



HS Trebuchet Design

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 the given set of targets*.

SPECIFICATIONS:

1. There may be only one trebuchet structure per team. Teams may consist of 1 or 2 people.
2. Schools may enter and register a maximum of 5 teams
3. No projectiles can bounce or be deemed damaging by the coordinators (golf balls, marbles, etc.)
4. There will be a taped off 24"x24" starting box *on a rug*. Students must shoot from within this starting box.
5. It is up to the team of students to decide how they are going to secure their device. However, the base of the catapult must remain in the 24"x24" starting box
6. Counter weights used to launch the testing device need to be safely attached and secured
7. Students may add and/or remove counter weights while performing their final testing
8. Students may not borrow or add additional objects from other schools
9. All materials used for the project must be deemed safe by the coordinators at the competition
10. All catapult bases (where the trebuchet meets and rests on the ground) must fit within a 24" X 24" start box
11. The overall height of the trebuchet can not be more than 36" at any given time, at any point of release, loaded or unloaded
12. The overall width of the trebuchet can not be more than 36" at any given time, at any point of release, loaded or unloaded
13. The maximum length sling that may be used is 24"
14. Students are given 2 minutes to complete a total of 5 final shots at the given targets.
15. *All targets are set at a 45 degree angle and measure approximately 12" off of the ground to the bottom of the target*
 - a) *target 1 is 12"x12" and placed out at 20' → target hit is worth 3 pts*
 - b) *target 2 is 18"x18" and placed out at 30' → target hit is worth 7 pts*
 - c) *target 3 is 24"x24" and placed out at 40' → target hit is worth 10 pt*
16. *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.*

**Italicized writing means new rule change for 2017.*

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

Target Next Page



PLAN DOCUMENT

- First Target (Small) : 12"x12" - 20' from Trebuchet
- Second Target (Medium) : 18"x18" - 30' from Trebuchet
- Third Target (Large) : 24"x24" - 40' from Trebuchet