

BIG HISTORY PROJECT

International Baccalaureate (IB) Middle Years Programme (MYP)

Big History Scope and Sequence



Big History Unit/Threshold	MYP subjects	Form of integration	Key concept	Related concept(s)	Global context/exploration	Statement of inquiry	TOK link: Ways of knowing	MYP subject group objectives	ATL skills	Content (topics, knowledge, skills)	
1a	Introduction: What Is Big History?	Individuals and Societies: History	Complex explanation: Integration of sciences and history helps students understand what Big History is and how it is different from other approaches.	Global interactions	Perspective	Orientation in space and time: Epochs, eras, turning points, and Big History	Big History is different from other approaches to history. It is about bringing together perspectives from different disciplines to help us understand the complete picture of the Universe, our planet, and how humans interact with each other and our environment.	Students explore scale through the articles, activities, and videos of the course. Scale itself is a core skill repeated and revisited in each unit. BHP's "claim testers" (authority, logic, intuition, and evidence) very closely align with TOK's "ways of knowing" of faith, reason, intuition, and sense perception.	A. Knowing and understanding: (i) Use terminology in context. D. Thinking critically: (iv) Interpret different perspectives and their implications.	Thinking: critical thinking-- consider ideas from multiple perspectives	<ul style="list-style-type: none"> Introduction to Big History: David Christian video <i>What Is Big History?</i> and how is BH different from other approaches to history Scale (BH is unique because it considers all different possible scales of time and space); temporal scale and spatial scale; perspective taking (individual, cultural, societal)
		Sciences: Integrated									
Notes: Exploring personal history and how that relates to the BH narrative. Introduction to BH reading process (three close reads)											
1b	Introduction 2: Origin Stories	Individuals and Societies: History	Aesthetic or literary synthesis: Translating disciplinary understanding into a symbolic work by bringing together history and the arts helps students explore connections between different kinds of origin stories.	Time, place, and space	Perspective	Orientation in space and time: Epochs, eras, turning points, and Big History	People orient themselves in space and time by creating origin narratives defined by a range of perspectives defined by particular turning points.	Indigenous knowledge systems: The role of language in the knowledge system; explaining observed natural phenomena as being part of a total worldview. History: Knowledge shared by a group help produce a sense of common heritage. Sense perception: An active process of interpreting the world according to prior conceptual framework or theories.	D. Thinking critically: (iv) interpret different perspectives and their implications	Research skills	<ul style="list-style-type: none"> Students conduct research in groups about different origin stories. The Stokes-Brown is there as a resource



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	Arts: Visual and Performing Arts			Narrative			Art: Can contribute to a view of self and can also shape an individual's view of the world.	A. Knowing and understanding: (ii) Demonstrate an understanding of the role of the art form in original or displaced contexts.		<ul style="list-style-type: none"> Examples of origin stories in art (BHP 1.4: Judeo-Christian, Mayan, Chinese, and Iroquois.) Similarities and differences between the 4 images Art and the origins of the Universe; art and the origins of humans What does each image reveal about the beliefs held by the people of the society that created it? Engage in process of creative self-exploration & discovery- an integrated arts performance on the origin stories and how arts contributes towards understanding the world which we live in 	
2	The Big Bang	Sciences: Physics	Complex explanation: Bringing together science and history helps students explore connections between scientific discoveries and those discoveries' relationship to society and the acceptance of new theories.	Time, place, and space	Interaction	Personal and cultural expression: The ways in which we discover and express ideas, feelings, nature, culture, beliefs and values	Over time, individuals change their minds based on new experiences, new understandings, and cultural norms.	Using imagination and reason in the creation of hypothesis. Pivotal shifts of thinking in the development of the natural sciences.	A. Knowing and understanding: (i) Explain scientific knowledge.	Thinking: transfer skills-- apply skills and knowledge in unfamiliar situations.	<ul style="list-style-type: none"> Big Bang theory; what emerged from the Big Bang? Janna Levin video: <i>Questions about the Big Bang: Guest Talk</i> David Christian video Cosmic Background Microwave Radiation
	Individuals and Societies: History			Causality (cause and consequence) Perspective	Orientation in time and space: Turning points and Big History		How can it be that scientific knowledge changes over time? What roles do culture and religion play in this paradigm shift in thinking? Galileo used sense/perception evidence and logic to reframe understanding of Universe.	A. Knowing and understanding: (ii) Demonstrate knowledge and understanding of subject-specific content and concepts through descriptions, explanations, and examples. C. Communicating: (i) Communicate information and ideas using an appropriate style for the audience and purpose.	Thinking: critical thinking skills-- develop contrary or opposing arguments.	<ul style="list-style-type: none"> How did our understanding/view of the Universe change over time? Geocentric view; heliocentric view BHP articles on Ptolemy, Copernicus, Galileo, Newton, and Hubble 	
<p>Notes: -Creating of a Big Bang infographic. Claim testing. Views of the Universe debate.</p>											



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3	Stars & Elements	Sciences: Chemistry	Development	Energy	Scientific and technical innovation: Inquiry into how the world works	With the appearance of stars, the Universe became more diverse, varied, interesting, and complex.	Prediction is an important feature of science. Many laws of science are stated using the language of math. Understanding of stars and elements based on reason and perception. That which we perceive (the language of TOK) is the evidence (language of Big History) upon which claims (Big History) of knowledge are made. These claims are the "ways of knowing" (TOK language) upon which our collective knowledge is based.	C. Processing and evaluating: (i) Present collected and transformed data.	Research: information literacy skills: use critical literacy skills to analyze and interpret media communications	<ul style="list-style-type: none"> Life and death of stars. Dmitri Mendeleev and the periodic table How stars were formed Life Cycles of Stars; "The Life of a Star" Stars timeline What did stars give us? Ways of Knowing, Marie Curie, Mendeleev What Do You Know? What Do You Ask? Case study: Silver (introduce the concept of a Little Big History) This Threshold Today
		Mathematics		Measurement				C. Communicating: (i) Select appropriate forms of mathematical representation to present information.		
<p>Notes: Grading <i>Silver Supernova</i> activity. "From Alchemy to Chemistry." The philosopher's stone/ <i>Cintamani</i></p>										
4	Our Solar System & Earth	Sciences: Earth Science (Integrated Sciences)	Systems	Models	Orientation in space and time: Natural landscapes and resources	Collisions of chunks of debris eventually created our Earth and Solar System. As giant hunks of rock, metal, and ice slammed into the Earth's surface, it became a planet with three layers. The interplay between the layers resulted in the Earth as we know it.	"Right," "wrong," and "scientific" truth. Deductive and inductive reasoning in science. Wegener hypothesis; Vine-Matthew-Morley hypothesis. Wegener used intuition and evidence but couldn't prove theory of continental drift until later evidence and reason provided foundation for plate tectonics.	A. Knowing and understanding: (iii) Analyze and evaluate information to make scientifically supported judgments.	Communication: communication skills: give and receive meaningful feedback.	<ul style="list-style-type: none"> Formation of Earth and the Solar System What Was the Young Earth Like?; the early atmosphere Accretion



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	Individuals and Societies: Geography			Knowledge				D. Thinking critically: (i) Synthesize information to make valid arguments.	Thinking: critical thinking skills: revise understanding based on new evidence and arguments.	<ul style="list-style-type: none"> Biography of a continent Plate tectonics and continental drift; <i>Our Shifting Globe</i> guest talk Geologists and the rock record; Earthquakes and volcanic activity 	
Notes: Evaluating writing. DQ Notebook.											
5	Life	Sciences: Biology	Aesthetic or literary synthesis: Bringing together insights from biology and history to explore what we mean by life, and how the fact that living organisms are constantly changing means that they have generated huge diversity.	Change	Transformation	Orientation in space and time: evolution, constraints, and adaptation	Living organisms represent a new type and level of complexity and are constantly changing.	Scientific models and the problems of absolute truth in science. What role does evidence play in the falsification of scientific theories? Reason, logic, and evidence provide foundation for understanding theory of natural selection.	A. Knowing and understanding: Explain scientific knowledge.	Thinking: critical thinking skills: consider ideas from multiple perspectives	<ul style="list-style-type: none"> What is life? How did life begin and change? Life and nonlife Photosynthesis Natural selection; "survival of the fittest" Biodiversity The Biosphere Extinction The carbon cycle Watson, Crick, and Franklin; DNA
		Humanities: History			Identity						The influence of personal beliefs and historical context on people's interpretation and application of scientific ideas.
Notes: -DQ Notebook. Convincing Narratives writing activity. Tree of Life infographic activity.											

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6	Early Humans	History	Communication	Civilization, innovation, and revolution	Personal and cultural expression: Critical literacy, languages, and linguistic systems	Complex communication through spoken and written language gives us the ability to express ourselves in many contexts for many purposes, including the collective learning and advanced systems that make civilization possible.	Lesson 6.1: "Ways of knowing" about how early humans lived uses disciplines of archaeology and anthropology and how they use evidence and reason to make claims.	A. Knowing and understanding C. Communicating D. Thinking critically Language timeline and explanation (group project)	Social: collaboration	<ul style="list-style-type: none"> • Early nomadic communities; daily life; beliefs • Making stone tools • Human migration • Technological developments 	
		Language Acquisition		Context, purpose				C. Communicating in response to spoken, written and visual text D. Using language in spoken and written form (lower phases- animals and humans communication comparison; higher levels- translation timeline translation or localization)			Research: Information literacy: creating information.
Notes: Little Big History project.											
7	Agriculture & Civilization	Sciences: Biology	Complex explanation: Using multiple disciplines to gain insight into the Neolithic agricultural revolution and its consequences for human and natural history.	Communities	Interaction	Globalization and sustainability: Commonality, diversity, interconnection	The development of agriculture paved the way for larger and more specialized social groups; it fundamentally changed the way human communities are organized, interact with the environment, and understand their relationships with each other.	The development over thousands of years of what we have come to call farming is based upon reason evidence (perception) and logic.	B/C (plant growth or digestion experiment); A/D (Essay: "How can we use science to provide more food for a hungry planet?")	Research: Information literacy: make connections between various sources of information.	<ul style="list-style-type: none"> • Domestication of plants and animals (human control over the environment and its consequences) • Food and dietary requirements of individuals and communities • Climate and natural resources -opportunities and constraints • Paleo-botany and climatology • Heterotrophs/ autotrophs • Digestive process-- mechanical, chemical, enzymes, peristalsis, chime, amylases, bite • Plant nutrition (vitamins, fiber, carbohydrates) • Experimental design



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	Individuals and Societies: Integrated Humanities			Resources				A/B/Early civilizations: (i) Search D. (from interdisciplinary essay)	Thinking: Critical thinking: gather and organize relevant information to make an argument; revise understanding based on new information and evidence.	<ul style="list-style-type: none"> Farming vs. foraging? Civilizations: East Asia, Greco-Roman, Mesoamerican Cities, states, civilizations (early urbanization) Social stratification and specialization (status, networks) Geography and society; Paleo-archaeology; scarcity-surplus--distribution of resources; trade and exchange; networks measures of quality of life 	
Notes: Biography of a Crop activity. Little Big History questions. Early civilization museum project								ID- A, B, D	Reflection: Identify strengths and weaknesses of personal learning strategies; keep a journal to record reflections.		
8	Expansion and Interconnection	History	Complex explanation: Students draw on expertise from historical and literary analysis to develop a more complex understanding of medieval and early modern history (500-1750 CE).	Global interactions	Identity (and culture)	Orientation in space and time: Civilizations and social histories, heritage, pilgrimage, migration, displacement, and exchange	Increased global interaction raises complex questions of identity that are reflected in the themes of adventurous travel writers.	Evidence reason language and evidence (perception) all play strong roles in claims of our knowledge regarding expansion and interconnection and also play strong roles in expansion and interconnection itself.	B. Investigating C. Communicating Travel dialogue with adventurer of choice	Thinking: Creative thinking: use existing works and ideas in new ways	<ul style="list-style-type: none"> Reasons for, and consequences of, the expansion and interconnection of agrarian civilizations Trade and exchange; trade routes such as the Silk Road; economic impact of increasing interconnectedness Ship making; expansion of overseas trade Social impact of increased interaction; spread of religion; spread of disease; plague Migration and demographic change The limits of growth



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	Language and Literature			Theme				B. Analyzing C. Producing text Read travelogues from a variety of eras, determine characteristics of the genre, take a real or imaginary (historical) trip and write a short piece of travel writing.	Thinking: Transfer: combine knowledge, understanding, and skills to create novel solutions	<ul style="list-style-type: none"> Accounts of adventurers such as Marco Polo, Ibn Battuta and Zheng He; How have the accounts contributed to our understanding of the world at this time? What picture of the world do they paint? What makes these accounts reliable or unreliable? Spread of ideas and cultures Interconnections and collective learning 	
Notes: World Zone game. Explorers min-project.											
9	Acceleration	History	Crossover tooling: Use the design cycle to understand the process of historical innovation.	Change	Causality (cause and consequence)	Scientific and technical innovation - Adaptation, ingenuity and progress	Increasingly rapid change offers exciting and troubling challenges that create ongoing, dynamic cycles of innovation.	Causes and consequences of acceleration based upon not just reason and perception but also intuition.	C. Communicating D. Thinking critically Write a newspaper editorial that advocates for adoption of a new technology in the face of opposition.	Thinking: Critical thinking: Gather and organize relevant information to formulate and argument.	<ul style="list-style-type: none"> Causes of accelerating change Role of significant individuals Consequences of accelerating change; political, social, cultural and economic impact; impact on the biosphere The Industrial Revolution; the causes and enablers of industrialization; developments in transportation; developments in energy and power; industrial infrastructure; iron and steel; mass production Developments in communications; urbanization and the growth of cities and factories; impact on standards of living
		Design									
Notes: Impacts of population growth essay.											



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10	The Future	Language and Literature	Perspective	Point of view	Globalization and sustainability: Human impact on the environment	The lessons we have learned as a species help us to develop unique points of view about the historical context and sustainable future of the human community.	Visions of the future notably influenced by choice use of language as well as intuition and reason.	<ul style="list-style-type: none"> Producing text Using language 	Reflection: Focus on the process of creating by imitating the work of others	<ul style="list-style-type: none"> Utopian and dystopian visions of the future Science fiction The future in popular culture
	Individuals and Societies: Integrated Humanities	effectively propose and argue what they think will be the next major threshold of increasing complexity.		Sustainability						
		Notes: Integrated assignment--creative writing (short story, poem, scene, detailed storyboard, graphic novel proposal, for example) that incorporates consequence or solutions of human interaction with the environment, projected to 2200 CE. The scenario must be based on current realities and trends, which are justified in an oral presentation ("pitch") to a specific audience (for example, a publisher or producer). Could be a small group or whole class project, a Big History project, or a Little Big History project.								

Course Structure

- Cover full spectrum on known history – 13.8 billion years, from the Big Bang to the present.
- Highlight all eight core thresholds as pivotal moments in our shared history (big bang, star formation).
 - Spend at least one third of the class time on prehuman history.
- Include specific content / projects / exercises about application of Big History to future of humanity.
- Include at least one individual or group project—traditionally a Little Big History—in which students trace the history of something back three or more thresholds.

Core Skills

- Claim testing – including theory and practice about how we know what to trust and believe.
- Interdisciplinary thinking – challenge students to think more holistically, integrating the perspectives of, for example, a historian, chemist, and sociologist, and evaluate how that changes their point of view and develop their understanding of an issue/solve a complex problem or adds to understanding
- Thinking at scale – How do changes in temporal or spatial scales impact perspective? Finding and placing "self" in time and space
- ELA – Emphasis on core ELA skills such as hypothesis generation and evaluating, crafting, and defending, an argument.

Content Knowledge

- Big History – what it is, how it is different, why it is useful.
- Thresholds – moments in time where complexity "leaps forward"
- Collective learning – understanding the unique way humans transmit information and the advantage that gives us.
- Core glossary – 10-15 key elements (such as definitions of "evolution," "life," and "humans") that are core to transitioning to more discipline-specific study.

