Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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nterstellar Space Travel And Space Technology: The Solar System And Beyond

Guide for Curriculum Unit 96.06.02
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The goal that I, as a science teacher, expect to accomplish with the “Interstellar Space Travel and Space Technology: The Solar System and Beyond” curriculum is to have 7th and 8th grade Earth and Space Science students develop an understanding of the following: composition and formation of the Universe, composition and formation of our Solar System, dating processes of the Universe, problems and accomplishments of interstellar space travel and space technology, findings of space missions, exploration of the possibility of life in space, and the construction of our space station.

Students will read and discuss various texts and current scientific journals, write essays depicting their opinions on certain astronomical/cosmological topics, conduct calculations and computations using calculators and computers, manipulate data in order to make comparisons/contrasts, and obtain hands-on experiences by visiting science museums/planetariums. The approach for this curriculum is interdisciplinary, combining science and mathematics. Therefore, a science and a math teacher at a school can combine their efforts for the topic of astronomy. The math teacher and science teacher can together teach the students calculations, conversions, measurements, scientific notation.

Some questions that can be answered from this curriculum are: What is the composition of our Universe? How was our Universe formed? When was our Universe formed? What is the International Space Station? Is there a possibility of intelligent life on other planets? In order to answer the above questions, the students need to understand that the scientific method plays a vital role. Therefore, one intended outcome for this curriculum is to enable students to demonstrate and interpret steps used to attain solutions/approaches for scientific problems/questions. Overall, this unit emphasizes problem solving, higher level thinking skills, applications of scientific method, and scientific/mathematical calculations and computations in order to understand more about astronomy.

(Recommended for Earth and Space Science, grades 7-8)