

First Quarter Science Project Marshmallow Toss

REQUIREMENTS:

Design and construct a catapult type device to launch a large marshmallow at two different targets. The catapult must be powered by a single mousetrap. The device needs to be adjustable so you can change the launch angle to hit targets at different distances. The only restrictions are that the device must use a single mousetrap as its power source and it must sit on the floor during launching. In other words, you are not allowed to hold the device when you launch. You may alter the trap by adding extensions to the lever arm, but you may not change the spring in any way.

All construction must be completed out of class.

PERFORMANCE TESTING:

Two targets will be set on the floor at the distances of 5 meters(16' 4") and 7 meters(22' 11") respectively. Each person will be given 3 shots to launch a large marshmallow (provided by the teacher) and get as close as possible to each target. The grading scale will be determined by the distance from the center of the target. The following scale will be used.

Grading Scale:

- A range- The marshmallow lands within 25 cm of the center of the target.
- B range- The marshmallow lands within 75 cm of the center of the target.
- C range- The marshmallow lands within 150 cm of the center of the target.
- D range- The marshmallow lands at a distance greater than 150 cm.

Each Target is worth 50 points. The total grade will be the sum of the score of each target.

Preliminary Due Date: Tuesday, September 24

Final Due Date: Tuesday, October 8

****You must construct the catapult on your own. You may not work with a partner.**

One last note--I am willing to assist you before or after school.

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