

Name:

Period:

Trebuchet Fizzicks

Project Goal: Design and build a trebuchet that will launch a small projectile and hit a 1 meter square target 10 meters away. You will have 3 tries to hit the target.

Team Size: 1-3 people, however, each person must write own report for grading

Materials: You will supply your own materials

Rules:

1. There is no minimum size, but the maximum size is limited to a base of no larger than 50 cm by 50 cm and the pivot point of 1 meter or less.
2. The team will determine what type of projectile to use, however nothing breakable is permitted.
3. The trebuchet can only be powered by gravity-no springs, rubber bands, etc.
4. The trebuchet must be free standing
5. Work not completed outside of designated lab days must be done outside of class time!
6. Your Fizzicks teacher will be the final judge on all matters!

Scoring Rubric

CATEGORY	POINTS
Design log is complete: sketches, material list, calculations (neatness counts!)	0-30
Trebuchet is built and functional-reflects team's design	0-30
Trebuchet launches projectile	0-20
Trebuchet hits target at least once	0-20
Total	0-100

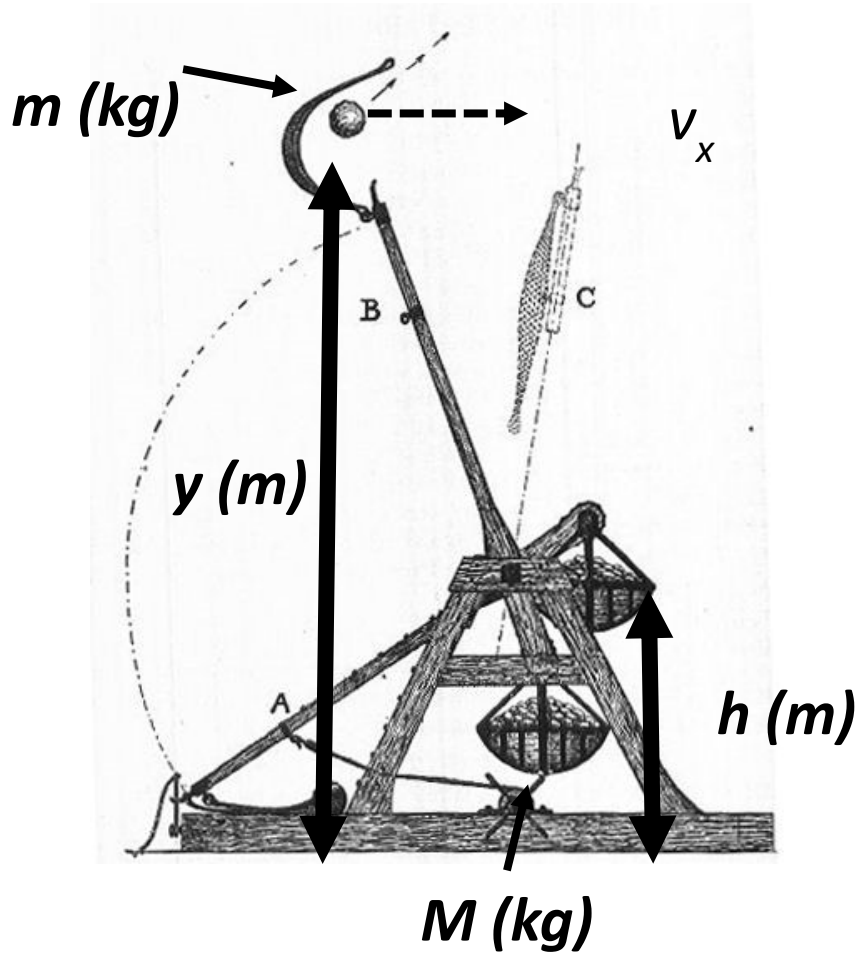
Extra Credit (0-20 points): Longest distance, most hits, Bruin spirit added to design.

Schedule: You will have all or part of 5 lab days plus one week end to complete your project. There will be one practice day before launch day. Trebuchets not ready by practice day will be fined tardy points.

Calculations

Use your notes to calculate the horizontal velocity, v_x

- m – mass of projectile
- M – mass of counterweight
- y – height of projectile at highest point
- h – height of counterweight above the ground



Design Log

(Notes and Sketches)

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