

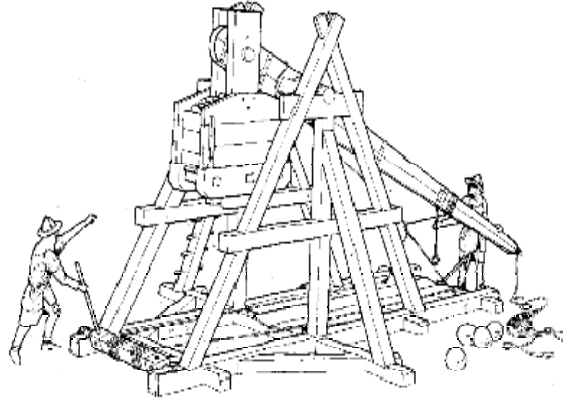
Medieval Siege Machines

Marshmallow Launcher Design Activity

Situation

Before the days of guns and the like, items such as catapults, trebuchets, and sling shots were used for purposes of warfare.

Design and build a device that will launch a standard size marshmallow to hit a target area with a high degree of accuracy. The design should include provisions for adjusting the range of the target.



Resources

Time	15 class periods
People	Up to 3 per group
Energy	Human energy to activate the device
Information	Suggested research topics: Projectile motion, Newton's first law of motion, inertia, levers, trebuchet, catapult
Money	None
Tools	Any that can be safely used with teacher permission
Materials	Any available in class or brought from home.
Space	No limitation

Other Criteria

- The target will be placed at three random points somewhere between ten and thirty-five feet away from the machine.
- The design must be well crafted, reliable, and predictable.
- Your group must conserve materials.

Required

Documentation

The following must be handed in your design portfolio at the end of the activity:

1. Research sources and notes.
2. Design sketches, notes, and drawings from all group members.
3. One final design drawing (to be completed before you receive materials).
4. Records of all tests and adjustments.