

## Big History as Connective Tissue: A Cosmic Approach to High School Pedagogy

The table provided below assumes a working knowledge of both Big History and Cosmic Education, and it is meant to accomplish two things. First of all, it shows how these two educational approaches overlap quite seamlessly in their conceptual framework. Secondly, it is meant to be a guide for high school teachers in any setting, but particularly in a Montessori school, attempting to weave his or her particular subject into a whole cloth of knowledge. At a glance, it shows where each thread appears in the design to help form the emergent image of what we know about our universe, our planet, and ourselves.

It should be stressed that this list is by no means exhaustive, as there are certainly other subjects that could be nested within each of the Threshold Moments and Great Lessons. Furthermore, the implication is not that Big History can cover the entire curriculum of any of these courses. Rather, Big History provides the context into which each of these otherwise isolated courses fit. To try a different metaphor, the individual courses taught in high school can be thought of as the acts and scenes that, together, comprise the Grand Drama that is our Big History. It is up to the teacher to write the dialogue.

Threshold Moments	Corresponding Great Lesson(s)	Corresponding School Subjects
1. The Big Bang	★ First Great Lesson: The Coming of the Universe	<ul style="list-style-type: none"> <li>→ Cosmology</li> <li>→ Earth and Space Science</li> <li>→ Physics</li> <li>→ Debate</li> <li>→ Cultural/Religious Studies</li> </ul>
2. The Stars Light Up	★ First Great Lesson: The Coming of the Universe	<ul style="list-style-type: none"> <li>→ Astronomy</li> <li>→ Earth and Space Science</li> <li>→ Chemistry</li> <li>→ Physics</li> </ul>
3. New Chemical Elements	★ First Great Lesson: The Coming of the Universe	<ul style="list-style-type: none"> <li>→ Chemistry</li> <li>→ Earth and Space Science</li> <li>→ Physics</li> </ul>
4. Earth and the Solar System	★ Second Great Lesson: The Coming of Life	<ul style="list-style-type: none"> <li>→ Geology</li> <li>→ Earth and Space Science</li> <li>→ Geography/History of the World</li> <li>→ Chemistry</li> <li>→ Biology</li> <li>→ Zoology</li> </ul>

<p>5. Life Appears</p>	<p>★ Second Great Lesson: The Coming of Life</p>	<ul style="list-style-type: none"> <li>→ Biology</li> <li>→ Ecology</li> <li>→ Geology</li> <li>→ Chemistry</li> <li>→ Anatomy</li> <li>→ Physical Education/Nutrition</li> <li>→ Debate</li> <li>→ Geography/History of the World</li> <li>→ Social Studies: Current Issues, Problems, and Events</li> </ul>
<p>6. Humans and Collective Learning</p>	<p>★ Third Great Lesson: The Coming of Humans</p> <p>★ Fourth Great Lesson: The History of Communication</p>	<ul style="list-style-type: none"> <li>→ Anthropology</li> <li>→ Language Arts</li> <li>→ Archaeology</li> <li>→ Cultural Studies</li> <li>→ Biology (DNA and Heredity)</li> <li>→ World History</li> <li>→ Genealogy</li> <li>→ Sociology</li> <li>→ Religious Studies</li> </ul>
<p>7. Agriculture and Civilization</p>	<p>★ Third Great Lesson: The Coming of Humans</p> <p>★ Fourth Great Lesson: The History of Communication</p> <p>★ Fifth Great Lesson: The History of Mathematics</p>	<ul style="list-style-type: none"> <li>→ World History</li> <li>→ Language Arts</li> <li>→ Mathematics</li> <li>→ Anthropology</li> <li>→ Middle/Far Eastern Studies</li> <li>→ Mediterranean Studies</li> <li>→ Mesoamerican Studies</li> <li>→ Agricultural Sciences</li> <li>→ Fine Arts: Ceramics/Sculpture/Fiber</li> <li>→ Sociology</li> <li>→ Economics</li> <li>→ Government</li> <li>→ Political Theory/Political Science</li> <li>→ Philosophy</li> <li>→ Religious Studies</li> <li>→ Social Studies: Current Issues, Problems, and Events</li> <li>→ Debate</li> </ul>
<p>8. The Modern Revolution: Expansion, Interconnection, and Acceleration</p>	<p>★ Third Great Lesson: The Coming of Humans</p> <p>★ Fourth Great Lesson: The History of Communication</p>	<ul style="list-style-type: none"> <li>→ Technological Studies (Computer Applications, Programming, Digital Citizenship, etc.)</li> <li>→ Language Arts</li> <li>→ Mathematics</li> <li>→ Economics</li> <li>→ Chemistry: Study of Gold</li> </ul>

★ Fifth Great Lesson: The History of Mathematics

- Geology: Climate Change and the Anthropocene
- Government
- Political Science
- Military History
- European History
- US History
- Geography/History of the World
- Medical Studies: Pathology
- Biology: Microorganisms
- Religious Studies
- Ecology: Biodiversity
- Environmental Science
- Debate
- Social Studies: Current Problems, Issues, and Events