Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Quadratic Catapult**

1. Using your materials, build a catapult - discuss ideas with your group and work together to construct a catapult.
2. Record 3 videos of your catapult in action (launching a ball).
3. Choose the best video, analyze it:
	1. Create a table of values: What will the x- and y-axis represent?
	2. Construct a graph from the data you collected.



* 1. What are the zeros? (Assume you started at (0,0)).
	2. What is the vertex?
	3. If the function was in the form *y =* ***a*** *(x – s)(x – t)*, what would “**a**” be?
	4. What would the function be in the form of y= ax2 + bx + c?
	5. How high would your ball be after 0.5 sec or 10 cm (based on your function)?