

Rubber Band Rocket

Directions: Follow the instructions below to build and launch a rubber band rocket.

Building Steps

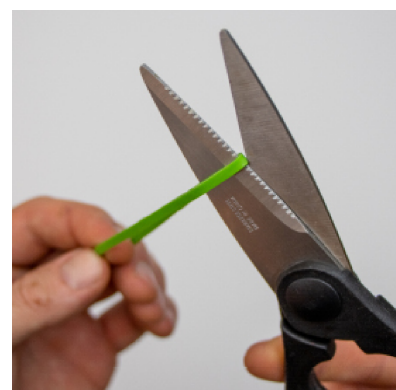
1. Gather Materials:

- Straw
- Tape
- Rubber band
- Permanent marker
- Scissors
- Scale
- Stopwatch
- Goggles
- Pennies (2-3)
- Tape
- Bamboo skewer (with sharp ends removed)

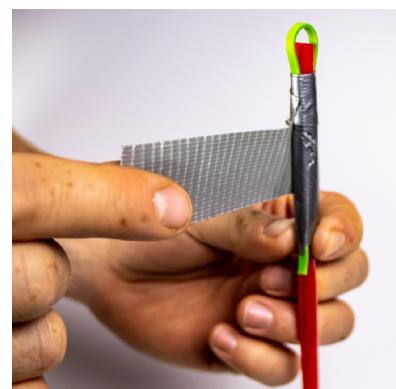


2. Cut the rubber band and then stretch the rubber band over the top of the straw and hold it about halfway down.

The straw should be held vertically (if there is a bendable portion of the straw, cut it off)



3. Wrap tape around the straw near the top while holding the rubber band. The rubber band should form a loop about $\frac{1}{2}$ inch out of the top.



4. Hold your bamboo skewer next to the ruler and, using your permanent marker, mark your bamboo skewer every cm.



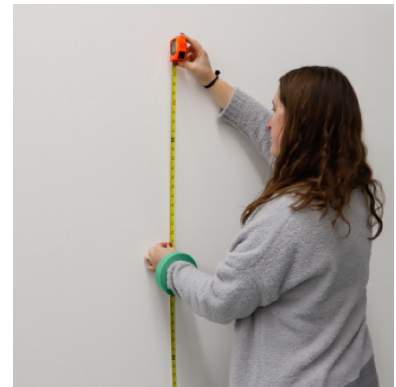
5. What variables should we consider in this investigation?
How could we measure these variables?

Before you begin experimenting, review the safety guidelines:

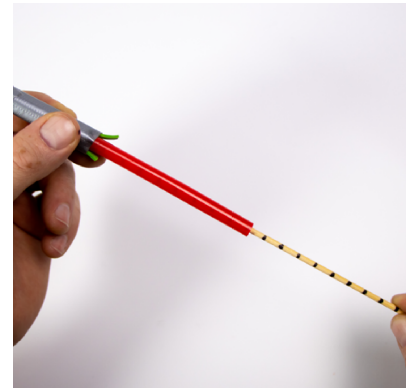
- a. Wear goggles when testing
- b. **Do not launch** until you are given permission
- c. Launch **only** straight up. **Do not launch at another student.** **Do not** lean over the rocket when you launch.

Experiment Preparations

1. Identify the locations your teacher has taped a meter stick or measuring tape on the wall.



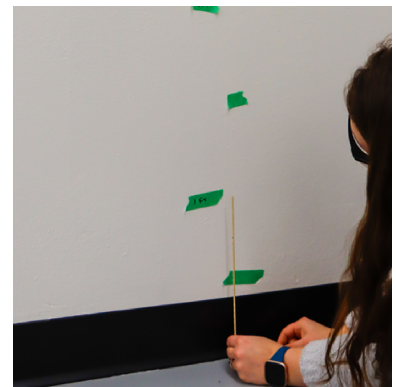
2. Put the bamboo skewer inside the straw.



3. Pull back the rubber band. **Before pulling back, look at where the end of the straw is located**



4. Give a countdown and launch. **Take turns with your partner to collect data for your own rocket.**



5. Record data for your rocket

Experiment 2			
mass of the rocket (g): 9			
Time (s)	Trial	Height (cm)	Time
1.5	1	70	
	2		
	3		
Average (add each of the trials and then divide by 3)			

6. Repeat three trials

