

The Pasta Challenge

Introduction:

Many rather fragile objects that we use in everyday life can actually support a great amount of weight. For example, it is possible for a person to stand on two empty aluminum cans, without crushing them, or to place a great amount of weight on raw eggs, without breaking them. This is possible because of certain laws of physics. In the designed world, the knowledge of these laws is very important. Modern, solid bike frames, for example, may consist of aluminum tubes that are just slightly thicker than an aluminum can. Antenna towers can also reach great heights, even though their frames might look fragile.



Design Challenge:

Working as a member of an engineering design team (teams of 2), your task is to build the highest tower that will support the weight of a golf ball. You have exactly 40 minutes to complete the task.

Design Requirements:

You are only allowed to use the provided materials. Your structure must be portable. When finished, you will be asked to carry the tower to another area of the room.

Materials:

20 spaghetti noodles
40" of tape

Preliminary Design Ideas and Sketches: