



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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The Space Cadet's Laboratory: Using Electromagnetic Energy to Study Astronomy

Guide for Curriculum Unit 07.03.05
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The electromagnetic spectrum is a basic science topic that is covered in many different ways in many different classes in school. This unit will look at how the electromagnetic spectrum is used to study astronomy. This curriculum unit is written to be taught in a high school physics class; however, most of the ideas could be adapted for use in a middle school or a general science class. Many of the students for whom this unit is intended struggle with basic algebra and read, write and think at about an eighth- or ninth-grade level. Most of these students have had very little background in science of any kind, so there is a fair amount of basic and introductory information covered in this unit as well as some of the more advanced topics in the study of astronomy and energy.

This unit includes several hands-on activities intended to make the study of the electromagnetic spectrum more interesting. These activities include building and using a simple spectrophotometer, and a new way to think about electron energy levels. All of the activities are suitable for high school level students and are probably adaptable for younger students as well as older ones.

(Recommended for Physics, General Science, and Astronomy, grades 9-12.)

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