

Spontaneous Problem: Up, Up, & Away

- A. When the team enters the room, tell them, "This is a Hands-On problem. In an actual tournament you would have one minute to select five team members to compete. The others could leave or stay to watch, sitting in seats away from the table. If they stayed in the room, they could not assist in solving the problem and could not talk at ANY time."

Note to Judge: All team members can participate in the Spontaneous Fair.

B. JUDGE READS TO TEAM: (Do not read the material in Parentheses)

1. You will have 8 minutes to discuss the problem and create your solution. The judge will warn you when 2 minutes and when 1 minute remain. You may ask questions and talk to each other at any time.
2. There is a table with two taped squares (*point to squares*). You cannot change the setup.
3. There are materials on the table for you to use to create your solution (*point to materials*). There is a pair of scissors for you to use but it cannot be part of your solution.
4. **Your problem is to build supports to hold this piece of wood as high as possible above the table** (*show wood to team*).
5. **When your solution is finished, it can only touch the table within the taped squares. The wood must touch the supports from both areas. It must not touch anything else.**
6. You will be finished when time ends or when you ask to be scored. Once you are finished, you are not allowed to touch your solution.
7. You will be scored as follows:
 - a. You will receive 10 points if your supports meet requirements and touch the table only within the taped areas.
 - b. You will receive 2 points for each half-inch the wood is supported above the table.
 - c. You will receive 1-15 points for your creative use of the materials.
 - d. You will receive 1-15 points for how well your team works together.

(Repeat items in bold. Begin by saying, "I repeat...")

C. FOR JUDGES ONLY

1. Practice reading the problem out loud before the first group of teams. When reading to the teams, illustrate the problem by pointing to items.
2. Place a Team Copy of the problem in front of each team. They may refer to it during the competition.
3. Use a sturdy table or something similar that is 30" x 60" and tape two 12" squares 14" apart from each other.
4. Before the teams enter the room, place a pair of scissors and a set of the following materials for each team on the side of the table that is not taped (substitutions may be made for spont fair):

1 piece tin foil 6"	1 plastic cup, 10-14oz.	10 wooden toothpicks
4 rubber bands	6 plastic straws	2 pieces of string, 4"
1 cube of clay (~1oz.)	6" masking tape	4 metal paper clips
4 Q-tips	4 pipe cleaners	2 unsharpened pencils
5. **Each team also gets an 18" piece of wood (either balsa or a light dowel) that may be reused throughout the day. Before each round make sure the wood is not damaged. Be sure to place the wood on the table while reading #4 to the team.**
6. Give 8 minutes to solve the problem. Try to remember to give the 2 and 1 minute warnings!
7. The completed supports can extend anywhere but they cannot touch anything other than the taped areas on the table and the wood. The wood cannot touch anything other than the supports. The supports can touch each other, that is, become one structure anywhere as long as they don't touch anything else.
8. Use a **measuring tape** to measure from the table to the highest part of the wood. If the bridge is completed successfully but falls before you score it, do your best to score it for how it was when the team finished. A laser pointer can help with measurement if attached to a level.
9. When judging **creative use of materials**, consider different uses for like items, how many ideas they have about how they can use an item, and originality of the use of the items. When scoring **how well the team works together**, consider the extent that all team members are involved in developing the solution: did the team delegate duties? Share ideas? Did the team members value one another's input?
10. If it is obvious that the team does not understand the problem, provide information to clarify the problem's intent and its limitations. For example, if the supports are resting outside of the taped squares, suggest that they re-read #5. Do not help teams solve the problem, but you should help confused teams understand the problem.

Team Copy

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2. There is a table with two taped squares. You cannot change the setup.
3. There are materials on the table for you to use to create your solution. There is a pair of scissors for you to use but it cannot be part of your solution.
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 - c. You will receive 1-15 points for your creative use of the materials.
 - d. You will receive 1-15 points for how well your team works together.

Scoresheet - Up, Up, & Away

Task Completed (0 OR 10)		
# half-inches in height of structure	_____ x 2	_____
Creative use of materials (1-15)		_____
How well team works together (1-15 points)		_____ +
Total points		_____ =

Comments:

Scoresheet - Up, Up, & Away

Task Completed (0 OR 10)		
# half-inches in height of structure	_____ x 2	_____
Creative use of materials (1-15)		_____
How well team works together (1-15 points)		_____ +
Total points		_____ =

Comments:

Scoresheet - Up, Up, & Away

Task Completed (0 OR 10)		
# half-inches in height of structure	_____ x 2	_____
Creative use of materials (1-15)		_____
How well team works together (1-15 points)		_____ +
Total points		_____ =

Comments: