

# Build a Bridge and Get Over It

A. When the team members enter the room, tell them this is a hands-on problem. They have one minute to select the team members who will solve the problem

**B. JUDGE READS TO TEAMS:** *(Do not read the material in parentheses)*

This is a hands-on problem. You will have 10 minutes, or until the team indicates it is finished and asked to be scored, to discuss, construct and test a solution.

You may talk at any time. You may ask the judges questions at any point, but time will continue.

You will be scored from 1-20 points on the creativity of the solution only if the structure holds weight. If the solution does not hold weight, you will receive 0 points for creativity.

You will receive 1-30 points for teamwork. These points will be awarded whether or not the solution hold weight.

On the table are four (4) sheets of newspaper and a bottle of water. *(Judge indicates items.)* You may use only the materials given to construct your solution.

**YOUR PROBLEM IS: to use the newspaper to hold the weight of the bottle somewhere between the two tables. The weight of the bottle may not rest directly on either the table or the floor. You may not remove any water from the bottle and you may not move either table. No team member may be touching the bottle or the newspaper when time ends or when you ask to be scored. The solution must hold for at least 10 seconds after time is called.**

I repeat, *(judge repeats section in bold, YOUR PROBLEM IS ...)*.

You have 10 minutes to discuss, build and test your solution.

Begin. *(Start timer and allow the team 10 minutes or until they indicate they are finished.)*

## FOR JUDGES ONLY:

Have the following set of materials for each team. (You will need to replenish the newspaper before each new team):

- 4 full sheets of newspaper (i.e. double sheets, with 4 pages of print on each)
- 1 half liter water bottle with a lid approximately  $\frac{3}{4}$  full of water
- 2 tables or large chairs between 30 and 32 inches apart
- Measuring tape or yardstick

Prior to the problem, place the tables or chairs somewhere between 30 and 32 inches apart. This distance should be just a little larger than can be spanned with a single sheet of newspaper. The tables should be a type with legs (not solid islands).

This problem requires a plan prior to starting construction. There are a limited amount of materials and it is not possible to “un-tear” a sheet of paper. As such, this problem has a higher than usual teamwork score.

The problem can be solved in at least four ways. (Teams should think of tearing, twisting, weaving, but do not tell them that).

The team may remove the lid from the bottle as long as they do not remove any water. Do not tell them this unless they ask. Wedging the paper into the bottle as a stopper is probably slightly more creative than just tying it on. If they can figure out a way to rest the bottle on top of the structure unsecured, that is also creative.

The problem is no more difficult with a liter water bottle, although visually it appears to be.

- Abbie Desrosiers