

# DUCT TAPE CHALLENGE 2014 - FOR EVENT LEADER

**MATERIALS:** Each team gets the following:

- 1 roll of new duct tape (Shurtape is providing this, and will be sent to your tournament)
- 3 sheets of copy paper
- 1 large paperclip

Teams may also bring something to write with, a stopwatch, 1 scissors, and 1 ruler

There is one extra set of materials for if a team discovers they are missing something, or something is damaged. It is THEIR responsibility to check materials before the competition begins. Their instruction sheet tells them to do so.

Teams also need a copy of the instruction sheet

You need stopwatches (to time the 30 minute build time and the parachute descent time), and a scale (to weigh the tape on the roll). You also need a few golfballs with a screw eye or something similar in them.

**TASK:** Teams have 30 minutes to build a parachute that will slow the descent of a golf ball as much as possible. The golf ball has a hook that must attach to the paperclip they have been provided.

**SCORING:** The parachute that takes the longest to reach the ground wins.

**TIEBREAKER:** The team with the least amount of duct tape used (as determined by weight of tape still on the roll) wins the tie. You will need to weigh this before they go to test their parachute and record it on their scoresheets. The mass of a roll of duct tape can vary up to 9 grams, if the weights of the new rolls were not pre-written on the inside of the rolls for you, do this when you're setting up the event so you can subtract the final weight from the original weight.

**TIMING:** Find the tallest staircase or window or whatever you can find, and clear the area below of spectators. It is best to use 3 stopwatches, and record the middle time (unless you know one stopwatch mis-timed, in which case average the two remaining watches).

Make sure teams aren't modifying their parachutes while they wait to drop. Tell them if they do you will disqualify them.

To make your own golf ball: Drill a small hole in a golf ball (just smaller than the screw on your screw eye) and screw in the screw eye. You might need pliers or to stick a pencil through the loop for better leverage if you can't screw it in all the way.

# Duct Tape Challenge 2014

School \_\_\_\_\_ Varsity or JV1 JV2 JV3 JV4

Names: \_\_\_\_\_ , \_\_\_\_\_



**You are responsible for making sure you have all the materials and that none are damaged. DO THIS NOW!**

1 roll of duct tape

3 sheets of copy paper

1 large paperclip



**TASK:** Build a parachute that will slow the descent of a golf ball as much as possible. The golf ball has a hook that must attach to the paperclip you have been provided.

**SCORING:** The parachute that takes the longest to reach the ground wins.

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Time (to nearest .01): \_\_\_\_\_ seconds

Mass of tape: \_\_\_\_\_ minus \_\_\_\_\_ = \_\_\_\_\_ used (to .1g):  
initial remaining (tiebreaker= less wins)

FINAL SCORE: \_\_\_\_\_

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