

## CATAPULT CONTEST

### Objective:

Build a catapult that will launch a tennis ball and land it closest to a 1 square meter target area 15 meters (49 feet) away from the launch site.

### Rules:

- Work in teams of three students. Sign up your team.
- Use any mechanical source of force (springs, elastic, etc.). NO flammables, explosives, compressed gases, or electricity!
- The entire catapult must fit inside a box that is 60 cm (24 inches) by 60 cm by 60 cm. The size of the catapult will be checked when it is at the launch line, loaded and ready to launch. The sizing box will be placed over the catapult so the box sits flat on the ground with one side parallel to the launch line.
- Your catapult must be homemade, and it must be made by you and your partners.
- The catapult must be free-standing (you must not hold it up, hold it down, or hold it in any other way for it to work).
- The catapult must have a trigger-type release mechanism, such as a latch you release or a string that you cut - you may not just hold it and release it by hand.
- Catapults that do not meet requirements will get a penalty of at least 30%!

### Scoring:

- Score = 100 – (Distance from Target)/10
- Each team will launch twice. Your final score will be the average of your two launches.
- Distance from target will be measured in centimeters, from the closest edge of the target zone to where the tennis ball first hits ground.
- The center of the target will be 15 meters from the launch line. All catapults must start fully behind the launch line, but they can be placed anywhere behind the launch line. The catapults will be sitting on concrete.
- We will test the catapults regardless of typical bad weather – wind, drizzle, cold, etc. will not stop or postpone the launch. The launch will be postponed only if there is a steady, heavy rain.