

## ADVANCED LEVEL

# THE CLOCK IS TICKING

### FOCUS

Innovation and design process, technical design and construction, teamwork.

### CHALLENGE

Your TASK is to build 3 freestanding structures as quickly as possible. For the purpose of this Challenge, "freestanding" means that the structure is NOT attached to anything.

### TIME

You will have up to 6 minutes to use your IMAGINATION and PROBLEM SOLVING SKILLS to build your structures.

### SETUP

In the center of the room is a table. On the table are 3 taped areas. There is also a table with materials.

### PROCEDURE

Use the materials on the table to build 3 structures. The bottom of each structure must be completely within a different taped area. Structures may be built in any order but must be built one at a time.

- Structure One must be at least 18in (45cm) tall.
- Structure Two must hold a tennis ball at least 6in (15cm) above the table.
- Structure Three must be at least 12in (30cm) tall and 12in (30cm) wide.

When you have completed one of the structures, tell the Appraisers. Time will briefly stop as the Appraisers verify that your structure meets one of the specified criteria. After the Appraisers have verified your structure, you may move to a different taped area and begin building a different structure. If your structure is NOT verified, you may continue working on that structure or begin building a different structure. However, if you choose to begin building a new structure, you will not be able to try to build the previous structure again. Materials may be reused. You will want to complete this Challenge as quickly as possible, for you will receive additional points for not using the entire 6 minutes.

### MATERIALS

- 1 Piece of Paper
- 2 Index Cards
- 4 Straws
- 1 Pencil
- 4 Paper Clips
- 4 Mailing Labels

Your team will also have a yardstick (meterstick) and a tennis ball, but these may NOT be damaged and may NOT be part of your structures.

### SCORING

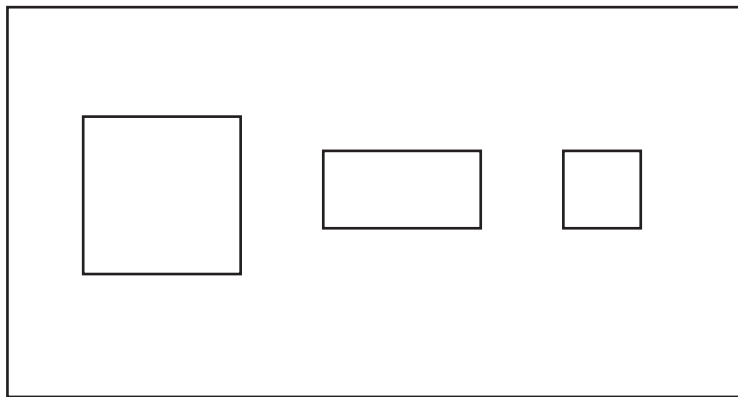
- A. 15 points (45 points maximum) for each structure successfully completed within 6 minutes.
- B. 5 points (35 points maximum) for each full half-minute remaining when you have completed the Challenge or wish to stop time.
- C. Up to 20 points for how well your team works together.

# THE CLOCK IS TICKING (CONT'D)

## FOR APPRAISERS ONLY

1. The setup consists of table with 3 taped areas. One of the areas is 12in X 12in (30cm X 30cm). One of the areas is 12in X 6in (30cm X 15cm). The third area is 4in X 4in (10cm X 10cm). (These measurements are all inside dimensions.) There is a 2nd table with materials, a tennis ball and a yardstick (meterstick)
2. If the team has stopped time but has NOT completed a valid structure, the team should be told that they can go back and continue working on the same structure or begin building a new structure. However, if they choose to begin building a new structure, they will not be able to try to build the previous structure again.

**TABLE 1  
TAPED AREAS**



**TABLE 2  
MATERIALS, TENNIS BALL AND YARDSTICK (METERSTICK)**

