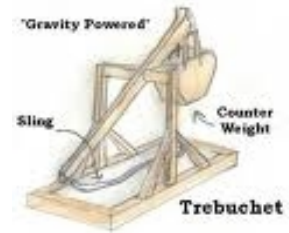


2010 Krazy Acres Pumpkin Launch

v1.1

Hello,

We would like to present to you a challenge. This challenge involves a lot of creativity, research, math, engineering, building with a variety of materials, and testing to see if your machine performs as intended during competition. We have tried to leave the door open as much as possible for creativity and originality of launcher design. If this sounds like something you would be interested in please read on.



A copy of the rules should be attached, rules will be listed on Krazy Acres website <http://www.krazyacres.net> . Check the website regularly for updated rules.

For more information, clarification, questions please contact Russ Oakley at 616-902-0704.

Below, is a list of web sites that are great sources for information to get you started.

<http://worldchampionhipunkinchunkin.com/>

<http://www.medieval-castle-siege-weapons.com/medieval-trebuchets.html>

<http://www.trebuchet.com>

<http://thehurl.wikidot.com>

<http://oaklandballistics.com/links2.html>

<http://www.middle-ages.org.uk/siege-weapons.htm>

http://www.redstoneprojects.com/trebuchetstore/build_a_catapult.html

The internet is a wonderful tool for research. I hope you accept this challenge. I have found this to be a great learning experience.

Russ Oakley

616-902-0704

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Location: Krazy Acres (on M21 approx. 2 miles west of Muir, Michigan)

When: October 23, 2010, starting at 10am

Entry fee: Youth: \$15 Adult: \$25 Prizes will be awarded!

Contact Russ Oakley 616-902-0704 for questions or comments

Challenge:

The challenge is to build a machine that can launch an 8-10lb pumpkin.

Youth: Only trebuchets are allowed. Prizes will be awarded for both distance and accuracy.

Adult: Any device that meets the criteria list below for "The machine". Trophy will be awarded only for distance.

The machine:

All machines must have a secondary safety mechanism separate from the primary firing mechanism to prevent accidental firing and must comply with all safety requirements.

You may not use explosives, flammable mixtures, compressed gas or air, etc. used in any way for firing the machine.

Motors, pumps may be used to setup and in cocking your machine only and may not be used to throw the projectile.

Teams should have a sign with the team name and machine name.

The projectiles:

Pumpkins between 8 and 10 lbs.

Pumpkin must leave the machine intact to be counted as a throw, and will not be allowed to throw again till next round.

Pumpkins may not be covered, padded, wadded, wrapped, etc. for the launch.

Pumpkins used for the competition will be weighed and inspected by the pit boss(s).

Pumpkins are not to be altered in any way, excluding inspection markings. All pumpkins must be in their natural state.

Only inspected pumpkins may be used for the competition.

Pumpkins will be furnished, but you may bring your own.

Only projectiles going in a forward direction will be measured for distance

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Safety:

All team members in the pit will be required to sign a "liability agreement" and wear hard hats.

Teams should consider the safety risk of the team and those around their machine at all times.

Teams should have a way to announce launch such as a countdown to launch as part of the launch sequence.

Common Sense Rule: All machines must be capable of operating in a safe manner in order to compete.

The pit boss(s) has the right to stop a team at any time if a safety concern arises.

Competition Day:

Your team must check in with the pit boss(s) prior to beginning setup. If your machine can not be setup the morning of the competition, special arrangements can be made.

Approximately thirty minutes before the competition there will be a meeting for team captains with the pit boss(s). If you have any questions for the pit boss(s), they will be answered at that time. Team firing order will be determined by drawing numbers out of a hat.

You will need to pick the pumpkins your team will use for competition and have them inspected by the pit boss(s), at least 10 minutes prior to the competition starting.

Teams will have three competitive throws. Throws will happen as determined by the firing order. After firing you may cock your machine while other teams commence firing.

Launches will be measured from the front of your machine. Once that point is determined and marked, machines may not be moved unless as a result of launching at which point every effort will be made to return the machine back to the original position.

Teams will be given 10 minutes from being called to fire their machines. The pit boss(s) will determine when the 10 minutes begins. The pit boss(s) will move to the next team if you are unable to fire your machine in the given time and you will forfeit that round!

The firing order will determine which team starts the competition. Each team will fire once, their distance will be measured. Only pumpkins thrown in a forward direction will be measured. The distance will be announced, the pit boss(s) will move to the next team.

At the end of the competitive round, do not cock your machine, spectators will be allowed to come into the pit and ask the teams questions about their machines (approx. 30 minutes).

If time permits, free throws may be made after the spectators have returned to the safety zone.

Things to consider

- 1. Safety, safety, safety.** Never forget the forces you are dealing with are great. Design the unit with safety in mind. Make sure when you're building, testing, and transporting that safety should be the most important thing.
- 2. Start designing and building early.** We would recommend starting to design a machine in March. Building should start as early as possible. June is not too early.
- 3. Practice, practice, practice.** Practice well ahead of the competition. There will always be technical difficulties with every machine, especially with a new machine. It will take many throws to "tweak" and "tune" for optimum performance. Don't think you can tune your machine the weekend before the competition.
- 4. Bring extra parts.** Breakage of a critical part can shut you out of the competition. It can be very disappointing to be sidelined because of technical difficulties.
- 5. Don't "go for broke" on your first throw.** Do exactly what has worked well in your practice sessions. Once you've got one good throw under your belt, then you can try more risky moves.
- 6. Don't try a radical move.** Most radical changes do not produce a greater distance. Radical changes could lead to breakage of your machine, pumpkin pie, or a throw backwards. Make only incremental changes in your machine.
- 7. Make a checklist.** It's extremely easy to make a mistake, especially if the tasks must be done in the *right* sequence, for example, cocking the machine or firing. A checklist will eliminate most errors.
- 8. "Keep It Simple!" K.I.S.** Having an extremely complicated machine and release mechanism can lead to unreliable performance. Complexity and reliability are two incompatible parameters! Enough things can go wrong with a simple machine, so why complicate things more.

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Entry Form

Please check: Adult Entry: _____ (\$25/team)

Youth Entry: _____ (\$15/team - team must be under 18 on competition day, trebs only)

Team Name: _____

Machine Name: _____

Team Captains Name: _____

Street Address: _____

City, State, ZIP: _____

Home Phone Number: _____

Work Phone Number: _____

Email: _____

Mail this **ENTRY FORM** and **ENTRY FEE** to: 2010 Krazy Acres Pumpkin Launch
Russ Oakley
1991 W David Hwy.
Ionia, MI 48846