National Education Standards in Alignment with Biocultural Diversity Studies





National Council for the Social Studies







Center for Civic Education



National Science Standards



Standard C: Life Sciences

• Biological Evolution

- o Species evolve over time.
- The great diversity of organisms is the result of more than 3.5 billion years of evolution that has filled every available niche with life forms.

Interdependence of Organisms

- Organisms both cooperate and compete in ecosystems. The interrelationships and interdependencies of these organisms may generate ecosystems that are stable for hundreds or thousands of years.
- Living organisms have the capacity to produce populations of infinite size, but environments and resources are finite. This fundamental tension has profound effects on the interactions between organisms.
- O Human beings live within the world's ecosystems. Increasingly, humans modify ecosystems as a result of population growth, technology, and consumption. Human destruction of habitats through direct harvesting, pollution, atmospheric changes, and other factors is threatening current global stability, and if not addressed, ecosystems will be irreversibly affected.

• Matter, Energy, and Organization in Living Systems

o The distribution and abundance of organisms and populations in ecosystems are limited by the availability of matter and energy and the ability of the ecosystem to recycle materials.

• Behavior of Organisms

- Organisms have behavioral responses to internal changes and to external stimuli. Responses to external stimuli can result from interactions with the organism's own species and others, as well as environmental changes; these responses either can be innate or learned. Like other aspects of an organism's biology, behaviors have evolved through natural selection. Behaviors often have an adaptive logic when viewed in terms of evolutionary principles.
- o Behavioral biology has implications for humans, as it provides links to psychology, sociology, and anthropology.

CONTENT STANDARD F: Science in Personal and Social Perspectives

• Population Growth

- o Populations grow or decline through the combined effects of births and deaths, and through emigration and immigration. Populations can increase through linear or exponential growth, with effects on resource use and environmental pollution.
- Populations can reach limits to growth. Carrying capacity is the maximum number of individuals that can be supported in a given environment. The limitation is not the availability of space, but the number of people in relation to resources and the capacity of earth systems to support human beings.

• Natural Resources

- Human populations use resources in the environment in order to maintain and improve their existence. Natural resources have been and will continue to be used to maintain human populations.
- The earth does not have infinite resources; increasing human consumption places severe stress on the natural processes that renew some resources, and it depletes those resources that cannot be renewed.
- o Humans use many natural systems as resources. Natural systems have the capacity to reuse waste, but that capacity is limited. Natural systems can change to an extent that exceeds the limits of organisms to adapt naturally or humans to adapt technologically.

• Environmental Quality

- Natural ecosystems provide an array of basic processes that affect humans. Those processes include maintenance of the quality of the atmosphere, generation of soils, control of the hydrologic cycle, disposal of wastes, and recycling of nutrients. Humans are changing many of these basic processes, and the changes may be detrimental to humans.
- o Materials from human societies affect both physical and chemical cycles of the earth.
- Many factors influence environmental quality. Factors that students might investigate include population growth, resource use, population distribution, overconsumption, the capacity of technology to solve problems, poverty, the role of economic, political, and religious views, and different ways humans view the earth.

• Natural and Human-Induced Hazards

- As societies have grown, become stable, and come to value aspects of the environment, vulnerability to natural processes of change has increased.
- o Human activities can enhance potential for hazards. Acquisition of resources, urban growth, and waste disposal can accelerate rates of natural change.

• Science and Technology in Local, National, and Global Challenges

- o Humans have a major effect on other species. For example, the influence of humans on other organisms occurs through land use—which decreases space available to other species—and pollution—which changes the chemical composition of air, soil, and water.
- o Scientists are influenced by societal, cultural, and personal beliefs and ways of viewing the world. Science is not separate from society but rather science is a part of society.

CONTENT STANDARD G: History and Nature of Science

Science as a Human Endeavor

o Scientists are influenced by societal, cultural, and personal beliefs and ways of viewing the world. Science is not separate from society but rather science is a part of society.

Historical Perspectives

o In history, diverse cultures have contributed scientific knowledge and technologic inventions.

National Social Studies Standards



Theme 1) Culture

Social studies programs should include experiences that provide for the study of culture and cultural diversity.

- In a multicultural, democratic society and globally connected world, students need to understand the multiple perspectives that derive from different cultural vantage points.
- As students progress through high school, they can understand and use complex cultural concepts such as adaptation, assimilation, acculturation, diffusion, and dissonance that are drawn from anthropology, sociology, and other disciplines to explain how culture and cultural systems function.

Theme 3) People, Places, and Environments

Social studies programs should include experiences that provide for the study of people, places, and environments.

- The study of peoples, places, and environments enables [students] to acquire a useful basis of knowledge for informed decision-making on issues arising from human-environmental relationships.
- As [students] analyze complex processes of change in the relationship between people, places, and environments, and the resulting issues and challenges, they develop their skills at evaluating and recommending public policies.

Theme 5) Individuals, Groups, and Institutions

Social studies programs should include experiences that provide for the study of interactions among individuals, groups, and institutions.

- It is important that students know how institutions are formed, what controls and influences them, how they control and influence individuals and culture, and how institutions can be maintained or changed.
- High school students must understand the paradigms and traditions that undergird social and political
 institutions. They should be provided opportunities to examine, use, and add to the body of knowledge
 offered by the behavioral sciences and social theory in relation to the ways people and groups organize
 themselves around common needs, beliefs, and interests.

Theme 6) Power, Authority, and Governance

Social studies programs should include experiences that provide for the study of how people create, interact with, and change structures of power, authority, and governance.

• By applying concepts and methods of political science and law, students learn how people work to promote positive societal change.

Theme 7) Production, Distribution, and Consumption

Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services.

- Increasingly, economic decisions are global in scope and require systematic study of an interdependent world economy.
- Students [should] develop economic perspectives and deeper understanding of key economic concepts and processes through systematic study of a range of economic and sociopolitical systems, with particular emphasis on the examination of domestic and global economic policy options related to matters such as trade [and] resource use.

Theme 9) Global Connections

Social studies programs should include experiences that provide for the study of global connections and interdependence.

- The realities of global interdependence require deeper understanding of the increasing and diverse global connections among world societies and regions.
- By interpreting the patterns and relationships of increased global interdependence, and its implications for different societies, cultures and institutions, students learn to examine policy alternatives that have both national and global implications.

National Geography Standards



Element 1) The World in Spatial Terms

- **Standard 1:** How to Use Maps and Other Geographic Representations, Tools, and Technologies to Acquire, Process, and Report Information From a Spatial Perspective
- **Standard 3:** How to Analyze the Spatial Organization of People, Places, and Environments on Earth's Surface

Element 2) Places and Regions

- **Standard 4:** The Physical and Human Characteristics of Places
- Standard 6: How Culture and Experience Influence People's Perceptions of Places and Regions

Element 3) Physical Systems

• Standard 8: The Characteristics and Spatial Distribution of Ecosystems on the Earth's Surface.

Element 4) Human Systems

- **Standard 9:** The Characteristics, Distribution, and Migration of Human Population on Earth's Surface.
- **Standard 10:** The Characteristics, Distribution, and Complexity of Earth's Cultural Mosaics.
- Standard 12: The Processes, Patterns, and Functions of Human Settlement.
- **Standard 13:** How the Forces of Cooperation and Conflict Among People Influence the Division and Control of Earth's Surface.

Element 5) Environment and Society

- Standard 14: How Human Actions Modify the Physical Environment
- Standard 15: How Physical Systems Affect Human Systems
- **Standard 16:** The Changes that Occur in the Meaning, Use, Distribution, and Importance of Resources.

Element 6) The Uses of Geography

• Standard 17: How to Apply Geography to Interpret the Present and Plan for the Future

National History Standards



Historical Thinking Standards

- Standard 1: Chronological Thinking
- Standard 2: Historical Comprehension
- Standard 3: Historical Analysis and Interpretation
- Standard 4: Historical Research Capabilities
- **Standard 5:** Historical Issues

World History Standards

Era 9: The 20th Century Since 1945

- Standard 2: The search for community, stability, and peace in an interdependent world
 - o **2a:** The student understands how population explosion and environmental change have altered conditions of life around the world.
 - o **2c:** Assess the progress of human and civil rights around the world since the 1948 U.N. Declaration of Human Rights.
 - o **2d:** The student understands major sources of tension and conflict in the contemporary world and efforts that have been made to address them.
- **Standard 3:** Major global trends
 - o **3a:** The student is able to asses causes of economic imbalances and social inequalities among the world's peoples and assess efforts made to close these gaps.
 - o **3b:** The student is able to analyze connections between globalizing trends in economy, technology, and culture in the late 20th century and dynamic assertions of traditional cultural identity and distinctiveness.

Era 10: World History Across the Eras

• **Standard 1:** Analyze ways in which human action has contributed to long-term changes in the natural environment in particular regions or worldwide

National Civics Standards



- Standard 1: What are Civic Life, Politics, and Government?
 - o **1a:** What purposes should governments serve?
- Standard 2: What are the Foundations of the American Political System?
 - o 2d: What values and principles are basic to American constitutional democracy?
- Standard 5: What are the Roles of the Citizen?
 - o **5a:** What is citizenship?
 - o **5b:** What are the rights of citizens?
 - o **5c:** What are the responsibilities of citizens?
 - o **5e:** How can citizens take part in civic life?