

CONSTRUCTIONEERING

PRE-VISIT PAGE (GRADES K-2) 60 minutes

The Arizona Science Center will be visiting your location with all the materials and equipment needed for your group to participate in a program introducing structural and architectural engineering by use of Straws and Connectors.

CONCEPTS

- Different geometric shapes and materials found within a building have different strengths
- The load (total weight) of a building must be supported and balanced at it's center of mass to prevent collapse
- As a structure's height and/or design changes, the center of mass changes
- A building's outer design can have environmental, structural or aesthetic purposes
- All structures are always either in tension or in compression

EXTENSION ACTIVITIES

- Build a house using playing cards
- Construct an arch using only square building blocks
- Build bridges with toothpicks and glue that can hold a textbook without breaking

PROGRAM NEEDS

- **A very large room similar to a gym cleared of tables and chairs**
- **Limited to 30 participants who will work in teams of 3**
- **Class teacher/instructor must remain in room for duration of program**