



Yale-New Haven
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Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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Energy Efficient Architectural Design and Model Building

Guide for Curriculum Unit 81.05.06
by Stephen Kass

This curriculum unit is designed for middle to high school level math and science teachers with two purposes in mind. The first purpose is for math teachers who want to illustrate the principles of scaling, ration, and proportion in a concrete way through model building. Too often math is taught in isolation, divorced from any “real life” situations. This causes students much anxiety and frustration. Student’s failure to connect math with subjects outside the classroom leads them throughout their math program to see any relevance or application of the math principles they have learned. This unit counteracts the irrelevance of math. It teaches “hands on” skills that can be continually reapplied to changing conditions throughout a student’s educational career. The second purpose is intended for science teachers who want to teach practical energy efficient design principles, with particular emphasis on passive solar design.

(Recommended for 7th-12th grade Basic Math and Science.)

Key Words

Architecture Energy Efficiency Mathematics Architectural Applications Basic Skills Solar Design

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