

Name: _____

Build a Trebuchet!

The Trebuchet was a weapon of war used during the Middle Ages to hurl large stones and other projectiles toward an enemy army. The Trebuchet made use of the force of gravity in the form of a counterweight. As the counterweight fell, it would rotate an arm (a lever) and launch a projectile.

Problem: Will a trebuchet launch a projectile farther with a long arm or a short arm?

Hypothesis: I think _____

Procedure: Launch your trebuchet three times with the projectile close to the fulcrum. Then launch your trebuchet three times with the projectile far from the fulcrum. Record how far in inches the projectile traveled in each trial.

	Trial 1	Trial 2	Trial 3	Average
Short Arm				
Long Arm				

Conclusion: _____

Problem: What is the best projectile to use with the Trebuchet? Which object will travel the farthest? Will an object with more mass travel farther, or will an object with less mass travel farther?

Hypothesis: I think that the best object to use as a projectile is a

Procedure: Choose four different items to launch with the Trebuchet. Record the distance that each object travels. Perform three trials with each object.

Object	Trial 1	Trial 2	Trial 3	Average

Conclusion: Which object traveled the farthest? Explain the properties that made that object the most effective projectile.

Did air resistance play a role in your results? What are some sources of error in this experiment?
