

Bridge It!

MSCOPE 2006-07

Development Team

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Design bridges and experience engineering at the Museum of Science and Industry

Description

Bridge It! is a hands-on exhibit that invites visitors to experience a design process and to explore the rules of structural engineering through the challenge of building a bridge. Visitors use a collapsible bridge deck, ropes and pieces of wood to build a bridge and test its strength with weights.

The exhibit demonstrates how the three main aspects of structural design – static mechanics laws, material properties and economic considerations can be creatively exploited.



The modular and open-ended nature of the exhibit develops creative thinking and artistic expression.

The challenge of solving an engineering problem helps visitors learn to apply the concepts, principles and processes of technological design – they identify a design problem, consider limitations in available materials, build a simulation, test it, assess the results and make improvements. Visitors gain an applied understanding of pure scientific concepts such as tension, compression and torque forces, and Newton's second law.