



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2001 Volume V: Bridges: Human links and innovations

Bridge: A Hands-On Approach to Learning

Guide for Curriculum Unit 01.05.07
by Liza Bowen

The purpose of this study is to introduce and integrate architecture as a study subject in the regular math school curriculum at the 9th grade level in The Sound School, a public school in New Haven, CT. Students at the end of the program will create a small model of a bridge as the chief goal of their work and study.

This curriculum unit consists of a series of lessons that will teach students the basics of architecture principles. The project presented in this unit describes my experiences in organizing, managing, supervising, and testing this program. To explain the development process of this project, I will present it in three phases as follows:

Phase 1: Background and Program Description

This phase describes the implementation of the project and how the students will be selected. It also describes the contents of the architecture program and how it integrated into the math curriculum.

Phase 2: Implementation

This phase will be a general overview and introduction to architecture principles. Students will be introduced basic principles of architecture and engineering, and an overview of the urban history and social issues of the building of some of the bridges of New York City. Some of these issues will be covered along the social studies teacher at The Sound School.

Phase 3: Execution of the Program

The third phase will explain how the project will be executed. The program will be introduce to the students in two parts. In the first part students will visit some of the bridges in New York City. This will be by bus or by boat, as budget permits. The second part will be dedicated to a hands-on approach. Students will collect all their data learned during the program and then, they will create and built a small-scale model of a bridge.

(Recommended for Mathematics, grade 9.)

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