***Duct Tape Challenges***

***Duct Tape Allocations***

1. Electric Powered Rover – 3 rolls (or 30 yards) of tape
2. Step Stool – 5 rolls (or 50 yards) of tape
3. Boat – 4 rolls (or 40 yards) of tape

***CHALLENGE 1: Electric Powered Rover***

**Challenge Materials ∙** 3 rolls of tape (or 30 yards) **∙** 1 electric motor **∙** 2 AA batteries **∙** 1 AA battery holder

**Challenge Rules** ***CAN*** use the cardboard rolls anywhere on the rover

* Rover must be able to travel the longest distance without aid from team

**Criteria for Judging** Points awarded (1-10) for design and distance travelled (in a straight line)

***CHALLENGE 2: Step Stool***

**Challenge Materials** 5 rolls of tape (or 50 yards)

**Challenge Rules *CAN*** use up to ***TWO*** (but no more) cardboard rolls anywhere on the stool

* Must have “legs”
* Must hold at least one member of your team
* Must be at least 6 inches off the ground
* Must have at least 2 steps

**Criteria for Judging** Points awarded (1-10) for design, how many team members can stand on it at one time. If you can get all of your team members on the stool at once you will get 1 additional point for every member (example 10 points for holding everyone and 1 additional point more for each member of the team).

***CHALLENGE 3: Boat***

**Challenge Materials** 4 rolls of tape (or 40 yards)

**Challenge Materials *CANNOT*** use the cardboard roll anywhere on the boat.

* The boat cannot be any larger than 12” in any one direction (on an XYZ axis)
* The boat must be able to float on water
* The boat must be able to hold weight (added by the advisors)

**Challenge Materials** Points awarded (1-10) for your design, weight held and time afloat. Once a boat has been proven to hold the maximum weight, it will be judged on how long it can stay afloat with the weight. The boat that can stay afloat with the maximum weight for the longest period of time gets the maximum amount of points.