

United States Academic Pentathlon® **2021-22 Curriculum and Content Standards**

Overview

The United States Academic Pentathlon’s curriculum is an interdisciplinary curriculum in which a selected theme is integrated across five different subject areas: fine arts, literature, mathematics, science, and social science. The theme for the 2021–2022 U.S. Academic Pentathlon curriculum is *Water: A Most Essential Resource*. While in most subjects the majority of the topics relate to the overall curricular theme, some topics that cover fundamentals may also be included to encourage a thorough understanding of the subject area as a whole. The U.S. Academic Pentathlon mathematics curriculum is unrelated to the theme and focuses on standard middle school mathematics topics.

Fine Arts

U.S. Academic Pentathlon and the National Standards for Music

USAP’s curriculum allows students and teachers to address four of the nine content standards for music. The five standards that are not met all involve the performance, composition, or notation of music. U.S. Academic Pentathlon’s music curriculum is centered on musicology (as opposed to composition or performance) and is designed to be accessible to all students, including those who cannot read musical notation and those who have no formal training in musical performance.

U.S. Academic Pentathlon’s 2021–2022 music curriculum addresses aspects of the following national content standards for music:

- STANDARD 6: Listening to, Analyzing, and Describing Music
- STANDARD 7: Evaluating Music and Music Performances
- STANDARD 8: Understanding Relationships between Music, the Other Arts, and Disciplines outside the Arts
- STANDARD 9: Understanding Music in Relation to History and Culture

U.S. Academic Pentathlon and the National Standards for Visual Arts

U.S. Academic Pentathlon’s curriculum allows students and teachers to address five of the six content standards for visual arts. The only standard not directly met by U.S. Academic Pentathlon’s curriculum (Standard 1: Understanding and Applying Media Techniques and

Processes), can easily be incorporated as a part of U.S. Academic Pentathlon's curriculum by having students create their own works of art in addition to studying the works of others.

U.S. Academic Pentathlon's 2021-22 art curriculum addresses aspects of the following national content standards for visual arts:

- STANDARD 2: Using Knowledge of Structures and Functions
- STANDARD 3: Choosing and Evaluating a Range of Subject Matter, Symbols, and Ideas
- STANDARD 4: Understanding the Visual Arts in Relation to History and Cultures
- STANDARD 5: Reflecting Upon and Assessing the Characteristics and Merits of their Work and the Work of Others
- STANDARD 6: Making Connections between Visual Arts and Other Disciplines

Literature

United States Academic Pentathlon 2021-2022 Literature Resource Guide correlation with Common Core State Standards (CCSS) and The National Council of Teachers of English (NCTE) standards

Water: An Enduring Element in Literature

The literary choices for the 2021-2022 United States Academic Pentathlon require students to work through several CCSS standards for both informational and fictional texts. In addition, in Section III, the historical context *A Long Walk to Water* falls under the literacy standards for social studies. Specific relevant standards are listed by sections which correlate to this year's literature resource guide. All these standards additionally fall under the first three NCTE standards:

1. Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.
2. Students read a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.
3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

Section I

Critical Reading

This section addresses and assesses numerous skills under CCSS (Please note, even though these standards are the sixth-grade standards, the same apply at grades 7 and 8):

Craft and Structure:

- [CCSS.ELA-LITERACY.RL.6.4](#)
Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone
- [CCSS.ELA-LITERACY.RL.6.5](#)
Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
- [CCSS.ELA-LITERACY.RL.6.6](#)
Explain how an author develops the point of view of the narrator or speaker in a text.

Section II: Water and the Oral Tradition

This section addresses an introduction to the role of water in literature over time. This section addresses and assesses the following skills under CCSS (Please note, even though these standards are the sixth-grade standards, the same apply at grades 7 and 8):

Integration of Knowledge and Ideas:

[CCSS.ELA-LITERACY.RL.6.9](#)

Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.

Range of Reading and Level of Text Complexity:

[CCSS.ELA-LITERACY.RL.6.10](#)

By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6-8 text complexity band independently and proficiently.

Section III: *A Long Walk to Water* by Linda Sue Park

The Historical Context and overall content in this section address the literacy standards for social studies:

Key Ideas and Details:

[CCSS.ELA-LITERACY.RH.6-8.1](#)

Cite specific textual evidence to support analysis of primary and secondary sources.

[CCSS.ELA-LITERACY.RH.6-8.2](#)

Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

Craft and Structure:

[CCSS.ELA-LITERACY.RH.6-8.4](#)

Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

Integration of Knowledge and Ideas:

[CCSS.ELA-LITERACY.RH.6-8.7](#)

Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

The entire book addresses this standard:

Range of Reading and Level of Text Complexity:

[CCSS.ELA-LITERACY.RI.8.10](#)

By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6-8 text complexity band independently and proficiently.

Additionally, these standards are also addressed through the analysis tasks throughout the work:

Key Ideas and Details:

[CCSS.ELA-LITERACY.RI.8.2](#)

Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.

Craft and Structure:

[CCSS.ELA-LITERACY.RI.8.4](#)

Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

[CCSS.ELA-LITERACY.RI.8.5](#)

Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.

Section IV: Shorter Works of Literature & Short Stories

The short stories address the following CCSS standards:

Craft and Structure:

[CCSS.ELA-LITERACY.RL.8.4](#)

Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

Range of Reading and Level of Text Complexity:

[CCSS.ELA-LITERACY.RL.8.10](#)

By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6-8 text complexity band independently and proficiently.

Poetry:

All the poems in this section address the following CCSS standards:

Craft and Structure:

[CCSS.ELA-LITERACY.RL.8.4](#)

Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

[CCSS.ELA-LITERACY.RL.8.5](#)

Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.

Range of Reading and Level of Text Complexity:

[CCSS.ELA-LITERACY.RL.8.10](#)

By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6-8 text complexity band independently and proficiently.

Science

Next Generation Science Standards¹: Middle School Physical Science – Disciplinary Core Ideas

MS-PS1: Matter and Its Interactions

- PS1.A: Structure and Properties of Matter
 - Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms.

MS-PS2: Motion and Stability: Forces and Interactions

- PS2.A: Forces and Motion
 - For any pair of interacting objects, the force exerted by the first object on the second object is equal in strength to the force that the second object exerts on the first, but in the opposite direction (Newton's third law).
 - The motion of an object is determined by the sum of the forces acting on it; if the total force on the object is not zero, its motion will change. The greater the mass

of the object, the greater the force needed to achieve the same change in motion. For any given object, a larger force causes a larger change in motion.

- **PS2.B: Types of Interactions**
 - Electric and magnetic (electromagnetic) forces can be attractive or repulsive, and their sizes depend on the magnitudes of the charges, currents, or magnetic strengths involved and on the distances between the interacting objects.
 - Gravitational forces are always attractive. There is a gravitational force between any two masses, but it is very small except when one or both of the objects have large mass—e.g., Earth and the sun.
 - Forces that act at a distance (electric, magnetic, and gravitational) can be explained by fields that extend through space and can be mapped by their effect on a test object (a charged object, or a ball, respectively).

MS-PS3: Energy

- **PS3.A: Definitions of Energy**
 - Motion energy is properly called kinetic energy; it is proportional to the mass of the moving object and grows with the square of its speed.
 - A system of objects may also contain stored (potential) energy, depending on their relative positions.
- **PS3.B: Conservation of Energy and Energy Transfer**
 - When the motion energy of an object changes, there is inevitably some other change in energy at the same time.
- **PS3.C: Relationship Between Energy and Forces**
 - When two objects interact, each one exerts a force on the other that can cause energy to be transferred to or from the object.

MS-PS4: Waves and Electromagnetic Radiation

- **PS4.A: Wave Properties**
 - A simple wave has a repeating pattern with a specific wavelength, frequency, and amplitude.
 - A sound wave needs a medium through which it is transmitted.
- **PS4.B: Electromagnetic Radiation**
 - The path that light travels can be traced as straight lines, except at surfaces between different transparent materials (e.g., air and water, air and glass) where the light path bends.
 - A wave model of light is useful for explaining brightness, color, and the frequency-dependent bending of light at a surface between media.
 - However, because light can travel through space, it cannot be a matter wave, like sound or water waves.

MS-ESS1: Space Systems

- **ESS1.A: The Universe and Its Stars**
 - Patterns of the apparent motion of the sun, the moon, and stars in the sky can be observed, described, predicted, and explained with models.

- Earth and its solar system are part of the Milky Way galaxy, which is one of many galaxies in the universe.
- ESS1.B: Earth and the Solar System
 - The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them.
 - This model of the solar system can explain eclipses of the sun and the moon. Earth's spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year.
 - The solar system appears to have formed from a disk of dust and gas, drawn together by gravity.
- ESS2.B: Plate Tectonics and Large-Scale System Interactions
 - Maps of ancient land and water patterns, based on investigations of rocks and fossils, make clear how Earth's plates have moved great distances, collided, and spread apart.

NGSS Science and Engineering Practices

Practice 2: Developing and Using Models

- Develop a model to predict and/or describe phenomena.
- Develop a model to describe unobservable mechanisms.

Practice 4: Analyzing and Interpreting Data

- Analyze and interpret data to determine similarities and differences in findings.
- Analyze and interpret data to provide evidence for phenomena.
- Construct and interpret graphical displays of data to identify linear and nonlinear relationships.

Practice 5: Using Mathematics and Computational Thinking

- Use mathematical representations to describe and/or support scientific conclusions and design solutions.

NGSS Understandings About the Nature of Science

Scientific Investigations Use a Variety of Methods

- Science investigations use a variety of methods and tools to make measurements and observations.
- Science depends on evaluating proposed explanations.

Scientific Knowledge is Based on Empirical Evidence

- Science knowledge is based upon logical and conceptual connections between evidence and explanations.

Scientific Knowledge is Open to Revision in Light of New Evidence

- Scientific explanations are subject to revision and improvement in light of new evidence.
- The certainty and durability of science findings varies.
- Science findings are frequently revised and/or reinterpreted based on new evidence

Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena

- Theories are explanations for observable phenomena.
- Science theories are based on a body of evidence developed over time.
- Laws are regularities or mathematical descriptions of natural phenomena.
- A hypothesis is used by scientists as an idea that may contribute important new knowledge for the evaluation of a scientific theory.

Science is a Way of Knowing

- Science knowledge is cumulative and many people, from many generations and nations, have contributed to science knowledge.

Scientific Knowledge Assumes an Order and Consistency in Natural Systems

- Science assumes that objects and events in natural systems occur in consistent patterns that are understandable through measurement and observation.
- Science carefully considers and evaluates anomalies in data and evidence.

Science is a Human Endeavor

- Men and women from different social, cultural, and ethnic backgrounds work as scientists and engineers.
- Scientists and engineers are guided by habits of mind such as intellectual honesty, tolerance of ambiguity, skepticism and openness to new ideas.
- Advances in technology influence the progress of science and science has influenced advances in technology.

Science Addresses Questions About the Natural and Material World

- Science knowledge can describe consequences of actions but is not responsible for society's decisions.

Social Science

Key Ideas and Details:

- **CCSS.ELA-LITERACY.RH.6-8.1**
Cite specific textual evidence to support analysis of primary and secondary sources.
- **CCSS.ELA-LITERACY.RH.6-8.2**
Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

- **CCSS.ELA-LITERACY.RH.6-8.3**
Identify key steps in a text's description of a process related to history/social studies...

Craft and Structure:

- **CCSS.ELA-LITERACY.RH.6-8.4**
Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
- **CCSS.ELA-LITERACY.RH.6-8.5**
Describe how a text presents information (e.g., sequentially, comparatively, causally).
- **CCSS.ELA-LITERACY.RH.6-8.6**
Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Integration of Knowledge and Ideas:

- **CCSS.ELA-LITERACY.RH.6-8.7**
Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- **CCSS.ELA-LITERACY.RH.6-8.8**
Distinguish among fact, opinion, and reasoned judgment in a text.
- **CCSS.ELA-LITERACY.RH.6-8.9**
Analyze the relationship between a primary and secondary source on the same topic.

Range of Reading and Level of Text Complexity:

- **CCSS.ELA-LITERACY.RH.6-8.10**
By the end of grade 8, read and comprehend history/social studies texts in the grades 6-8 text complexity band independently and proficiently.

Source List

“Common Core State Standards Initiative” 2 August 2021 <<http://www.corestandards.org/>>.

"English Language Arts Standards » History/Social Studies » Grade 6-8." Common Core State Standards Initiative. 30 July 2021. <<http://www.corestandards.org/ELA-Literacy/RH/6-8/>>.

“Next Generation Science Standards: For States, By States.” 2 August 2021 <<http://www.nextgenscience.org/>>.

“Next Generation Science Standards.” National Science Teachers Association. 2 August 2021 <<https://www.nsta.org/science-standards>>.

“Standards for the English Language Arts.” The National Council of Teachers of English. 2 August 2021 <<http://www.ncte.org/standards/ncte-ira/>>.

“Standards for the Performing and Visual Arts for Grades 5-8.” The Kennedy Center: Arts Edge. 1 August 2021 <<https://www.kennedy-center.org/education/resources-for-educators/classroom-resources/>>.