

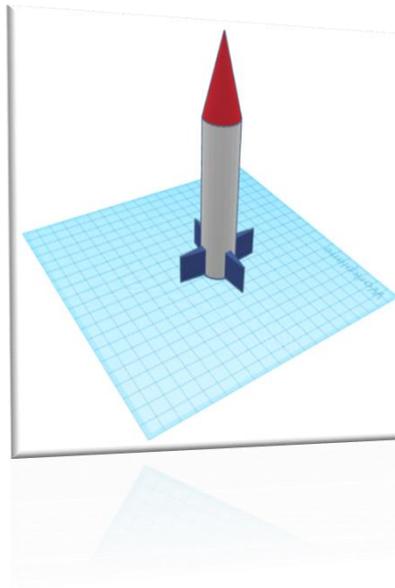
This is Rocket Science Lab Report

Final Design Drawing:

Include a detailed drawing of your **final** design. (use the FULL PAGE for the drawing).

You need to include the following drawings:

- A **neat, accurate drawing** of your rocket.
- Use a **ruler** for making straight lines.
- Measurements** (in cm) for the **length (height)** and **width** or **all the parts** or your rocket.
- In **FULL COLOR**
- Include the **FORCES** acting on your rocket and their **direction** (use **arrows**).



Calculations:

You will do the calculations for **each** of your rocket designs (**3 rockets total**). Make sure you **show your work**. In your notebook include the following calculations:

- Calculate** the **AVERAGE VELOCITY** reached by your rocket using this formula: **$v = d/t$**
 - d = distance** traveled (from the equation above)
 - t = the amount of time** it took for your rocket to reach the ground after launch.
- Calculate** the **AVERAGE MOMENTUM** reached by your rocket using this formula: **$p = mv$**
 - p = momentum** (quantity of motion that your rocket has)
 - m = mass** in (kg not grams)
 - v = average velocity** from above

(Turn this CLASS COPY over... You're Welcome)

Post Project Questions: (Answer in complete sentences)

1. Explain your rocket using each of **Newton's 3 Laws of Motion**.
(All 3 laws should be addressed.)
 - a. First Law:
 - b. Second Law:
 - c. Third Law:
2. What did you change from the original design? Why? How did that change your rocket and the distance it traveled?
3. Which rocket worked the best (in terms of distance of launch and flight stability), your original design or your 2nd, 3rd or 4th design? Why? **Use data to support your claim.**
4. What forces influenced your rocket? Explain at least three.
5. What is something you learned from this lab that you can apply to your personal life?