

Hovercraft Materials & Good Suggestions Sheet

Materials Allowed:

- Styrofoam, cardboard, old CDs (AOL software) or any plastic material
 - Maximum dimensions are 10 X 10 inches or an area of 100 square inches. Any craft larger than the maximum needs to be justify to me why you are making such a large craft (Remember, $F=MA$; the more Mass, the more Force you will need to move (accelerate) the craft).
- Balsa wood (for supporting balloons or other structures).
- Bottle caps from 2 liter type bottles
- Balloons for propulsion and Drinking straws for direction
- Propeller powered by rubber band or electric motor
- Plastic wrap or other material for skirt
- Any kind of tape or glue (any type)
- Other materials as long as you check with Mr. Mathot for approval

Materials NOT Allowed:

- Engines, motors, or other mechanical devices that use gasoline or other flammable liquids
- Wheels or mechanical tracks (like those found on tanks)
- Any other material that Mr. Mathot does not approve

Suggestions:

- Do research on other water crafts, such as: Hydrofoils, fan boats, boat planes, or personal watercrafts
- Make your craft as light as possible (remember, $F=MA$: Less mass means less force needed to move the craft)
- Reduce ground friction on craft (less friction means less FORCE)
- The more balloons you use, the harder it is to get them all to deflate at the same time. 3 balloons are probably the very most you would want to use.
- Let glue dry before testing the craft.
- Make sure you balance the weight of your craft. Do not make it front heavy or back heavy. Remember the concept of center of gravity and balancing forces.
- Make it look as nice and clean as possible. Appearance & the design will be counted in the final grade of your craft.
- Really think about the design before cutting, gluing, and building.
- Do good research and sketch (blueprints) what you are doing before you do it. It is all right to have more than one set of blueprints or to change them as needed.
- Have fun and be nice to everyone you meet.