

Name: _____

Grade: _

Changing variables on a Trebuchet**Aim:** Perform an experiment by changing variables on a trebuchet**Materials:**

Trebuchet

Clay

Tape measure

Procedure:

1. Work in groups of two.
2. You will be testing two different variables: the mass of the projectile and the shape of the projectile.
3. One person will operate the trebuchet and the other will measure the distance that the projectile travels. Distance is measured by placing a mark where the projectile first hits the ground and measuring the distance to the mark from the front of the trebuchet.
4. Fill in the tables given below (Remember to calculate the average values):

Shape: Sphere				
	Distance traveled (m)			
Projectile Mass (g)	Trial 1	Trial 2	Trial 3	Average
10				
20				
30				
40				
50				

Shape: Cylinder				
	Distance traveled (m)			
Projectile Mass (g)	Trial 1	Trial 2	Trial 3	Average
10				
20				
30				
40				
50				

Shape: Pyramid				
	Distance traveled (m)			
Projectile Mass (g)	Trial 1	Trial 2	Trial 3	Average
10				
20				
30				
40				
50				

5. Graph your results for each shape and discuss any patterns that you see.