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Curriculum Units by Fellows of the National Initiative

2008 Volume IV: Bridges: The Art and Science for Creating Community Connections

Bridges: Inspired by Nature

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This unit is designed to spark students' interest in and appreciation of bridges. Through the suggested activities in this unit, students will develop an understanding of the rationale for creating bridges, study bridges in their historical contexts and follow the development of new ideas, techniques, processes, materials and other considerations for the building of bridges. They will become aware of bridges as paths of travel that impact the communities that they connect. Architect and artist Santiago Calatrava will be studied because of the way that he has incorporated the principles of structures found in nature (such as a leaf) into the design of some of his architectural structures. Calatrava will serve as an inspiration for the students. The students will build their own individual bridges that have been inspired by nature, assessing both their own and those of their peers. This unit will culminate with an art exhibit of the students' bridges and their drawn plans on graph paper. Even though this unit has been created for high school 3-D Design art students, it can be adapted for use in other disciplines, particularly those of science and math, and other grade levels.

(Developed for 3-D Design and Art, grades 9-12; recommended for Art, grades 7-12)

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