



Pumpkin Slings

AT PICATINNY ARSENAL

Contest Entry Form

Friday, October 20, 2017

(rain date Friday, October 27)

PICATINNY ARSENAL

Route 15 North, Wharton, NJ 07885

<http://www.pica.army.mil/Picatinny>

School: _____

Team Name for Publishing: _____

Name of Adult In Charge: _____

Mailing Address _____

Phone: Home: _____ Work: _____

Email: _____

_____ Yes, we have obtained Board of Education approval

Name of Administrative Contact _____

Our Team represents (check one): _____ Elementary / Junior High _____ High School

_____ Estimated Number Attending (10 youth and 2 chaperones limit)

Please indicate your Class (see descriptions in section C.) – Please check all that apply. This will help us determine placing more quickly. We reserve the right to merge classes based on participation.

_____ Trebuchet _____ Floating Arm Trebuchet _____ Catapult

Arm Length _____ Rough Dimensions _____

Designed for _____ pounds maximum counterweight

Prizes will be awarded for greatest distance in each class, best of 3 attempts. The grand prize trophy will be awarded for the overall distance winner.

Information about your team for our website and PR.

We encourage you to **email photos of the teams working** on the project to info@pumpkinsling.com.

Information about your device

Describe your machine type (ie. catapult, ballista, trebuchet, floating arm trebuchet, other)

Arm Length: _____

Describe your cocking system and release.

List All Team Members. (This list will be used to determine scholarship eligibility in future)

All team members and chaperones in pit must have waivers on file prior to any launch activity. We reserve the right to limit the number of members in the pit. Teams may alternate members in pit between throws.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Describe safety precautions reviewed with team during practices

Please return entry forms to:
Pumpkin Sling, 231 Brainards Road, Phillipsburg NJ 08865

PLEASE NOTE: ONLY US CITIZENS WILL BE ALLOWED AT PICATINNY ARSENAL. All attendees will be required to submit ID prior to entry. All school groups should arrive all together as a group in one vehicle to expedite entry.

LOCATION
Picatinny Arsenal, Route 15 North, Wharton, NJ 07885
Directions and details for entry will be emailed to you upon registration.



RULES AND REGULATIONS:

1. Design of Machine

The machine can be of any design as long as it is constructed of materials designed for the weights or stresses that will be put on them, and which allows it to operate in a safe manner. Materials should be rated for the job they are asked to perform. The machines will be inspected prior to the competition by a panel of judges who will determine compliance with the guidelines. No motors, engines, pneumatic assist, compressed air, steam or any other compressed gas, hydraulics or ignitable substances may be used or attached in any way.

The machine must be fired at least once by team prior to attendance. Please keep Firing Log and bring with you the day of competition.

A. General Rules

1. Each team will have three shots, one shot in each round of the completion. Practice shots may be allowed at the discretion of the organizers.
2. Pumpkin will be supplied by organizers and will weigh between 2-5 pounds.
3. All pumpkins fired must remain intact until they impact the ground/water to count for an official measurement. Distances will be measured from the pumpkin's position just before the shot is triggered to the point of first impact.
4. Pumpkins may not be altered in any way, except for shortening or removing the stem.
5. If any part of the machine is thrown forward so that it lands in front of the rest of the machine, that shot will be disqualified.
6. No wadding is permitted (including bean chaff, straw, foam, metal, or any other object.)
7. No explosives or internal combustion engines are allowed.
8. The Pumpkin Sling organizers reserve the right to combine any classes if there is a lack of participation, as determined by the organizers. All classes must have three (3) entries in that class to open it to competition. Each machine may enter only one (1) class.

9. Machines may be cocked manually, using a winch, block and tackle, or similar mechanism, or using an electric winch. Electric winches are highly recommended, particularly for larger, more powerful machines. (See winch battery notes in Safety rules).
10. Teams may not preload. Each team must wait until notified by the pit boss, at which time they have 5 minutes to cock the machine, load the pumpkin, and fire.
11. If you are disqualified in any round of the competition for breaking General or Safety rules, you will forfeit the distance for that round. A forfeited shot may not be redone at a later time.
12. Picatinny officials will have final say in what is deemed safe and acceptable.

B. Safety Rules

Precautions must be taken at all times ensure the safety of your team members as well as the safety of those in the pits next to you. The staff is here to help you stay safe, so please help them to help you by communicating with them changes that might impact safe operation of your machine. Don't assume that they understand your equipment as well as you do. If the judges determine that a given machine is not competing and launching in a safe manner as outlined in the rules below, they will be eliminated from competition. No exceptions.

If you are not certain that your machine conforms to the safety requirements below, please contact the safety committee at info@pumpkinsling.com with a description and photos of your machine.

1. All persons present in the pits during competition must sign a Liability Release Form. Team members under age 18 must have their form signed by a parent or guardian.
2. All team members under the age of 18 must be under adult supervision at all times while in the pits.
3. Hard hats and safety goggles, provided by the team, must be worn at all times by members in the pit area surrounding the machine. The use of gloves by members handling ropes or cables is strongly encouraged in order to minimize the chance of injury.
4. All counterweights must be installed onto the machine before the arm is cocked into the firing position. Counterweights must be installed by a team member or members in a safe manner. Teams needing to use ladders will use those supplied by Picatinny.
5. It is highly recommended that winches have a safety cage that would protect the operator from injury in the event that the winch cable fails. Machines that cannot be cocked in such a way as to insure operator safety may not be allowed to throw.

6. All machines must have a trigger mechanism that causes the machine to fire smoothly. If your trigger requires so much effort that it causes the entire machine to rock back and forth or otherwise constitute a safety issue, it will not be permitted.

Specifically, a triple ring release system such as the one shown here (https://en.wikipedia.org/wiki/3-ring_release_system) is not permitted, as they have proved to be unreliable under high loads.

For a machine in which the throwing end of the arm is held in place prior to firing, teams are strongly encouraged to use a snap shackle similar to the one found here:

http://www.shopsoundboatworks.com/ro215fibasns.html?cmp=googleproducts&kw=ro215fibasns&gclid=Cj0KEQiAtqHEBRCNrdC6rYq9_oYBEiQAejvRl8E6nmXRMEEP7h4LQ2wgAgeIkku6G5bcy15i1My0Rk4aAmAR8P8HAQ

7. All machines must have a safety mechanism to prevent premature release before they are loaded and ready to fire. This mechanism should be designed so that it prevents the throwing mechanism from starting a throwing motion if the trigger is inadvertently activated.
8. All members of the team must be at least 10 feet away from the machine when it is fired. The release of the safety mechanism is not subject to the 10-foot requirement.
9. If an electric winch is used, please make sure that your battery will last for the duration of the competition, or that you bring a spare. Teams will not be permitted to recharge batteries by hooking them to a motor vehicle.
10. All cables and cable clamps must be sized and installed properly. If you're not sure about the correct way to install the clamps, look at this:
<http://www.ropecentre.co.nz/general-hardware/wire-rope-grips.html>
11. All machines will be inspected by the safety committee. Any machine found to have structural defects (load beams, firing pins, any load bearing members, supports or support subsystems) will be suspended from the competition until repairs are completed and re-inspected to the satisfaction of the committee.
12. No machine may fire without the approval of the pit boss, or without sounding a horn or other warning device just prior to release.
13. Picatinny officials will have final say in what is deemed safe and acceptable.

C. Machine Class Information

Machines must be loaded and released by youths between the ages of 11 and 17, with adult supervision.

Trebuchet (arm has fixed axis of rotation)

1. All energy used to launch the pumpkin after release shall come from the potential energy stored in an elevated mass.
2. A mechanical device such as a block and tackle or winch may be used to cock the machine. Electric winches are also permitted.
3. Machines must conform to all General and Safety rules.

Floating Arm Trebuchet (arm has movable axis of rotation)

1. All energy used to launch the pumpkin after release shall come from the potential energy stored in an elevated mass.
2. A mechanical device such as a block and tackle or winch may be used to cock the machine. Electric winches are also permitted.
3. The throwing arm may have a maximum length of 6 feet. This length is measured from the center of arm's rotational axis to the point where the fixed sling line attaches to the arm. The position of the rotational axis that yields the longest arm measurement will apply. In the case of a machine without a sling, arm length is measured from the rotational axis to the center of the projectile in the ready to launch position.
4. Machines must conform to all General and Safety rules.

Catapult

1. All or some of the energy used to launch the pumpkin after release shall come from the potential energy stored in an elastic material. This class includes machines such as torsion catapults and ballistae.
2. A mechanical device such as a block and tackle or winch may be used to cock the machine. Electric winches are also permitted.
3. The throwing arm may have a maximum length of 6 feet. This length is measured from the center of arm's rotational axis to the point where the fixed sling line attaches to the arm. In the case of a floating arm machine, the rotational axis that yields the longest arm measurement will apply. In the case of a machine without a sling, arm length is measured from the rotational axis to the center of the projectile in the ready to launch position.
4. Machines must conform to all General and Safety rules.

Restrictions

No Alcohol

No Pets. Registered medical service animals only.

All those entering Picatinny Arsenal base must be US Citizens

Proper Photo ID must be presented at time of entry.

Only one machine per school.

Teams should plan on arriving early if their machine takes a fair amount of set up. For the safety of all teams, we cannot start shooting until everyone is ready and a team cannot leave prior to last shot of last machine. We anticipate between 2-2:30 pm, based on start time.