# PROBLEM SOLVING JANUARY CHALLENGE

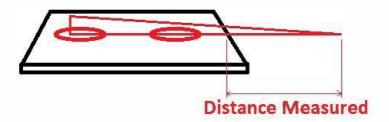


### **PROBLEM STATEMENT**

Using only the materials listed, design and construct a solution that will extend (cantilever) as far as possible over the edge of the table. Two paper plates will serve as piers and are the only portion of the solution that can contact the table surface. The evaluation criteria will be the greatest distance over the edge of the table surface.

## **MATERIALS**

- · 2 paper plates
- · 20 craft sticks
- · 10 drinking straws
- 3 pieces of 8.5" x 11" color copier paper



### **GUIDELINES**

- The final solution must contain <u>both</u> paper plates and a combination of craft sticks, drinking straws, and/or the pieces of color copier paper. This paper cannot be a part of the solution.
- Items in your toolbox may be used to construct the solution, but the solution can only contain the provided materials (listed above), adhesive(s), and masking tape. The cardboard roll center of the masking tape cannot be a part of the solution.
- The paper plates cannot contact each other, and they are the only portion of the solution that can contact the top of the table surface. The team determines of the paper plates are faced up or faced down in the solution. Plates cannot be taped or adhered to the table surface
- If any portion of the solution contacts any vertical surface of the table, any other object or item on the floor (chair, toolbox, etc.), or the floor surface surrounding the table, the distance will be recorded as a zero (0).
- If the portion of the solution that extends over the edge drops below the horizontal plane of the top table surface, the distance is measured horizontally from the top of the table surface.

## **EVALUATION**

Once your team has completed the structure, bring the solution to the testing table. The team will position the solution on the testing table with the solution extending as far over the edge as possible and then must remain in place for 20 seconds while the judge measures the portion of the solution that extends horizontally over the table edge.

JUDGE WILL WRITE BELOW THIS	LINE
Team Number:	Distance of solution over the table edge (in inches):
	Time evaluated: