Name_____

Balloon Rockets

Trial One

Create a balloon rocket that can carry a payload.

Weigh the mass of the payload _____

Time the flight _____

Measure the distance of the flight _____

What is the speed of the flight? _____

What is the acceleration rate of the flight? _____

What is the force applied from the balloon rocket? _____

Trial Two

1. Pick a string that is horizontal and has a slope.
2. Follow the same directions as before, except time the flight and measure the distance at three different points in the flight. This will take three to four people to accomplish.
3. Measure the payload _____
4.

Time the Flight	Measure the Distance
Point A _____	Point A _____
Point B _____	Point B _____
Point C _____	Point C _____

5. Calculate the force _____
6.

Calculate the speed and acceleration rate at each point

Speed:	Acceleration:
Point A _____	Point A _____
Point B _____	Point B _____
Point C _____	Point C _____

7.

Calculate the average speed, acceleration rate, force and total distance and time.

Total Time_____ Total Distance _____
Average Speed _____ Average Acceleration _____
Average Force _____

8. Construct graphs (notice this is plural) representing all this information from Trial Two.

Trial Three

1. What is your plan for this trial? What do you plan to do differently to the design of your rocket or the test trial?

2. Construct a trial of your own calculating speed, distance, time, acceleration rate, and force. Represent the results on a graph. Label the graph.

3. Compare this graph to the graphs in trial two. List some of the comparisons and differences.