Hands-On: **Waste Not, Want Not**

Judge Reads to Team:

1. When the team enters the room, tell them this is a hands-on problem.
2. You will have 6 minutes to solve this problem. You may ask questions after time begins, but time will continue.
3. Your problem is to build a structure that will stand as tall as possible.
4. You will be given materials to build your structure. No other items may be used.
5. You must use every single material given in some way in your structure. For each item not used, there will be a 3 point penalty.
6. There are three squares on the table. Your structure must stand completely within the boundaries of one of these squares. Each square has a value marked on it. The height of your structure will be multiplied by this value. If your structure cannot fit inside any of the squares, it will receive no score.
7. Your team's structure will receive score as follows:
   Each inch in height of your structure will receive 1 point
   Height multiplied by 1, 2, or 3 depending upon which square contains the structure
   Each item used in your structure 1 point
   Each item not used in your structure -3 points
   How creatively the materials are used to build a structure 1-10
   Teamwork 1-20

For Judges (And Coaches) Only:

1. Give teams a variety of items to use for their structure, including a few non-traditional items. For example, you might give each Division I team 3 miniature marshmallows, 4 toothpicks, 2 mailing labels, 5 pieces of spaghetti, 1 soda straw, 1 unsharpened pencil, 1 piece of jewelry, 1 plastic flower, 1spoon (not plastic), and 1 small stuffed animal.
2. Give Division 1: 20 items
3. Give Division II: 25 items (add 2-3 more traditional items, one fairly heavy, such as a large nail; and 2-3 unusual items, one fairly heavy, such as a "C" battery)
4. Give Division III: 35 items (add 4-5 more traditional items, two fairly heavy; and 4-5 unusual items, two fairly heavy)
5. Tape the boundaries of 3 squares on the table as follows:
   Make one square 6" x 6"; label this square #1
   Make one square 4 ½ " x 4 ½ "; label this square #2
   Make one square 3" x 3"; label this square #3
Note: the outside edges of the tape define the vertical plane; be sure the outside edges are the prescribed distances apart.