



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2006 Volume IV: Math in the Beauty and Realization of Architecture

Mathematics Alive: Environment and Design of Human Habitats

Guide for Curriculum Unit 06.04.03
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How can architectural mathematical concepts be integrated into everyday life applications? What are the basic principles and relationships between mathematics and architectural design? What are the direct and indirect impacts of architectural form and design in our lives? And more importantly, how can these concepts be presented to elementary school students in a meaningful way? These are some of the central questions that this curricular unit begins to answer and attempts to clarify.

In this unit, the architectural mathematical concepts are integrated into daily life applications by helping students observe the environment around them as critical observers, by paying attention to details that can then be quantified, tabulated, measured, graphed, and analyzed, and by allowing students to see the various relationships between the design and application of mathematical concepts of measurement, arithmetic, and geometry in the completion of a structure.

A list of student, teacher, and electronic resources, evaluation rubrics, extension activities and standards is provided for the implementation of the unit.

(Recommended for Language Arts, Mathematics, Science, Social Studies, and Art, grades 2-4.)

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