



Yale-New Haven
Teachers Institute®

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

The Basic Mathematics of Bridges

Guide for Curriculum Unit 01.05.06
by Lewis Spence

This unit intends to provide students of the seventh and eighth grade levels a basic insight into the basic features and structure of bridges. It provides pertinent information regarding four basic forms of bridge types of which some are common in our everyday communities. There are activities that are designed to identify the mathematics associated with the designs and constructions. These activities include measuring of angles, the application of proportionality, practice in linear measurements and a model construct of a bridge.

Due attention is given to the science of stress, the major factor which allows a bridge to function. Hopefully, these activities will awake a consciousness in the students to these massive structures regarding their functions, the efforts employed in the construction, aesthetic effects on the surroundings and intents of those associated with the projects. Two questions that this unit should provoke the students to ask are, what happens to the communities when there is that bridge? And, what happens to the communities when that bridge is absent?

(Recommended for Mathematics, grades 7-8.)

<https://teachersinstitute.yale.edu>

©2019 by the Yale-New Haven Teachers Institute, Yale University

For terms of use visit <https://teachersinstitute.yale.edu/terms>