

## Large Structures

Grades K+ | Students Served: 30

ELEMENTARY



### Essential Questions

What shapes create stronger structures? Why?

What is the difference between a 2-D and a 3-D shape?

What attributes are important for naming shapes?

### Career Connections:

- Architect
- Civil Engineer
- Animation Artist
- Math Teacher

### STEM Connections

#### Science

- Forces
- Materials science
- Equilibrium

#### Technology

- Design processes
- Construction
- Historical perspectives

#### Engineering

- Structural engineering
- Technological design
- Observations and analysis

#### Math

- Regular polygons
- Geometric solids
- Measuring angles/lengths



## Sample Activity

### Building a Greenhouse

#### Challenge

Design and build a greenhouse using the tubes and fuzzy chenilles from the Large Structures Maker Project and covering with cling wrap. Students in upper grades (fourth and fifth) can take learning about photosynthesis to a new level by using sensors to test CO<sub>2</sub> levels inside the greenhouse while in the sun.

#### Discussion

What kind of construction improvements could be made to the greenhouse to make it easier to use? What changes could be made to increase CO<sub>2</sub> levels?