

LOCALLY DEVELOPED COURSE OUTLINE

Big History (2019)15-5

Submitted By:

Chinook's Edge School Division No. 73

Submitted On:

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Course Basic Information

<u>Outline Number</u>	<u>Hours</u>	<u>Start Date</u>	<u>End Date</u>	<u>Development Type</u>	<u>Proposal Type</u>	<u>Grades</u>
15-5	125.00	09/01/2019	08/31/2023	Developed	Authorization	G10

Course Description

Big History (2019) 15-5 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 (2019) 15-5 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?

The Big History (2019) 15-5 course 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 (2019) 15-5 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.

Course Prerequisites

Sequence Introduction (formerly: Philosophy)

Where did we come from? What causes change? Where are we heading?

Big History (2019) 15-5 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 (2019) 15-5 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 (2019) 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 we live.

In contrast to delving deeply into narrow topics across a range of specialized subjects, the broader, interdisciplinary approach of Big History (2019) 15-5 serves as a solid foundation for students entering high school 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. Big History (2019) 15-5 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 (2019) 15-5 can be delivered and assessed collaboratively by science, social studies and language arts teachers.

Student Need (formerly: Rationale)

Big History (2019) 15-5 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 (2019) 15-5, 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.

Scope and Sequence (formerly: Learner Outcomes)

- 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 (2019) 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 (2019) 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 (2019) 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 (2019) 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 (2019) 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 (2019) 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 (2019) 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 (2019) 15-5 origin story is incomplete and will continue to evolve as science and scholarly inquiry continue to advance.

Guiding Questions (formerly: General Outcomes)

- 1 Formations and Early Life: What is Big History? Why do we look at things from far away and close up?**
- 2 The Big Bang: How and why do individuals change their minds?**
- 3 Stars and Elements: How can looking at the same information from different perspectives pave the way for progress?**
- 4 Our Solar System and Earth: How and why do theories become generally accepted?**
- 5 Life: How are we still evolving?**
- 6 Early Humans: What makes humans different from other species?**
- 7 Agriculture and Civilization: Was farming an improvement over foraging?**
- 8 Expansion and Interconnection: What are the positive and negative impacts of interconnection?**
- 9 Acceleration: To what extent has the Modern Revolution been a positive or a negative force?**
- 10 The Future: What the next threshold?**

Learning Outcomes (formerly: Specific Outcomes)

1 Formations and Early Life: What is Big History? Why do we look at things from far away and close up?	15-5
1.1 Define thresholds of increasing complexity, origin stories, and scale.	X
1.2 Understand that Big History is a modern, science based origin story that draws on many different types of knowledge.	X
1.3 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.	X
1.4 Understand what disciplines are and consider how the viewpoints of many different scholars can be integrated for a better understanding of a topic.	X

2 The Big Bang: How and why do individuals change their minds?	15-5
2.1 Explain the basics of the Big Bang theory and the primary evidence that supports this theory.	X
2.2 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.	X

3 Stars and Elements: How can looking at the same information from different perspectives pave the way for progress?	15-5
3.1 Describe how stars form.	X
3.2 Explain what happens in the life of a star and explain what happens when a star dies.	X
3.3 Explain how the death of stars results in the creation of heavier elements.	X

3.4 Explain why the formation of stars and the emergence of elements are so important in our world.	X
3.5 Understand what scholars from multiple disciplines know about a topic and the questions they can ask to understand the topic from an integrated perspective.	X

4 Our Solar System and Earth: How and why do theories become generally accepted?	15-5
4.1 Explain why planets are more complex than stars.	X
4.2 Use evidence to explain how the Earth and its atmosphere developed and changed over time.	X
4.3 Explain the basic mechanisms and key pieces of evidence for plate tectonics, and how plate tectonics impacts life on Earth.	X
4.4 Explain why geology is important to understanding the history of the Earth.	X
4.5 Understand how geologists can work with scientists and historians from other disciplines to form a deeper understanding of the history of the Earth.	X

5 Life: How are we still evolving?	15-5
5.1 Describe the conditions that made it possible for life to emerge on Earth.	X
5.2 Explain the differences between life and non-life.	X
5.3 Describe the major events in the development of life on Earth and explain what is meant by the term biosphere.	X
5.4 Use evidence to explain adaptation and evolution, including Darwin's theory of natural selection and DNA.	X

6 Early Humans: What makes humans different from other species?	15-5
6.1 Describe human evolution, using evidence and connection to other species of mammals.	X
6.2 Explain whether or not symbolic language makes humans different.	X

6.3 Describe how early humans lived.	X
6.4 Explain collective learning.	X
6.5 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.	X

7 Agriculture and Civilization: Was farming an improvement over foraging?	15-5
7.1 Define agriculture and describe where it emerged.	X
7.2 Identify the features of agrarian civilizations.	X
7.3 Understand the similarities and differences between the lifestyles of hunter and gatherers and farmers.	X
7.4 Describe how early civilizations formed and their key features.	X
7.5 Understand what scholars from multiple disciplines know about agriculture and civilization and the information each field offers to your overall understanding.	X

8 Expansion and Interconnection: What are the positive and negative impacts of interconnection?	15-5
8.1 Analyze what propelled the expansion and interconnection of agrarian civilizations.	X
8.2 Investigate the implications of interconnected societies and regions by looking at how commerce has spread.	X
8.3 Explain how new networks of exchange accelerated collective learning and innovation.	X

9 Acceleration: To what extent has the Modern Revolution been a positive or a negative force?	15-5
9.1 Describe accelerating global change and the factors that describe it.	X
9.2 Understand the key features that define the Anthropocene.	X

9.3 Describe how economies have developed and changed since the Industrial Revolution.	X
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10 The Future: What the next threshold?	15-5
10.1 Explain the Big History story and its defining features and patterns.	X
10.2 Identify important human and environmental issues that affect the future of our species and the biosphere.	X
10.3 Propose a vision of the future based on new understandings of the past.	X

Facilities or Equipment

Facility

No required facilities.

Facilities:

Equipment

Access to the internet and an electronic device for research purposes.

Learning and Teaching Resources

No required resources.

Sensitive or Controversial Content

No sensitive or controversial content.

Issue Management Strategy

Health and Safety

No directly related health and safety risks.

Risk Management Strategy

Statement of Overlap with Existing Programs

Name of provincial course(s) with overlap and/or similarity:

- Biology 20 / Social Studies 10

Identify the overlap or similarity:

- Big History (2019) 15-5 has some overlap with the topic of evolution in Biology 20. Big History (2019) 15-5 discusses Nationalism, Globalism, and the Industrial Revolution, which are covered in Social Studies 10.

Indicate reason as to why the LDC is necessary:

- This course 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. This course provides an opportunity to introduce and reinforce important concepts discussed in Social Studies 10-30.

Name of LDC with overlap and/or similarity:

- None

Identify the overlap or similarity:

- None

Student Assessment

Big History (2019) 15-5 culminates in a "Little Big History" project that is used as the student's 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.

Course Approval Implementation and Evaluation

No specific processes.

