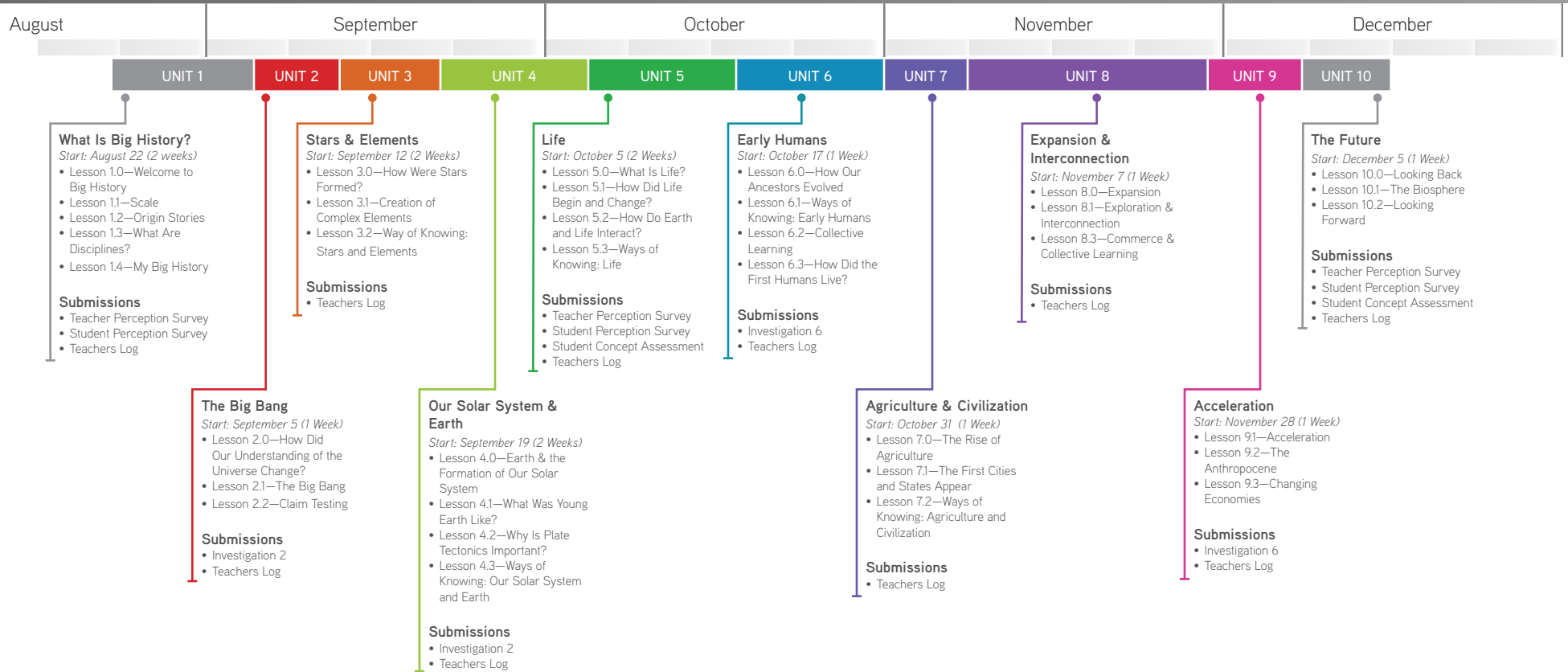


2016/17 Big History: Sample Semester-Long Course Plan

Content Pacing Guide



*Assumes a three-day US Thanksgiving holiday the last week of November, an end of year holiday the last two weeks of December, and a week-long spring holiday in April.



Big History Project

2016/17 SAMPLE SEMESTER COURSE PLAN

Course Learning Outcomes

1. Explain how 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.
2. Integrate perspectives from multiple disciplines to create, defend, and evaluate the history of the Universe and Universal change.
3. Deepen an understanding of key historical and scientific concepts and facts; use these in constructing explanations.
4. 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.
5. Critically evaluate, analyze, and synthesize primary and secondary historical, scientific, and technical texts to form well-crafted and carefully supported written and oral arguments.
6. 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.
7. Locate and understand how our own place, our community's place, and humanity as a whole fit into and impact Big History's narrative.
8. Engage in historical analysis using the theories and practices from multiple disciplines, toward an integrated, interdisciplinary understanding of the history of the Universe.

Projected Pacing Guide*

Unit / Activity	Estimated Start	Estimated Duration
1	August 22	2 weeks
2	September 5	1 week
3	September 12	1 week
4	September 19	2 weeks
5	October 5	2 weeks
6	October 17	2 weeks
7	October 31	1 week
8	November 7	3 weeks
9	November 28	1 week
10	December 5	1 week

*Takes into account school holidays, in-service days, and other commonly missed time such as testing days.



Unit 1—What Is Big History?

Start Date: August 22, 2016 (2 weeks)

Learning Outcomes

1. Define thresholds of increasing complexity, origin stories, and scale.
2. Understand that Big History is a modern, science-based origin story that draws on many different types of knowledge.
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.
4. Understand what disciplines are and consider how the viewpoints of many different scholars can be integrated for a better understanding of a topic.
5. Learn to use timelines as a way to compare the scale of personal and historic events.

Unit 1 Driving Question

"Why do we look at things from far away and close up?"

Lesson 1.0—Welcome to Big History

- 1.0.2 **Watch:** *Easter Island Mystery*
- 1.0.3 **Watch:** *What Is Big History?*
- 1.0.4 **Watch:** *Big Bang - Crash Course*
- 1.0.5 **Activity:** Big History Website Scavenger Hunt

Lesson 1.1—Scale

- 1.1.1 **Watch:** *Powers of 10*
- 1.1.2 **Activity:** Powers of 10
- 1.1.4 **Vocab Activity:** Part I
- 1.1.5 **Activity:** Big History on a Football Field
- 1.1.7 **Activity:** Timelines and Scale

Lesson 1.2—Origin Stories

- 1.2.2 **Activity:** "Intro to Origin Stories"
- 1.2.3 **Read:** "Origin Stories Introduction"
- 1.2.4 **Read:** "Origin Story: Modern Scientific"
- 1.2.5 **Activity:** "Origin Stories Article Collection"
- 1.2.6 **Read:** "Origin Story: Chinese"
- 1.2.7 **Read:** "Origin Story: Judeo - Christian"
- 1.2.8 **Read:** "Origin Story: Iroquois"
- 1.2.9 **Read:** "Origin Story: Mayan"
- 1.2.10 **Read:** "Origin Story: Greek"
- 1.2.11 **Read:** "Origin Story: Zulu"
- 1.2.12 **Read:** "Origin Story: Efik"



Lesson 1.3—Claim Testing

- 1.3.1 **Opening:** Claim Testing Snap Judgment
- 1.3.2 **Vocab Activity:** Part II
- 1.3.3 **Read:** "Approaches to Knowledge"
- 1.3.4 **Watch:** *How Do We Decide What to Believe?*
- 1.3.6 **Read:** "The Claim Testers: Episode 1 - First Contact"
- 1.3.7 **Closing:** Investigation 1

Unit 2—The Big Bang

Start Date: September 5, 2016 (1 week)

Learning Outcomes

1. Explain the basics of the Big Bang theory and the primary evidence that supports this theory.
2. Using evidence from texts and claim testing, 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.
3. Understand how to use claim testing to evaluate a claim or resource.
4. Locate Ptolemy, Copernicus, Galileo, Newton, and Hubble on a timeline and explain what each added to our collective understanding of the structure of the Universe.

Unit 2 Driving Question

"How and why do individuals change their minds? "

Lesson 2.0—The Big Bang

- 2.0.1 **Opening:** DQ Notebook
- 2.0.3 **Vocab Activity:** Part I
- 2.0.4 **Read:** "Complexity and Thresholds"
- 2.0.5 **Watch:** *Introduction to Thresholds*
- 2.0.6 **Watch:** *Threshold 1: The Big Bang*
- 2.0.7 **Activity:** This Threshold Today
- 2.0.8 **Watch:** *Questions About the Big Bang*

Lesson 2.1—How Did Our Understanding of the Universe Change?

- 2.1.1 **Opening:** Big Bang Snap Judgment
- 2.1.2 **Watch:** *How Did Our View of the Universe Change?*
- 2.1.3 **Activity:** Changing Views Timeline
- 2.1.4 **Read:** "Claudius Ptolemy"
- 2.1.5 **Read:** "Galileo Galilei"
- 2.1.6 **Read:** "Nicolaus Copernicus"
- 2.1.7 **Read:** "Isaac Newton"
- 2.1.8 **Read:** "Henrietta Leavitt"



2.1.9 **Read:** "Edwin Hubble"

2.1.10 **Activity:** Views of the Universe Debate

Lesson 2.2—What Are Disciplines?

2.2.1 **Opening:** Who Knows What?

2.2.3 **Vocab Activity:** Part II

2.2.4 **Watch:** *Ways of Knowing - Introduction to Cosmology*

2.2.5 **Watch:** *Ways of Knowing - Introduction to Astrophysics*

2.2.6 **Activity:** What Do You Know? What Do You Ask?

2.2.7 **Activity:** Claim Testing - The Big Bang

2.2.8 **Closing:** Investigation 2

Unit 3—Stars & Elements

Start Date: September 12, 2016 (1 week)

Learning Outcomes

1. Describe how stars form.
2. Explain what happens in the life of a star and explain what happens when a star dies.
3. Explain how the death of stars results in the creation of heavier elements.
4. 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.
5. Understand how to use and apply the concept of periodization.

Unit 3 Driving Question

"How can looking at the same information from different perspectives pave the way for progress?"

Lesson 3.0—How Were Stars Formed?

3.0.1 **Opening:** The Life of a Star

3.0.2 **Watch:** *How Were Stars Formed?*

3.0.3 **Activity:** My Threshold Card

3.0.5 **Activity:** Star Comic

3.0.6 **Vocab Activity:** Part I

3.0.8 **Closing:** This Threshold Today

Lesson 3.1—Creation of Complex Elements

3.1.1 **Opening:** Is It in There?

3.1.2 **Watch:** *Threshold 3: New Chemical Elements*

3.1.3 **Watch:** *What Did Stars Give Us?*

3.1.4 **Vocab Activity:** Part II



- 3.1.5 **Watch:** *Stars and Galaxies - Crash Course*
- 3.1.6 **Activity:** Superhero Element
- 3.1.7 **Read:** "A Little Big History of Silver"
- 3.1.9 **Activity:** Grading Silver Supernova
- 3.1.10 **Closing:** Little Big History of an Element

Lesson 3.2—Ways of Knowing: Stars and Elements

- 3.2.2 **Watch:** *Ways of Knowing - Intro to Chemistry*
- 3.2.3 **Activity:** What Do You Know? What Do You Ask?
- 3.2.4 **Watch:** *Crash Course Chemistry - Periodic Table of Elements*
- 3.2.5 **Read:** "Dmitri Mendeleev - Building the Periodic Table of Elements"
- 3.2.6 **Read:** "Marie Curie - Chemistry, Physics, and Radioactivity"
- 3.2.8 **Closing:** Investigation 3

Unit 4—Our Solar System & Earth

Start Date: September 19, 2016 (2 weeks)

Learning Outcomes

1. Explain why planets are more complex than stars.
2. Use evidence to explain how the Earth and its atmosphere developed and changed over time.
3. Explain the basic mechanisms and key pieces of evidence for plate tectonics, and how plate tectonics impacts life on Earth.
4. Define geology, the types of questions geologists ask, and the tools they use to answer those questions.
5. Explain why geology is important to understanding the history of the Earth.
6. Understand how geologists can work with scientists and historians from other disciplines to form a deeper understanding of the history of the Earth.

Unit 4 Driving Question

"How and why do theories become generally accepted?"

Lesson 4.0—Earth & the Formation of Our Solar System

- 4.0.1 **Opening:** Planet Card Sort
- 4.0.2 **Watch:** *Threshold 4: Earth and the Solar System*
- 4.0.3 **Watch:** *How Did Earth and the Solar System Form?*
- 4.0.5 **Activity:** Active Accretion
- 4.0.6 **Read:** "How Our Solar System Formed"
- 4.0.7 **Closing:** This Threshold Today



Lesson 4.1—What Was Young Earth Like?

- 4.1.2 **Watch:** *What Was the Young Earth Like?*
- 4.1.3 **Watch:** *The Early Atmosphere*
- 4.1.4 **Vocab Activity:** Part I

Lesson 4.2—Why Is Plate Tectonics Important?

- 4.2.1 **Vocab Activity:** Part II
- 4.2.2 **Watch:** *The Solar System and the Earth - Crash Course*
- 4.2.3 **Watch:** *Our Shifting Globe*
- 4.2.4 **Activity:** Claim Testing - Geology and the Earth's Formation
- 4.2.5 **Read:** "Why We're All Lava Surfers"

Lesson 4.3—Ways of Knowing: Our Solar System and Earth

- 4.3.2 **Watch:** *Introduction to Geology*
- 4.3.3 **Read:** "Alfred Wegener and Harry Hess"
- 4.3.5 **Watch:** *Introduction to the Geologic Time Chart*
- 4.3.6 **Read:** "Principles of Geology"
- 4.3.7 **Activity:** What Do You Know? What Do You Ask?
- 4.3.9 **Closing:** Investigation 4

Unit 5—Life

Start Date: October 5, 2016 (2 weeks)

Learning Outcomes

1. Describe the conditions that made it possible for life to emerge on Earth.
2. Explain the differences between life and nonlife.
3. Describe the major events in the development of life on Earth and explain what is meant by the term biosphere.
4. Use evidence to explain adaptation and evolution, including Darwin's theory of natural selection and DNA.

Unit 5 Driving Question

"How does extinction drive evolution?"

Lesson 5.0—What Is Life?

- 5.0.3 **Watch:** *Threshold 5: Life*
- 5.0.4 **Vocab Activity:** Part I
- 5.0.5 **Activity:** How Closely Related Are We?



5.0.6 **Watch:** *The Origin of Life - Crash Course*

5.0.7 **Read:** "Life and Purpose"

5.0.8 **Closing:** Claim Testing - What Is Life?

Lesson 5.1—How Did Life Begin and Change?

5.1.2 **Watch:** *How Did Life Begin and Change?*

5.1.3 **Watch:** *Mini-Thresholds of Life*

5.1.4 **Activity:** Are These the Right Mini-Thresholds of Life?

5.1.5 **Watch:** *Life in All Its Forms*

5.1.7 **Watch:** *The Evolutionary Epic - Crash Course*

5.1.8 **Closing:** DQ Notebook

Lesson 5.2—How Do Earth and Life Interact?

5.2.1 **Opening:** Living in the Extremes of the Biosphere

5.2.2 **Vocab Activity:** Part II

5.2.3 **Read:** "What Is the Biosphere?"

5.2.4 **Watch:** *How Do Earth and Life Interact?*

5.2.5 **Activity:** A Year in the Life of a Species

5.2.6 **Watch:** *How We Proved an Asteroid Wiped Out the Dinosaurs*

Lesson 5.3—Ways of Knowing: Life

5.3.1 **Activity:** The Voyage of the Beagle

5.3.2 **Read:** "Darwin, Evolution, and Faith"

5.3.3 **Read:** "Watson, Crick, and Franklin"

5.3.4 **Watch:** *Codes - H2*

5.3.5 **Activity:** Evolution and Life Timeline

5.3.6 **Closing:** Investigation 5

Unit 6—Early Humans

Start Date: October 17, 2016 (2 weeks)

Learning Outcomes

1. Describe human evolution, using evidence and connection to other species of mammals.
2. Explain whether or not symbolic language makes humans different.
3. Describe how early humans lived.
4. Explain collective learning.
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.
6. Show early human migration on a map.



Unit 6 Driving Question

"What makes humans different from other species?"

Lesson 6.0—How Our Ancestors Evolved

- 6.0.1 **Opening:** Early Ancestors
- 6.0.2 **Watch:** *Threshold 6: Humans and Collective Learning*
- 6.0.3 **Watch:** *Human Evolution – Crash Course*
- 6.0.4 **Vocab Activity:** Part I
- 6.0.5 **Activity:** Evolution Comic
- 6.0.6 **Read:** "Lucy and the Leakeys"
- 6.0.7 **Read:** "Jane Goodall"

Lesson 6.1—Ways of Knowing: Early Humans

- 6.1.2 **Watch:** *Intro to Anthropology*
- 6.1.3 **Watch:** *Intro to Archaeology*
- 6.1.4 **Activity:** What Do You Know? What Do You Ask?
- 6.1.5 **Activity:** Historos Cave
- 6.1.6 **Closing:** Little Big History Kickoff

Lesson 6.2—Collective Learning

- 6.2.1 **Opening:** Collective Learning Snap Judgment
- 6.2.2 **Read:** "Collective Learning" (Part 1)
- 6.2.3 **Watch:** *Common Man – H2*
- 6.2.4 **Activity:** Claim Testing – Collective Learning
- 6.2.5 **Vocab Activity:** Part II
- 6.2.6 **Watch:** *Early Evidence of Collective Learning*

Lesson 6.3—How Did the First Humans Live?

- 6.3.1 **Watch:** *How Did the First Humans Live?*
- 6.3.2 **Read:** "Foraging"
- 6.3.3 **Watch:** *From Foraging to Food Shopping*
- 6.3.4 **Activity:** Hunter Gatherer Menu
- 6.3.6 **Activity:** Human Migration Patterns
- 6.3.7 **Activity:** Little Big History – Choosing Your Focus
- 6.3.8 **Closing:** Investigation 6

Unit 7—Agriculture & Civilization

Start Date: October 31, 2016 (1 week)



Learning Outcomes

1. Define agriculture and describe where it emerged.
2. Identify the features of agrarian civilizations.
3. Understand the similarities and differences between the lifestyles of hunter-gatherers and farmers.
4. Describe how early civilizations formed and their key features.
5. Understand what scholars from multiple disciplines know about agriculture and civilization and the information they can derive from them using an integrated perspective.
6. Describe how agrarian civilizations formed and analyze their key similarities and differences.

Unit 7 Driving Question

"Was farming an improvement over foraging?"

Lesson 7.0—The Rise of Agriculture

- 7.0.1 **Opening:** This Threshold Today
- 7.0.2 **Watch:** *Threshold 7: Agriculture*
- 7.0.3 **Watch:** *Why Was Agriculture So Important?*
- 7.0.5 **Vocab Activity:** Part I
- 7.0.7 **Read:** "Collective Learning" (Part 2)
- 7.0.9 **Activity:** Biography of a Crop
- 7.0.11 **Closing:** Little Big History Biography

Lesson 7.1—The First Cities and States Appear

- 7.1.1 **Opening:** Comparing Crops
- 7.1.2 **Watch:** *Where and Why Did the First Cities and States Appear?*
- 7.1.3 **Vocab Activity:** Part II
- 7.1.4 **Read:** Agrarian Civilizations Introduction
- 7.1.5 **Activity:** Comparing Civilizations
- 7.1.6 **Read:** "Uruk"
- 7.1.7 **Read:** "Mesoamerica"
- 7.1.8 **Read:** "Jericho"
- 7.1.9 **Read:** "East Asia"
- 7.1.10 **Read:** "Greco Roman"
- 7.1.11 **Read:** "Aksum"
- 7.1.12 **Read:** "Ghana"
- 7.1.15 **Read:** Early Civilization Museum Project

Lesson 7.2—Ways of Knowing: Agriculture and Civilization

- 7.2.1 **Opening:** Social Status, Power, and Human Burials
- 7.2.2 **Watch:** *Intro to History*
- 7.2.3 **Read:** "Recordkeeping and History"
- 7.2.4 **Activity:** What Do You Know? What Do You Ask?
- 7.2.5 **Watch:** *Migrations and Intensification – Crash Course*
- 7.2.6 **Activity:** DQ Notebook



- 7.2.7 **Read:** “The Origin of Agriculture in Africa”
7.2.8 **Activity:** Little Big History – Research Questions
7.2.11 **Closing:** Investigation 7

Unit 8—Expansion & Interconnection

Start Date: November 7, 2016 (3 weeks)

Learning Outcomes

1. Analyze what propelled the expansion and interconnection of agrarian civilizations.
2. Explain how new networks of exchange accelerated collective learning and innovation.
3. Describe the changing characteristics of societies in the four world zones before and after oceanic travel and the thickening of global networks.

Unit 8 Driving Question

“What are the positive and negative impacts of interconnection?”

Lesson 8.0—Expansion

- 8.0.1 **Opening:** What Caused Expansion?
8.0.2 **Watch:** *Why Did Civilization Expand?*
8.0.3 **Watch:** *The Modern Revolution – Crash Course*
8.0.5 **Vocab Activity:** Part I
8.0.6 **Read:** “The Four World Zones”
8.0.8 **Activity:** Investigation Writing – Argument

Lesson 8.1—Exploration & Interconnection

- 8.1.1 **Opening:** World Travelers
8.1.2 **Watch:** *How Did the World Become Interconnected?*
8.1.3 **Read:** “China: The First Great Divergence”
8.1.4 **Read:** “An Age of Adventure”
8.1.5 **Activity:** An Age of Adventure
8.1.6 **Read:** “Ibn Battuta”
8.1.7 **Read:** “Marco Polo”
8.1.8 **Read:** “Zheng He”
8.1.9 **Activity:** Explorers Mini Project

Note: Lesson 8.2 is for BHP World implementations.



Lesson 8.3—Commerce & Collective Learning

- 8.3.5 **Watch:** *Systems of Exchange and Trade*
- 8.3.6 **Read:** “Benjamin Banneker: Science in Adversity”
- 8.3.7 **Vocab Activity:** Part II
- 8.3.8 **Read:** “The First Silk Roads”
- 8.3.9 **Read:** “Lost on the Silk Road”
- 8.3.10 **Read:** “A Curious Case: African Agrarianism”
- 8.3.11 **Activity:** Personal Supply Chain
- 8.3.12 **Activity:** Little Big History Final Project
- 8.3.15 **Closing:** Investigation 8

Unit 9—Acceleration

Start Date: November 28, 2016 (1 week)

Learning Outcomes

1. Describe accelerating global change and the factors that describe it.
2. Understand the key features that define the Anthropocene.
3. Describe the acceleration in world population, technology, science, communication, and transportation. Explain how they have benefited and threatened humanity.
4. Explain the changes in the use, distribution, and importance of natural resources on human life.

Unit 9 Driving Question

“To what extent has the Modern Revolution been a positive or a negative force?”

Note: Lesson 9.0 is for BHP World implementations.

Lesson 9.1—Acceleration

- 9.1.1 **Opening:** The Appetite for Energy
- 9.1.2 **Watch:** *Threshold 8: The Modern Revolution*
- 9.1.4 **Vocab Activity:** Part I
- 9.1.5 **Watch:** *Crash Course World History: The Industrial Revolution*
- 9.1.6 **Read:** “The Industrial Revolution”
- 9.1.7 **Watch:** *How Did Change Accelerate?*
- 9.1.8 **Read:** “Acceleration”
- 9.1.11 **Closing:** Investigation Writing – Peer Review

Lesson 9.2—The Anthropocene

- 9.2.1 **Watch:** *The Anthropocene and the Near Future - Crash Course*
- 9.2.2 **Vocab Activity:** Part II



9.2.3 Read: “The Anthropocene”

Lesson 9.3—Changing Economies

9.3.2 Read: “Collective Learning” (Part 4)

9.3.4 Read: “Smith, Marx, and Keynes”

9.3.5 Activity: This Threshold Today

9.3.6 Closing: Investigation 9

Note: Lessons 9.4 to 9.7 are for BHP World implementations.

Unit 10—The Future

Start Date: December 5, 2016 (1 week)

Learning Outcomes

1. Explain the Big History story and its defining features and patterns.
2. Identify important human and environmental issues that affect the future of our species and the biosphere.
3. Propose a vision of the future based on new understandings of the past.

Unit 10 Driving Question

“What’s the next threshold? ”

Lesson 10.0—Looking Back

10.0.1 Opening: Timeline Review

10.0.2 Vocab Activity: Part I

10.0.3 Watch: *The History of Everything – TED*

10.0.5 Activity: Scale

10.0.6 Closing: What Do You Know? What Do You Ask?

Lesson 10.1—The Biosphere

10.1.1 Opening: Natural Disasters

10.1.2 Watch: *Crash Course World History: Globalization II – Good or Bad*

10.1.3 Vocab Activity: Part II

10.1.4 Watch: *The Atmosphere and Climate*

10.1.6 Activity: Gapminder Card Sort

10.1.7 Closing: Visions of the Future



Lesson 10.2—Looking Forward

10.2.3 **Read:** “Complexity and the Future”

10.2.4 **Watch:** *Visions of the Future* – Bill Gates

10.2.5 **Watch:** *The Deep Future* – Crash Course

10.2.6 **Read:** Sylvester James Gates, Jr.: At the Forefront of Science”

10.2.8 **Closing:** The Future of Our Planet

Note: Note: Lesson numbers may be not be sequential. BHP World History content and Year-Long content is omitted from the Semester-Long Course Plan.