

Physics 100  
Water Rocket Design

Group Members: \_\_\_\_\_, \_\_\_\_\_

Bottle Diameter: \_\_\_\_\_ mm

Nozzle Diameter: \_\_\_\_\_ mm

Bottle Mass: \_\_\_\_\_ g

Best Water Volume (according to simulator): \_\_\_\_\_ L

Best Dry Mass (according to simulator): \_\_\_\_\_ g

Estimated Apogee (highest point of flight): \_\_\_\_\_ m

Estimated Total Flight Time: \_\_\_\_\_ s

Subtract your bottle mass from the “best dry mass” and write your answer here → \_\_\_\_\_ g  
This will give you an idea how much mass you can add with fins, tape, a nose cone, etc.

\*\*Sketch your rocket design on the back↓

In the space below, draw a plan for a rocket that will fly as high as possible.

- Make your drawing large enough to fill up most of the space
- Don't leave out any important parts. If you need to draw two different views to show everything, that's fine. For example, you might want to draw a top view to show how many fins your rocket will have. You should have at least three fins.
- Label each of the parts with:
  1. The type of material that you plan to use for that part
  2. The name of the group member who is going to bring the material (if it's something that is provided in class, you don't need to include a name)