



## 2017 Pumpkin Chunkin' Information

Event Date: Saturday, Nov. 4<sup>th</sup>, 2017

Event Location: Greene Street Field

(751 Gadsden St Columbia, SC 29201)



**\*\*\*Please be sure to make sure all participants sign a waiver and pay close attention to the safety and firing requirements.\*\*\***

### Trebuchet Requirements:

- Without the arm, the trebuchet should measure no more than 3 feet wide x 4 feet long x 5 feet tall.
- The counterweight can be a maximum of 100 lbs. Different counterweight weights can be used for the distance and accuracy portions if desired, but neither can exceed 100 lbs.
- During the scored rounds, 2lb water balls will be launched.
- There will be a bonus round for launching small pumpkins

### Safety and Firing

- The trebuchet is required to have a safety that can be disengaged from behind the firing line 10 feet away.
- The trebuchet must also be fired from 10 feet away.

### Scoring

- **Distance (25%):** The furthest launch of the distance competition will be awarded the full 25% of points. All other launch distances will be scored as compared to the furthest launch. For example, if the furthest launch is 45 yards, that team will be awarded the full 25%, and a team with a launch of 37 yards will be awarded 20.5%  $[(37/45)*(25\%)]$ .
- **Accuracy (25%):** A target will be placed 50 yards directly in front of the trebuchet and points will be awarded based on the proximity of pumpkin ball landing to the target. One point will be deducted for each yard beyond the target.
- **Understanding (50%):** A team of judges including USC Engineering students and professors will ask students from each team questions regarding their design/construction. Points will be awarded based on the students' understanding of and rationale behind their designs.

### Prizes

- \$250 for first place, \$150 for second place, and \$100 for third place. All participating teams/students will receive certificates. Prize money will be given to school science/engineering programs for students.



## Information for Scoring/Measurement

There will be three total launches and two teams will fire at a time. Each team will have a group of scorers/measurers that will mark and record their distances. Each launch is comprised of one practice throw and two official throws. Only the official throw with the most accurate or farthest launch will be recorded for points.

Prior to competition:

- Student groups will aid in judging with faculty based on rubric

Group of scorers/measurers:

- Watch where the ball hits and mark it
- Measure and record distance on sheet
- Give sheet to person at the scoreboard

Scoreboarder:

- Record scores of judging and launches on white scoreboard

### Launches:

1. Accuracy: to the 50-yard line

- Measure distance from 50 yd line, each yard off is minus one point

2. Distance:

- Longest distance of 2 tries is recorded

3. Pumpkins:

- Place tarps where the pumpkins “should’ land



Score Sheet:

Team Name: \_\_\_\_\_ Advisor Name: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_

	Accuracy Challenge	Points (Max 25)
Distance From Target	50 Yards	
Practice 1		
Official Throw 1*		
Official Throw 2*		

	Distance	Points/Percentage (Max 25)
Practice 1		
Official Throw 1*		
Official Throw 2*		

\*Best official throw counts

Engineering Process Evaluation (Max 50 Points)				
	20 pt.	10 pt.	5 pt.	0 pt.
Creativity		Have a uniform theme or building design that was incorporated throughout the trebuchet	Only put effort and design details into certain parts of the trebuchet	Same design from last year
Understanding	When judges walk around and asked students questions, all team members have a complete understanding of what went into making the trebuchet and why they designed it the way they did.	Has understanding about the build of the trebuchet but lacks understanding of the reasoning behind the design	Only able to answer the most basic questions about the trebuchet	Did not understand the way the trebuchet works when asked
Teamwork/ Safety	At competition, the team works together and gives equal opportunity to all of its members.	The team has a few people who aren't participating or contributing.	Only have one or two members contributing to the machine	No teamwork/collaboration between students or the mentor is doing the launching
Total:				



## Agenda

- 8:00 – 9:00** Teams check-in and sign waivers; begin set up
- 9:00 – 10:00** Mentors and faculty make rounds; faculty judges designs and asks concept questions
- 10:00 – 10:30** Welcome and warm-up/testing launches
- 10:30 – 11:15** Lunch
- 11:15 – 12:00 \*** First Launch - Accuracy (50 yards)
- 12:00 – 12:45 \*** Second Launch - Distance
- 12:45 – 1:15 \*** Scoring; pumpkin launching for fun
- 1:15 – 2:00 \*** Winners announced/ Prizes given
- Times are tentative and are subject to change based on how long it takes to get through each team's launches.