

University of Michigan **Provost's Teaching** Innovation Prize

2011 WINNER



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ZOOM: Teaching Time, Space, and Approaches to Knowledge

Innovation Description

"Zoom" is a course in "Big History." It moves through range of disciplinary perspectives (astronomy, geology biology, anthropology, etc.) to tell the universe's story from the Big Bang to the end of time. This approach covers 13.7 billion years and puts human history into terrestrial and cosmic contexts.

The primary, semester-long assignment engages students in thinking directly about how materials presented by guest lecturers from different disciplines relate to one another. Students form groups centered around a particular discipline and then create a set of wiki pages profiling their discipline: what types of evidence it considers, how it goes about evaluating th evidence, and examples of content knowledge that the discipline has produced.

Students collaborate across groups in order to create linkages, both literal hyperlinks and intellectual connections, among wiki pages and disciplines. A structured peer-review process guides students as the critique other groups' work and determine how it migh connect with their own.

The pedagogical innovation is twofold: it puts wikis to use to encourage new ways of thinking and collabora ting, and it gives students the chance to take ownersh of their learning as they teach others, creating an ope educational resource that reflects what they have learned and the connections they have made in Zoom

Examples of Teaching Innovation



Home page for the wiki module created by the student group focused on chemistry. The image at right shows organization of the site.

The best modules will be hosted on the Exhibit Museum of Natural History's webpage.

Student Comments
"Never before was it clear to me that we c techniques and knowledge gained from m to tell the story of human history within the universe."
<i>"If we had moved linearly through time, stated Big Bang would only leave room for the ern history during the last minute of our last clast instead to move logarithmically, "zooming" and space with brief stops along the way-of the Earth, the first hominids and human Revolution, and even stops in the distant f</i>
"Asking us to create a knowledge base that of our grade but potentially viewed by hun encouraged us to research both the subject teaching and the audience we were caterin
"Zoom changed the way I think about histo education."
"Educators can talk at great length about of making connections, but [this] class allowed history at its most beautiful and complex for As I prepare to enter a new classroom of m history teacher, it is my greatest hope that my students see history in a similarly rich, innovative way."



Each red particle represents a wiki page. Clockwise from the top right, we see 2 key eras in the study of chemistry,

2 applications of chemistry,

2 "holes" in chemistry's content knowledge, and

2 other disciplines in which chemistry figures.





can use the nultiple disciplines e context of the

arting with the ntirety of human lass. He chose " through time -the formation ns, the Industrial future."

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tory and

complexity and ed me to see for the first time. my own as a I might help engaging, and

Louis Pasteur's experiment discrediting spontaneous generation as the origin of life. Part of a wiki page about chemistry's engagement with as yet unanswered questions about the links between non-living elements and living organisms.