



FYE 1000

BIG HISTORY: NATURE AND CULTURE FROM THE BIG BANG TO THE PRESENT

SAMPLE LESSON PLAN

REQUIRED TEXT

Christian, D., Brown, C. & Benjamin, C. *Big History: Between Nothing and Everything, Preliminary Edition*. McGraw-Hill : San Francisco, 2010. ISBN 0-07-803969-X

COURSE DESCRIPTION

In Big History we take an immense voyage through time. We witness the first moments of our universe, the birth of stars and planets; we watch as life forms on earth, grows and develops in complexity, until human consciousness dawns; we then trace the evolution of human cultures through geography, migration patterns, and social structures. We watch the rise of humankind until we finally peer over the threshold of the present into possible futures for us and for our planet.



STUDENT LEARNING OUTCOMES:

The student will demonstrate the ability to:

1. describe and analyze Big History themes addressed in the course. Assessment: A midterm exam and a logically and coherently organized midterm essay written in university-level English and crafted through a process of drafting, revising, and editing.
2. distinguish and apply understanding of major stages in the history of the universe from the Big Bang to the present, including a variety of natural and cultural phenomena. Assessment: A logically and coherently organized term essay written in university-level English and crafted through a process of drafting, revising, and editing.
3. locate and evaluate sources for research related to Big History; extract and synthesize such information using appropriate summarizing, paraphrasing, and citation methods in accordance with MLA, APA, or CMS documentation guidelines. Assessment: library exercises and writing assignments.

SCHEDULE FOR READINGS AND ASSIGNMENTS

1. Monday August 22	<ul style="list-style-type: none"> • Welcome. Get-To-Know-You Exercise. What is Big History? Stories and Framing a Story. Strands of Big History.
THRESHOLD 1	
2. Wednesday August 24	<p>Have read Introduction, pages v-xv and Chapter 1, pages 1-5.</p> <ul style="list-style-type: none"> • Thresholds and Increasing Complexity. The Big Bang and Origins of the Universe. Creation Stories. <p>In-Class Activity: Creation Stories</p>
3. Monday August 29	<p>Have read Chapter 1, pages 5-15.</p> <ul style="list-style-type: none"> • The Four Features of Complexity: Diverse Components, Specialized Arrangement, Emergent Properties, Energy Flow. Introduce Overarching Themes: Rising Levels of Complexity, Networks, Cause and Effect. Summation of Complexity in Threshold 1.
THRESHOLDS 2 and 3	
4. Wednesday August 31	<p>Have read Chapter 1, pages 15-18</p> <ul style="list-style-type: none"> • The Force of Gravity. Fusion and Light. Creation of Galaxies and Stars.
Monday, September 5	Labor Day
5. Wednesday September 7	<p>Have read Chapter 1, pages 18-25</p> <ul style="list-style-type: none"> • Chemical Elements. Life Cycle of Stars. Hydrogen and Helium. Molecular Clouds. Supernovae. Summation of Complexity in Thresholds 2 & 3.
<p>Wednesday, Sept. 7</p> 	<p>REQUIRED EVENT: An exclusive screening of <i>Journey of the Universe</i>. Cosmologist and host Brian Swimme takes viewers on a 14 billion year voyage through time and space in this scientific narrative and will be present to answer questions after the show. Angelico Hall, 7 pm. Doors open 6:30</p>
THRESHOLD 4	
6. Monday September 12	<p>DUE: Writing Assignment : <i>Journey of the Universe</i></p> <p>Have read Chapter 2, pages 26-38.</p> <ul style="list-style-type: none"> • Emergence of the Sun. Modes of Observation and Analysis: Telescopes, Unmanned Spacecrafts, Radiometric Dating. Accretion: The Formation of Planets. The Formation of Moons. <p>In-Class Activity: Solar System and Accretion.</p>
7. Wednesday September 14	<p>Have read Chapter 2, pages 38-54.</p> <ul style="list-style-type: none"> • Early Earth. Chemical Differentiation. The Structure of Earth: Crust, Mantle, Core. Four Stages of Earth's Atmosphere. Plate Tectonics. Summation of Complexity in Threshold 4. Summarizing.

	Regional Example: The Geographic History of California.
THRESHOLD 5	
8. Monday September 19	Have read Chapter 3, pages 55-68. • Emergence of Life. Darwin and Natural Selection. Evolution. Origin of Life Traditions: Genesis, etc.
9. Wednesday September 21	Have read Chapter 3, pages 68-76. • First Four Stages of Life: First Life, Photosynthesis, Respiration and Eukaryotes, Sexual Reproduction. Emergence of Cells. The Carbon Atom. DNA and RNA.
September 21 	Event: FYE Big History Movie Night: <i>Jurassic Park</i> . Creekside. 6:00 pm Ice cream social; 6:30 pm Screening
10. Monday September 26	Have read Chapter 3, pages 76-82. • Next Four Stages of Life: Multi-Celled Organisms, The First Vertebrates, Life on Land, Dinosaurs, Birds and Mammals. Summation of Complexity in Threshold 5.
THRESHOLD 6	
11. Wednesday September 28	Have read Chapter 4, pages 84-96. • Emergence of Hominines. Evidence: Fossils and Artifacts, Modern Primates, Climate Change. In-Class Activity: Evolution of Hominines (Quadrupedal to Bipedal)
Thursday, Sept. 29 	Event: Stargazing with San Francisco Amateur Astronomers Forest Meadows at 8:30 pm.(Rain Date: October 6) http://www.sfaa-astronomy.org/
12. Monday October 3	DUE: Midterm Essay Draft Have read Chapter 4, pages 96-100. • Emergence of <i>Homo sapiens</i> . Collaboration and Teamwork. Chimpanzees vs. Humans. Use of Tools. Collective Learning. Fire and Cooking. In-Class: Workshop draft.
13. Wednesday October 5	Have read Chapter 4, pages 100-116. • Emergence of <i>Homo sapiens</i> . Advanced Communication. Symbolic Thinking. In-Class Activity: Hominoid Skull Lab
14. Monday October 10	DUE: Midterm Essay Have read Chapter 4, pages 116-118.

	<ul style="list-style-type: none"> • Emergence of <i>Homo sapiens</i>. The Paleolithic Era. Climate Changes and the Ice Age. Migration Patterns. Extensification. Diverse Lifeways: Foraging, Small Group Living, Fire-Stick Farming. Gender Relations. Art-making. Play and Ritual.
15. Wednesday October 12	Review Chapters 1-4 <ul style="list-style-type: none"> • Summation of Complexity in Threshold 6. Review Concept of Increasing Complexity. In-Class Activity: Hunter/Gatherer LifeStyle.
16. Monday October 17	Midterm Exam
THRESHOLD 7	
17. Wednesday October 19	Have read: Chapter 5, pages 122-149. <ul style="list-style-type: none"> • Agricultural Revolution. Domestication. “Affluent Foragers.” “World Zones.” Farming and Intensification. Food and Population Growth. Trade. Farming Technologies: Horticulture, Swidden Agriculture, “Chinampa” Agriculture. Sedentism. Villages and Towns: Jericho and <i>Calahhayack</i>
Friday, October 21	Fall Break day
18. Monday October 24	Have read: Chapter 5, pages 149-151 and Chapter 6, pages 160-174 <ul style="list-style-type: none"> • Cities. Consensual Power. Buildup of Resources and Collective Learning. <i>Uruk</i>, The First City.
19. Wednesday October 26	Have read: Chapter 7, pages 196-201 and Chapters 6, pages 174-178 and 185-187. <ul style="list-style-type: none"> • City-States. Characteristics: Writing, Hierarchy, Tribute-Taking, and Division of Labor. Specialization: Military, Warfare. State Religions. Monumental Architecture. City-States of Afro-Eurasia and the Americas.
20. Monday October 31	DUE: Research Exercise 1. Guest lecture: Librarian
21. Wednesday November 2	Have read Chapter 8, pages 228-235 and 240-241 and 249-250 and 265. <ul style="list-style-type: none"> • General Trends of Empires: Islam and Mongol Empires. Religion, Rituals, and Laws. Resource Acceleration. Summation of Complexity in Threshold 7.
THRESHOLD 8	
22. Monday November 7	Have read Chapter 10, pages 295-333. <ul style="list-style-type: none"> • The Modern Revolution (c. 1000-1700 CE). Advances in Communication and Transportation. Competitive Markets. Capitalism. Networks of Exchange. Collective Learning. Setting the stage for Industrialization.
23. Wednesday November 9	Have read Chapter 11, pages 336-353.
24. Monday November 14	DUE: Research Exercise 2 Have read Chapter 11, pages 353-369. <ul style="list-style-type: none"> • Breakthrough to Modernity (c. 1700-1900 CE). Industrial Revolution (Britain). Innovations in Industry: Steam Engines and Coal, Energy

	Intensity. Slavery. Colonization. Urbanization. Arbitrage and Free Trade
25. Wednesday November 16	<p>Have read Chapter 12, pages 371-400.</p> <ul style="list-style-type: none"> • The “Anthropocene” Epoch (c. 1900-2011 CE). The Modern State. Human Impact on the Biosphere: Internal Combustion Engine and Oil. Education. Imperialism and Innovations in Warfare. Splitting the Atom. Medical Innovations. Birth Control. Computer Technology. Sustainability. Solar and Wind Power. Global Self-Awareness. Summation of Complexity in Threshold 8.
THE FUTURE	
26. Monday November 21	<p>DUE: Term Essay Draft</p> <p>Have read Chapter 13, pages 405-406, 410-412.</p> <ul style="list-style-type: none"> • Where are we now? Ecosystems: Population, Biodiversity, Water, Food, Energy. The Near Future and Ominous Trends: Limited Fossil Fuels, Destabilized Climate. Have read: pages 414-415 • Workshop draft
Wednesday November 23	Thanksgiving Holiday
27. Monday November 28	<p>Have read Chapter 13, pages 412-425.</p> <ul style="list-style-type: none"> • Where do we go from here? Possible Futures. The Next Few Thousand Years and Hopeful Trends: Restoring the Environment, Reducing Consumption. Democracy. Global Communication and Collaboration. The Remote Future. How do we contribute to the world we want? Examples of False Futures (<i>Planet of the Apes, 1984</i>, etc.) <p>In-Class Activity: Opinion Snake</p>
28. Wednesday November 30	DUE: Term Essay: Little Big History
Final: Little Big History Discussion	Time _____, Place _____