstrate understanding can:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</td>
</tr>
</tbody>
</table>

Next Generation Science Standards (NGSS)

Science

Grade 6 - Adopted: 2013

<table>
<thead>
<tr>
<th>STRAND</th>
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<th>LIFE SCIENCE</th>
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</table>

Next Generation Science Standards (NGSS)

Science
Ecosystems: Interactions, Energy, and Dynamics

Students who demonstrate understanding can:

- **MS-LS2-2.** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

- **MS-LS2-3.** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

- **MS-LS2-4.** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.