

High School Trebuchet Design Challenge

PROBLEM:

Design and construct a device that fits the description of a trebuchet. The device will be used to launch a projectile of choice *at an 18"x18" target at an unknown distance specified on testing day.*

SPECIFICATIONS:

1. Schools may enter and register a maximum of 3 teams
2. All catapults must fit within the build dimension of 36"x36"x36." This includes any point of release, cocked or un-cocked (the sling does not count towards these measurements)
3. The maximum length sling that may be used is 24"
4. The trebuchet must include at least 2 wheels that touch the ground
5. Students will be given 3 minutes to complete a total of 5 shots at the given target
6. Students must launch from the taped off start line for each throw. Moving their project forward or back to try to adjust for distance will not be allowed
7. Counter weights used to launch the testing device need to be safely attached and secured as to not damage the gym floor
8. Students may add and/or remove counter weights while performing their final testing
9. Students may not borrow or add additional objects from other schools
10. All materials used for the project must be deemed safe by the coordinators at the competition
11. Students must bring their own throwing projectiles the day of competition, however, no projectiles can be deemed damaging by the coordinators (golf balls, marbles, etc.)
12. *The face of the target will be an 18"x18" platform set at a 45 degree angle, and measures approximately 12" off of the ground to the bottom of the target*
13. *Point scoring will be as follows....target hit on*
 - a) *Shot 1 = 5 points*
 - b) *Shot 2 = 4 points*
 - c) *Shot 3 = 3 points*
 - d) *Shot 4 = 2 points*
 - e) *Shot 5 = 1 point*
14. *Points are only scored if the projectile hits the face of the target during its initial launch. Hitting the target legs does not result in points awarded, nor does bouncing off of the ground or wall.*
15. *The final distance of the target will be unknown until the day of competition, but it will be set between a distance of 30-40 feet.*

Please contact Greg Keenan at gpkeen@yorkcsd.org with any questions