

Curricula Connections to the Standards of Learning with Student Learning Objectives

SCIENCE

1. Science as a Human Endeavor

Objectives

Students will:

- Learn that science and technology have been practiced by people for a long time.
- Learn that men and women have made a variety of contributions throughout the history of science and technology.
- Learn that women and men of various social, cultural, and ethnic backgrounds—and with diverse interests, talents, qualities, and motivations—engage in the activities of science, engineering, and related fields, such as astronomy, timekeeping, and mathematics.
- Learn that science is a human endeavor, and that the work of science relies on basic human qualities, such as reasoning, insight, hard work, skills, and creativity—as well as on scientific habits of mind, such as observation, measurement, prediction, and analysis.

2. History of Science

Objectives

Students will:

- Learn that many individuals have contributed to the traditions of science.
- Learn that in a historical perspective, science has been practiced by different individuals in different cultures.
- Learn that studying different cultures such as the Maya provides further understanding of scientific inquiry, science as a human endeavor, the nature of science, and the relationship between science and society.
- Open their minds to new ideas, such as in timekeeping and the use of different calendar systems.

3. Earth Science and the Solar System

- Observing, Measuring, and Identifying Properties
- Seeking Evidence
- Recognizing Patterns and Cycles

- Identifying Cause and Effect and Extending the Senses
- Designing and Conducting Controlled Experiments

Objectives

Students will:

- Learn that the Earth is part of the solar system that includes the Sun.
- Learn that the Earth orbits the Sun in a year's time.
- Learn that Earth rotates on its axis once every 24 hours.
- Learn that day and night is caused by the rotation of the Earth on its axis.
- Learn that the apparent movement of the Sun across the sky is caused by the rotation of the Earth on its axis.
- Learn that the position of the Sun in the sky appears to change throughout the day.
- Learn that the Sun has patterns of apparent movement that can be observed, recorded, and predicted over time.
- Observe and record the shadows cast by the Sun as a tool for measuring the passage of time and for identifying the cardinal directions.
- Learn that the changes in the length and direction of an object's shadow indicate the changing position of the Sun during the day.
- Learn that the outdoor shadows are longest during the morning and evening and shortest during the middle of the day.
- Learn that the tilt of the Earth's axis as the Earth travels along a nearly circular yearly orbit around the Sun causes us to see different shadows at different times of year.
- Describe that in tropical regions such as southern Mexico and Guatemala that are close to the equator the Sun passes directly overhead, thus these regions receive more concentrated solar energy than those closer to the poles.
- Learn that the major source of energy for ecosystems/agriculture on the Earth's surface is sunlight.

MATHEMATICS

1. Number Sense and Operations

Objectives

Students will:

- Construct sets of a given number using concrete objects.
- Identify the place value of digits.
- Use numbers and counting as a means to predict, solve problems, and measure quantities.

- Represent equivalent forms of the same number through the use of physical models, diagrams, and number expressions.
- Use words, models, and expanded forms to represent numbers to 1,000.
- Exhibit an understanding of the base 20 number system by reading, modeling, and writing whole numbers to at least 10,000; demonstrate an understanding of the values of the digits.
- Exhibit an understanding of the base 20 number system by reading, modeling, and writing whole numbers to at least 100,000; demonstrating an understanding of the values of the digits; and comparing and ordering the numbers.
- Apply number theory concepts.
- Understand numbers, ways of representing numbers, relationships among numbers, and number systems.

2. Computation and Operations

Objectives

Students will:

- Use mental arithmetic.
- Demonstrate the idea of adding and subtracting by using concrete objects.
- Use objects and drawings to model and solve related addition, subtraction, and multiplication problems.

3. Measurement

Objectives

Students will:

- Make use of nonstandard and standard units for measurement to obtain information.
- Show awareness of time concepts and sequence.
- Recognize and compare objects with respect to the attributes of length and time using appropriate language.
- Make and use estimates of measurements from everyday experiences.
- Use standard and nonstandard units to measure length.
- Make and use estimates of time measurement.
- Identify parts of the day (e.g., morning, afternoon, evening), days of the week, and months of the year.
- Identify dates such as the equinoxes, and summer and winter solstices, using a calendar.
- Compute elapsed time using a clock and using a calendar.

- Select and convert systems of measurement, and use appropriate units of measurement.
- Given the formulas, convert from one system of measurement to another.

4. Data Analysis, Statistics, and Probability

Objectives

Students will:

- Graph real objects or pictures/shadows as a way to organize information.
- Use observations to gather data about themselves and their surroundings.
- Ask and answer simple questions related to data representations.
- Organize, classify, and represent data using tallies, charts, tables, bar graphs, pictographs, and diagrams; interpret the representations.
- Formulate inferences (draw conclusions) and make educated guesses (conjectures) about a situation based on information gained from data.
- Collect and organize data using observations, measurements, surveys, or experiments, and identify appropriate ways to display the data.
- Represent the possible outcomes for a simple probability situation.
- Use data to estimate the probability of future events.
- Select, create, interpret, and use various tabular and graphical representations of data; differentiate between continuous and discrete data and ways to represent them.

ENGLISH, LANGUAGE ARTS, AND READING

1. Language Development

- Discussion
- Questioning, Listening, and Contributing
- Vocabulary and Concept Development

Objectives

Students will:

- Apply understanding of rules and individual roles to make decisions, including suggestions from each group member, defining individuals' roles and responsibilities, and coming to consensus.
- Summarize major ideas and supporting evidence presented in spoken messages, videos, websites, and formal presentation.
- Ask thoughtful questions and respond to relevant questions with appropriate elaboration in oral settings.
- Identify how language use reflects regions and cultures.

- Ask questions that clarify information not already discussed.
- Restate and execute multistep oral instructions and directions.
- Ask probing questions to elicit information, including questions about the evidence that supports the speaker's claims and conclusions.
- Determine meanings, pronunciations, alternate word choices, correct spellings, and parts of speech, or etymologies of words using dictionaries, glossaries, thesauri, and other resources (printed and electronic).
- Determine the meaning of unfamiliar words, using knowledge of English language structure, Greek and Latin roots (e.g., ann, sol), suffixes (e.g., ox), and prefixes (e.g., equi, multi, di).
- Use such clues as definition, example, and restatement to determine the meanings of unfamiliar words in context.
- Know the origins and meanings of common foreign/Spanish words used in English.
- Monitor text and videos for unknown words or words with novel meanings, using word, sentence, paragraph and context clues to determine meaning.

2. Informational Text

- Expository Text
- Document and Procedural Text

Objectives

Students will:

- Identify and analyze the authors' purpose, main ideas, supporting ideas, and supporting evidence.
- Summarize the critical details of expository text, maintaining chronological order, comparison and contrast, cause and effect, logical order, and classification schemes.
- Identify and use knowledge of common textual features (e.g., title, headings, key words, captions, paragraphs, topic sentences, table of contents, index, and glossary).
- Compare (and contrast) the central ideas, problems, or situations from readings on a specific topic selected to reflect a range of viewpoints.
- Identify the components (e.g., directions, charts, maps, legend, illustrations, diagrams, tables, timelines, and sequence) of documents and procedural texts.
- Use information from text and text features to determine the sequence of activities needed to carry out a procedure.
- Respond appropriately to a set of instructions to complete a task, solve a problem, or perform procedures.

3. Literary Text (Popol Vuh)

- Connections
- Theme
- Traditional Narrative

Objectives

Students will:

- Students will relate a literary work to artifacts, artistic creations, or historical sites of the period of its setting.
- Identify themes as moral lessons in folktales and fables.
- Recognize multiple themes in a text and supply evidence from the selection.
- Identify phenomena explained in origin myths.
- Identify natural events explained in origin myths.
- Identify common structures in traditional literature.
- Identify similarities and differences in mythologies from different cultures (e.g., ideas of afterlife, roles of deities).
- Identify conventions in epic tales (e.g., the quest, the hero's tasks, special weapons or clothing).

SOCIAL STUDIES

1. Culture

Objectives

Students will:

- Learn that humans create, learn, share, and adapt to culture.
- Learn that cultures are dynamic and change over time, but also practice ancestral traditions from hundreds of years ago that are particular to each place on Earth.
- Learn that there are similarities among cultural groups across time and place.

2. Time, Continuity, and Change

Objectives

- Students will learn that studying the past makes it possible for us to understand the human story across time.

3. People, Places, and Environments

Objectives

Students will:

- Explore people, places, and environments in different regions of the world
- Learn that the study of people, places, and environments enables us to understand the relationship between human populations and the physical world.
- Learn where people and places are located and why they are there.
- Learn how people interact with the environment.
- Use abstract thought as they apply data and skills in analyzing human behavior in relation to its physical and cultural environment.

4. Individual Development and Identity

Objectives

Students will:

- Learn how people develop their personal identities in the context of their land, their families and communities.
- Explore, identify, and analyze how individuals and groups are alike and how they are unique, as well as how they relate to each other in supportive and collaborative ways.
- Learn how individuals develop in different societies and cultures.

5. Individuals, Groups, and Institutions

Objectives

Students will:

- Learn that formal and informal institutions, such as calendar keeping, help the Maya carry out, organize, and manage their daily affairs, both secular and ceremonial, as well as throughout the year.
- Learn that timekeeping as an institution plays an integral role in our lives as well as in the lives of the Maya.
- Learn that calendar keeping plays a variety of important roles in socializing individuals and meeting their needs, as well as in the promotion of societal continuity and the consideration of public issues.
- Learn how institutions such as timekeeping can be maintained or changed.

6. Global Connections/Global Community

Objectives

Students will:

- Expand their learning horizons beyond the borders of the United States.
- Learn about neighboring countries to the United States, namely, Mexico and Guatemala.
- Become familiar with the history and geography of Mexico and Guatemala.
- Demonstrate knowledge of the Maya, a major civilization of the Western Hemisphere, by describing Maya history and culture.
- Describe Maya cultural patterns, such as timekeeping and architecture.

GEOGRAPHY

1. The World in Spatial Terms

Objectives

Students will learn:

- To use maps, globes, and other technologies to acquire and process information about Mexico and Guatemala, its people, places, and environments.
- To locate the cardinal directions, the equator, the continents, and other major geographical features of the Western hemisphere.
- To locate and define various large regions in the Western hemispheres such as Mesoamerica, and divide those regions into smaller regions based on race, language, nationality, or religion.
- To locate Mexico and Guatemala, major countries of the Western hemisphere and their regions.
- To explain that cultures may develop their own mental maps of the Earth in relation to the Sun, and that culture and land influences people's perceptions, and that these perceptions influence their actions. Examples include time-keeping and agriculture.

2. Places and Regions

Objectives

Students will:

- Acquire a framework for thinking geographically, including the location and some of the unique characteristics of Mesoamerica.

- Learn that the concept of “region” has been devised by people as a way of categorizing, interpreting, and ordering complex information about Earth.
- Give examples and analyze ways in which people’s changing views of places and regions reflect cultural change, specifically Maya culture pre and post-colonialism.

3. Physical Systems

Objectives

Students will:

- Acquire a framework for thinking about the Earth’s physical systems: the Earth-Sun relationship, climate, and related ecosystems.
- Recall and apply knowledge concerning Earth-Sun relationship, including “reasons for seasons,” equinox, summer and winter solstice, and calendar keeping.

4. Environment and Society

Objectives

Students will:

- Analyze and assess how people and cultures are affected by their environment and natural phenomena such as equinox and summer and winter solstice.
- Analyze and assess how people's perceptions of their environment and natural phenomena are reflected in human activity and land use, such as in architecture and agriculture.

ART

1. Cultural Context and Art History

Objectives

Students will:

- Understand the role that the visual arts play in communicating historical and cultural beliefs and ideas.
- Identify and analyze art and architecture from world cultures, periods, or civilization by styles, symbolism, and technological impact.
- Identify art from other cultures, specifically Maya.
- Identify symbols that Maya culture uses to represent common themes.
- Learn about Maya architecture, such as temples, tombs, pyramids, and

palaces. Include representative examples of various artworks found in the ancient buildings.

- Learn about various gods that Maya civilizations worshipped, as well as the religious architecture.

