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Curriculum Units by Fellows of the National Initiative
2007 Volume VII: The Science and Technology of Space

The Integration of Space Technology into the Physics Classroom

Guide for Curriculum Unit 07.07.04, published September 2007
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I have developed a curriculum unit that includes space science and technology as a unifying theme throughout the study of introductory physics. The purpose of the unit is two fold. First, so often the study of physics appears to be a series of mathematical manipulations with little connection to understanding how and why the Universe works, which is the true study of science. I believe the integration of space science will ignite interest and allow students to recognize that the study of physics is not just formula manipulations but has implications beyond solving the daily homework problems. The second purpose is that the students we teach will be part of the decision-making for the future, and need a basic understanding of physical principles of the Universe to make informed decisions, not only about space travel, but about energy resources and the environment. I believe that including the science of space in my curriculum will motivate and inspire students to have a richer understanding of the concepts of physics. The unit includes problem sets, class discussions, presentations and demonstrations, and an inquiry design cycle experiment on rocket science.

(Developed for Honors Physics I, grades 10-12; recommended for Physics, grades 10-12)