

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute 1998 Volume VI: Selected Topics in Contemporary Astronomy and Space Science

Out-of-this-World Experiments

Guide for Curriculum Unit 98.06.01 by G. Casey Cassidy

This year's unit entitled "Out-of-this-World Experiments" encourages my students as well as yours to take a journey of a lifetime. Our unit begins with the development of the theory of quest ... that is, what is it that motivates mankind to search for the unknown, to travel to untold destinations in search of knowledge and mysteries yet to be unfolded.

Our journey begins with the history of flight dating back to Leonardo da Vinci and progresses forward with the discoveries of hot air balloons by the Mongolfier Brothers. In 1903, we're at Kitty Hawk and successfully "fly like birds" with Wilbur and Orville Wright into the 20th century.

In the early 60's, we trade our flight suits for space exploration gear and board Mercury 3 with Alan Shepard, followed by countless others in the Mercury, Gemini, and Apollo missions. In July, 1969, we travel to the Moon and back aboard the "Eagle" and the "Columbia" with astronauts Aldrin, Collins, and Armstrong, accomplishing the unthinkable.

The 1970's are ushered in with Skylab space explorations with scientists conducting research and experiments in micro-gravity conditions. During this time, four skylabs are sent into orbit, three of which have manned crews. All of the missions achieve their operational and experimental goals while engaged in solar astronomy, medical experiments and Earth resource studies.

Since the early 1980's, NASA has sent crews and payloads into orbit aboard the Space Shuttle. The Shuttle has introduced new capabilities for micro-gravity research and the return to Earth of all instruments, samples and data.

Today, these Shuttle missions continue to investigate the unknown, preparing the way for the International Space Station of tomorrow.

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