

RUBBER BAND LAUNCH

1. **DESCRIPTION:** Prior to the tournament, teams will design and construct a device to launch a rubber band at a target that is placed within a given range, the exact distance won't be announced until after impound.

2. **TEAM OF UP TO:** 2

3. **MAXIMUM TIME:** 10 minutes

4. **TEAMS:** Teams must bring their device, at least 3 rubber bands, any data tables or tools necessary to calibrate the device, and safety glasses.

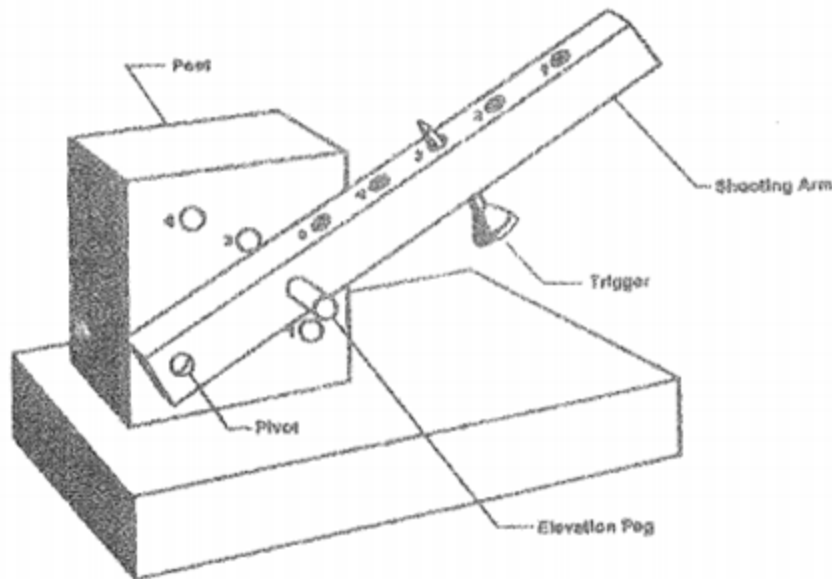
5. **EVENT LEADERS:** Event leaders will provide the score sheets, tape measures, targets, and any other materials needed for the event.

6. **SAFETY REQUIREMENT:** Teams must wear safety glasses with side shields throughout the event.

7. **IMPOUND:** Yes. Device should be labeled with team name and level (Varsity, JV1, JV2, etc) and turned in during the morning impound. Devices that are not impounded will be scored in Tier 2.

8. **THE COMPETITION:**

a. Teams are to design, construct and bring to the tournament an adjustable angle launching device similar to the one below.

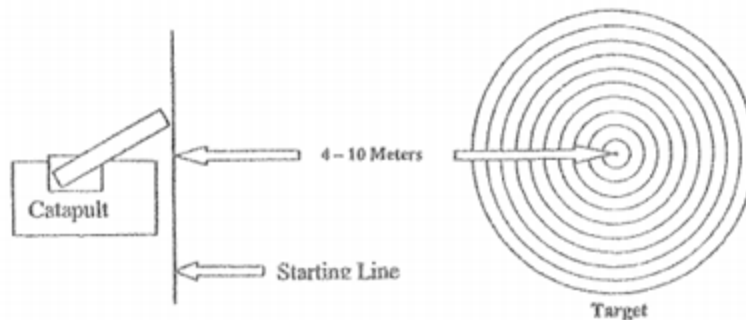


b. Launchers are NOT limited to the above design and may be of any material, with as few or as many launch positions as desired to hit a target. Teams may have an unlimited number of base and shooting arm positions.

c. Assembled launchers must fit under a box of dimensions: 45x28x25cm.

d. The device must be able to remain at the starting position in the ready-to-launch configuration without being touched until activated by the removal of a "trigger".

- e. Data should be collected and recorded in a data table which includes at least 3 of the following parameters for at least 10 launches: Rubber band size, launch angle, distance traveled, amount rubber band was stretched, (not sure what else??)
- f. The target consists of three to twenty concentric rings with a dot at their center. The target will have a four meter diameter. The center ring will have a 20 cm diameter, and each subsequent ring have 10 cm between them. The center of the target will be located between four (4) and ten (10) meters from the starting line.



- g. No part of the launcher may extend beyond the starting line before, during, or after the launch.
- h. Teams may attempt up to 3 launches with 3 rubber bands. Teams wishing to use all 3 launches must bring at least 3 rubber bands. They will not be allowed to re-use a rubber band that has already been launched.
- i. Rubber band maximum size limit: 22 cm. (length, not circumference) measured with the rubber band suspended freely, under only its own weight, from a nail or similar object. Rubber bands may not be knotted, linked together or attached to any other material.

9. **SCORING:**

- a. Teams will be ranked in tiers as follows:
 - i. Tier 1: Teams with no violations
 - ii. Tier 2: Teams that violate a rule under 8. The competition.
 - iii. Tier 3: Teams that miss impound.
- b. The score for each launch will be determined by the smallest ring (highest number) any part of a rubber band is touching or inside of when it comes to rest. The smallest ring is worth twenty (20) points, with each successively larger ring worth 1 less point.
- c. A bullseye "X" will be awarded for all shots where any part of the rubber band is touching or contains the center dot.
- d. 10 points will be awarded for a data table with at least 3 parameters for 10 or more different launches. There is no partial credit.
- e. The final score is the sum of the individual scores for all three launches plus the data table points.
- f. Highest score in the highest tier wins.
- g. Ties will be broken in favor of the team with best individual shot, then by the second best, then 3rd best