ST. JOSEPH'S PREPARATORY SCHOOL

PHYSICS COMPETITION

Your Task:

Design and build a water bottle rocket that will go higher than your classmates' rockets. Students may consult with one another regarding design and implementation, but each student must make his own rocket.

Design Parameters:

- 1 unaltered 2-liter soda bottle (additional bottles may be used but 1 must remain intact for the pressure chamber)
    - no holes may be in this bottle
    - the structural integrity may not be affected
        - use of hot glue, super glue, or pvc cement, etc will damage the structural integrity of the bottle
        - duct tape, masking, packing tape are acceptable
- Rocket will be powered by water and air pressure alone
    - Amount of water in the bottle is up to you
    - All rockets will be pressurized to the same psi (will be determined during launch week)
- Any materials may be added to the pressure chamber to increase flight height
- We reserve the right to deem any bottle unfit for flight due to safety concerns – consult with your instructor for grade penalties.

Grading:

- Ten point scale
- First five points for being submitted on time.
- Sixth and seventh points for actually flying.
- Eighth point for reaching a height of at least one SJP story.
- Ninth point for significant height achievement.
- Tenth point for aesthetic quality.
- One or two extra credit points are available for exceptional work and achievement.

YOUR ROCKET IS DUE <u>TUESDAY, 10 MAY 2016.</u>

FLIGHTS WILL BEGIN ON 10 MAY