

## **Lesson 17 Alternative Lesson Idea – Attaching long objects securely and using triangles to make a strong structure**

**Note:** Even after completing all of the preceding lessons, students have a strong tendency to attempt to attach long objects by butting them together and using gobs and gobs of tape. Once developed, this lesson will attempt to make students aware that they can make much stronger joints if they overlap the long objects and wrap two pieces of tape around the objects at either end of the overlap.

Ideally, the project will also include a need for using triangles. If using triangles, be sure to include straws or plastic rods that are long enough to function as the hypotenuse of a right triangle.

**Objectives:** Students will learn ways to securely attach long objects using tape or bolts.

Students will understand ways in which they can make their structures more stable by using triangles.

**Project:** Students will use straws or plastic rods and tape to build a structure. Students are allowed to use pieces of tape no longer than one inch for straws or two inches for plastic rods, and they must use no more than two pieces of tape for each joint.