Physical Science 100
Some Effects Due to Internal Forces (Chapter 6)

The Mini Lab Deadline Approaches!
- Refer to your packet
- Choose either A or B or C
- Follow the instructions
- SIGN IT AND HAND IT IN TO THE TA LAB! (N252 ESC)

The first exam also approaches! Try reviewing on the WWW pages. You can get to the review pages from my PS100 page: go to http://ps100.byu.edu/ and select the link to Dr. Scott D. Bergeson. From there you can get to the review questions.

A liquid
- assumes the shape of its container
- supports no shear forces at rest

Pressure = Force / Area
- 100 lbs. / 1 square inch = 100 p.s.i.
- 100 lbs. / ¼ square inch = 400 p.s.i.

4 Comments on Forces in Fluids
1. Each bit of fluid pushes outward perpendicularly to any surface or boundary it touches.
2. The pressure is the same in all directions at a given point
3. Pressure increases with depth so that weight and pressure balance
4. Pressure is the same at all points at the same depth. Pressure does not depend on the surface area of the fluid.

Archimedes’ principle
"An object immersed in a fluid experiences an upward buoyant force due to contact interactions with the surrounding fluid, whose strength is equal to the weight of the displaced fluid."

The Buoyant force depends on
- volume of object submerged
- density of liquid

Density = mass / volume

Why do cement boats float?

What causes convection currents?