

Org-Type	Non-Profit-based		
Lead	SETI Institute	PoC	Pamela Harman, Manager of Education and Outreach
PoC-Phone	650-961-6633	PoC-Email	pharman@seti.org
Address			
URL			
Service-Region	Nationwide		
Type	Professional Development for Teachers Lesson Plan		
Subjects	General Science Biology Chemistry Physics Earth Science Space Computer Science Environmental Science		
Level	High School (9-12th grade) Teacher Certification Professional Development		
Other-Objectives	There are 6 modules in Voyages through Time which comprise approximately 180 days of instructional materials: Cosmic Evolution--astronomy Planetary Evolution--planetary science Origin of Life--biology and microbiology Evolution of Life--biology and evolution of life Hominid Evolution--biology and physical anthropology Evolution of Technology--invention, engineering and evolution of technolog		
Served-per-Year	400+ Classrooms	Demographics	
Content	Voyages Through Time: A standards-based curriculum for a high school integrated science course centered on the unifying theme of evolution. The curriculum is presented in 6 technology-based modules: Cosmic Evolution, Planetary Evolution, Origin of Life, Evolution of Life, Hominid Evolution, and Evolution of Technology. Together, they comprise a year-long course; individually, the modules can be integrated into discipline based courses such as earth and space science, biology, physics, etc. Each summer, we train 20-25 high school teacher-leaders in ASSET: Astrobiology Summer Science Experience for Teachers at San Francisco State University. Teachers apply, are selected, and funded. They commit to providing professional development for other educators in their home communities. We have approx. 90 mentor teachers in more than 20 states. They present workshops, mentor other teachers, and implement the curriculum at their schools.		
Outcomes	Our goal is to provide excellent curriculum materials that bring cutting edge science to the classroom, support teaching the major concepts in science in an integrated course that includes the historical sweep of science (via timeline activities), computer/data base experiences that engage students with scientific data, and inquiry-based activities. The curriculum is based upon the "5 E's" model: Engage, Explore, Explain, Elaborate, and Evaluate, a proven model of instruction. Teacher materials and student data-base activities, media, and print materials are provided on CD-ROMs. Separately, collected science articles comprise the student readers for each module.		
Started		Funded-Through	
Length		Cost	
Primary-Funding	Foundation Government Academia	Primary-\$	
Materials			
Other-Funding			
How-Assessed			
Best-Practice-Why	Our curriculum design is based upon the National Science Education Standards, and the 5-E's inquiry-based model for classroom science teaching developed by BSCS in Colorado Springs. Our teacher professional development (ASSET) institute also reflects best practices from NSES, and Designing Professional Development for Teachers of Science and Mathematics (Loucks-Horsley, Love, Stiles, Mundry, & Hewson, 2003). Formative evaluation over 4 years has demonstrated that ASSET is an excellent workshop for high school science teachers. Voyages Through Time has been recognized by: Media and Methods: Portfolio Winner, 2004 Education Software Preview Guide: Notable Software California Learning Resources Network: (CLRN): Ed Tech Funds may be used to purchase the materials. Voyages Through Time is used in more than 400 school nationwide. During development, the materials were extensively tested and evaluated by WestEd, the regional research laboratory for science and mathematics education.		
Promising-Practice	This week-long institute for high school science teachers provides content enrichment, inquiry-based learning experiences, planning for professional development, and planning for implementation of astrobiology into high school courses with Voyages Through Time materials and other NASA materials.		
Sponsor		Sponsor-Org	
Sponsor-Phone		Sponsor-Email	
Other-Orgs	NASA Astrobiology Institute, National Science Foundation, Educate America, SETI Institute, California Academy of Sciences, San Francisco CA, NASA Ames Research Center, San Francisco State University		