Locally Developed Courses

Big History

For the 2023-2024 School Year

Introduction to the Big History Course Sequence

Subject: Social Sciences - Discipline: History

Big History is an interdisciplinary study of change over time from the Big Bang to the present with projections for the future.

The course is founded on three essential skills and three core concepts.

The essential skills are:

- thinking across scales,
- integrating multiple disciplines, and
- making and testing claims.

The core concepts are:

- thresholds of history,
- collective learning, and
- origin stories.

Big History prompts students to examine big questions:

- How has the Universe and life within it grown more complex over the past 13.8 billion years?
- How do we know what we know about the past?
- How can we judge claims about the past?
- Why does what we "know" change over time?
- How does what happened during the early days of the Universe, the Solar System, and the Earth shape what we are experiencing today?

Big History encourages students to think critically and to develop a thoughtful, consistent, and rigorous approach to testing new ideas and information in a world in which they are bombarded with information.

Big History can be delivered by one or more teachers in a classroom setting. Students engage in various writing assignments, hands-on activities, as well as a variety of formative and summative assessments. Big History culminates in a "Little Big History" project that is used as the final assessment for the course. It is a cumulative research project in which the student must present a history of a single topic (ie. an idea, innovation, invention, object) from the beginning of the universe up to the present day and consideration of its possible future, making connections across time and space along the way.

Student Need

Big History arose from a desire to transcend traditional self-contained fields of study and grasp history as a whole, looking for linked ideas and connections across history's entire spectrum. By teaching students to explore these connections and effectively question, analyze and postulate their learning, the course provides a foundation for thinking not only about the past, but also about the future and the changes that are reshaping our world. Throughout Big History, students encounter challenging ideas and questions and learn to connect ideas across 13.8 billion years of time within an array of disciplines. The course asks students to thoughtfully and rigorously engage with the claims they encounter along the way, which in turn will change their thinking.

Courses in the Big History Course Sequence

Big History 15 (LDC1017)

Where did we come from? What causes change? Where are we heading? Big History 15 takes on existential questions that originated with the dawn of conscious thought, exploring the story of humanity's place in the Universe.

More than a history course, Big History helps students see the whole picture and make sense of the pieces: it looks at the past from the Big Bang to modernity, seeking out common themes and patterns that can help us better understand people, civilizations, and the world in which e world in which we live.

In contrast to delving deeply into narrow topics across a range of specialized subjects, the broader, interdisciplinary approach of Big History 15 serves as a solid foundation for students entering streams of social studies, science, mathematics and language arts. If individual course concepts are considered parts of a mosaic, this course has students step back to see the interplay of the larger artwork.

- Thresholds of increasing complexity, differing scales of time and space, claim testing, and collective learning help us understand historical, current, and future events as part of a larger narrative.
- Integrate perspectives from multiple disciplines to create, defend, and evaluate the history of the Universe and Universal change.
- Deepen an understanding of key historical and scientific concepts and facts; use these in constructing explanations.
- Engage in meaningful scientific inquiry and historical investigations by being able to hypothesize, form researchable questions, conduct research, revise one's thinking, and present findings that are well supported by scientific and historical evidence.
- Critically evaluate, analyze, and synthesize primary and secondary historical, scientific, and technical texts to form well crafted and carefully supported written and oral arguments.
- Communicate arguments to a variety of audiences to support claims through analysis of substantive texts and topics; use valid reasoning and relevant and sufficient evidence through individual or shared writing, speaking, and other formats.
- Locate and understand how our own place, our community's place, and humanity as a whole fit into and impact the narrative of Big History 15-5.
- Engage in historical analysis using the theories and practices from multiple disciplines, toward an integrated, interdisciplinary understanding of the history of the Universe.

Essential Skills

1. ***Thinking Across Scales***
Big History 15-5 encourages students to think across orders of magnitude from the massive expanse of the Universe to the smallest of atoms. Thinking across scales in terms of both time and distance helps frame human experience at the personal, family, community, national and geological levels.

2. ***Integrating Multiple Disciplines***
Big History 15-5 encourages the use of interdisciplinary thinking and methodologies. Students integrate the insights of multiple disciplines including social, physical and natural sciences, when analyzing and drawing conclusions about historical information.

3. ***Making and Testing Claims***
Big History 15-5 encourages students to develop a thoughtful, consistent, and rigorous approach to testing new ideas and information. These learned techniques inform their writing and broaden academic pursuits.

Core Concepts

1. ***Thresholds***

Big History 15-5 looks at the Universe as a series of significant moments called thresholds. These moments are characterized by a set of ingredients and just-right "Goldilocks Conditions" that result in new forms of complexity. Big History (2019) 15-5 tells the story of the Universe by using these moments to describe Universal change. While the use of thresholds is unique to Big History 15-5, it provides a helpful means of analysis that can be applied to more traditional historical contexts and other disciplines.

2. ***Collective Learning***
Collective learning is the human ability to share, preserve, and build knowledge over time. In Big History 15-5, this is the defining characteristic that separates humans from other species.

3. ***Origin Stories***
There are numerous explanations of the origins of our planet as well as the Universe as a whole. Since the time of the earliest humans, we have attempted to make sense of our world, our origins and our purpose. Big History represents one point of view, and is considered a modern, scientific origin story. The Big History 15-5 origin story is incomplete and will continue to evolve as science and scholarly inquiry continue to advance.

> No required facilities.

Prerequisites: None

Versions Available: (Each version must be locally approved by Board Motion prior to offering to students.)

Credit Level	First School Year	Last School Year
5	2023-2024	2026-2027

Curriculum Outline

Curriculum Elements		Big History 15-5
1	Topic **Formations and Early Life**	✓
1.1	General Outcome What is Big History? Why do we look at things from far away and close up?	✓
1.1.1	Specific Outcome Define thresholds of increasing complexity, origin stories, and scale.	✓
1.1.2	Specific Outcome Understand that Big History is a modern, science based origin story that draws on many different types of knowledge.	✓
1.1.3	Specific Outcome Understand how you fit into the Big History narrative, using the concept of "thresholds" to frame your past, present, and future, as well as the history of the Universe.	✓
1.1.4	Specific Outcome Understand what disciplines are and consider how the viewpoints of many different scholars can be integrated for a better understanding of a topic.	✓
2	Topic **The Big Bang**	✓
2.1	General Outcome How and why do individuals change their minds?	✓
2.1.1	Specific Outcome Explain the basics of the Big Bang Theory and the primary evidence that supports this theory.	✓
2.1.2	Specific Outcome Using evidence from texts, explain why views of the Universe have changed over time and the roles that scientists played in shaping our understanding of the origin of the Universe. Understand how to use claim testing to evaluate a claim or resource.	✓
3	Topic **Stars and Elements**	✓
3.1	General Outcome How can looking at the same information from different perspectives pave the way for progress?	✓
3.1.1	Specific Outcome Describe how stars form.	✓

Curriculum Elements		Big History 15-5
3.1.2	Specific Outcome Explain what happens in the life of a star and explain what happens when a star dies.	✓
3.1.3	Specific Outcome Explain how the death of stars results in the creation of heavier elements.	✓
3.1.4	Specific Outcome Explain why the formation of stars and the emergence of elements are so important in our world.	✓
3.1.5	Specific Outcome Understand what scholars from multiple disciplines know about a topic and the questions they can ask to understand the topic from an integrated perspective.	✓
4	Topic **Our Solar System and Earth**	✓
4.1	General Outcome How and why do theories become generally accepted?	✓
4.1.1	Specific Outcome Explain why planets are more complex than stars.	✓
4.1.2	Specific Outcome Use evidence to explain how the Earth and its atmosphere developed and changed over time.	✓
4.1.3	Specific Outcome Explain the basic mechanisms and key pieces of evidence for plate tectonics, and how plate tectonics impacts life on Earth.	✓
4.1.4	Specific Outcome Explain why geology is important to understanding the history of the Earth.	✓
4.1.5	Specific Outcome Understand how geologists can work with scientists and historians from other disciplines to form a deeper understanding of the history of the Earth.	✓
5	Topic **Life**	✓
5.1	General Outcome How are we still evolving?	✓
5.1.1	Specific Outcome Describe the conditions that made it possible for life to emerge on Earth.	✓
5.1.2	Specific Outcome Explain the differences between life and non-life.	✓

Curriculum Elements		Big History 15-5
5.1.3	Specific Outcome Describe the major events in the development of life on Earth and explain what is meant by the term biosphere.	✓
5.1.4	Specific Outcome Use evidence to explain adaptation and evolution, including Darwin's theory of natural selection and DNA.	✓
6	Topic **Early Humans**	✓
6.1	General Outcome What makes humans different from other species?	✓
6.1.1	Specific Outcome Describe human evolution using evidence and connection to other species of mammals.	✓
6.1.2	Specific Outcome Explain whether or not symbolic language makes humans different.	✓
6.1.3	Specific Outcome Describe how early humans lived.	✓
6.1.4	Specific Outcome Explain collective learning.	✓
6.1.5	Specific Outcome Understand what scholars from multiple disciplines know about a topic and the questions they can ask to gain an understanding of the topic from an integrated perspective.	✓
7	Topic **Agriculture and Civilization**	✓
7.1	General Outcome Was farming an improvement over foraging?	✓
7.1.1	Specific Outcome Define agriculture and describe where it emerged.	✓
7.1.2	Specific Outcome Identify the features of agrarian civilizations.	✓
7.1.3	Specific Outcome Understand the similarities and differences between the lifestyles of hunter and gatherers and farmers.	✓
7.1.4	Specific Outcome Describe how early civilizations formed, and their key features.	✓

Curriculum Elements		Big History 15-5
7.1.5	Specific Outcome Understand what scholars from multiple disciplines know about agriculture and civilization, and the information each field offers to your overall understanding.	✓
8	Topic **Expansion and Interconnection**	✓
8.1	General Outcome What are the positive and negative impacts of interconnection?	✓
8.1.1	Specific Outcome Analyze what propelled the expansion and interconnection of agrarian civilizations.	✓
8.1.2	Specific Outcome Investigate the implications of interconnected societies and regions by looking at how commerce has spread.	✓
8.1.3	Specific Outcome Explain how new networks of exchange accelerated collective learning and innovation.	✓
9	Topic **Acceleration**	✓
9.1	General Outcome To what extent has the Modern Revolution been a positive or a negative force?	✓
9.1.1	Specific Outcome Describe accelerating global change and the factors that describe it.	✓
9.1.2	Specific Outcome Understand the key features that define the Anthropocene.	✓
9.1.3	Specific Outcome Describe how economies have developed and changed since the Industrial Revolution.	✓
10	Topic **The Future**	✓
10.1	General Outcome What is the next threshold?	✓
10.1.1	Specific Outcome Explain the Big History story and its defining features and patterns.	✓
10.1.2	Specific Outcome Identify important human and environmental issues that affect the future of our species and the biosphere.	✓

Curriculum Elements		Big History 15-5
10.1.3	**Specific Outcome** Propose a vision of the future based on new understandings of the past.	✓

Statement of Overlap with Existing Programs

Similar / Overlapping Courses	Description of Similarity / Overlap - Rationale
Biology 20	Big History has some overlap with the topic of evolution in Biology 20.
	Big History provides a great foundation for further study in Biology 20 and enables students to see how humans fit into the evolutionary epic of life on our planet.
Social Studies 10-1	Big History discusses Nationalism, Globalism, and the Industrial Revolution, which are covered in Social Studies 10-1.
	This course provides an opportunity to introduce and reinforce important concepts discussed in Social Studies 10 / 20 / 30.
Social Studies 10-2	Big History discusses Nationalism, Globalism, and the Industrial Revolution, which are covered in Social Studies 10-1.
	This course provides an opportunity to introduce and reinforce important concepts discussed in Social Studies 10 / 20 / 30.