

Name: _____ Date: _____ Period: _____ Page: _____

Cartesian Divers

Objective: _____

RESEARCH:

Rene Descartes: _____

Cartesian Diver: _____

Squeeze the container: _____

Stop squeezing: _____

Must adjust the diver so that it barely _____ by adjusting the amount of water inside.

Look to see the _____ of water changing _____
as pressure varies in the container.

MATERIALS:

2 Liter clear bottles Eyedropper Plastic beaker Disposable pipet with nut

DIVER ASSEMBLY:

Eyedropper Diver

1. Fill the plastic beaker with water almost to the top. Gradually draw water into the eyedropper until the eyedropper floats in the beaker with its top barely above the surface.

Pipet Diver

2. Repeat the same process of adding water to the pipet as you did with the eyedropper. Make the pipet float just below the surface.
3. Fill a 2 liter soda bottle almost to the top with water. Transfer the eyedropper into the soda bottle. Be careful not to change the amount of water in the dropper while doing this. Screw the cap onto the bottle tightly.

TO DO AND NOTICE:

Squeeze the soda bottle to make the diver sink, rise and hover at any depth you choose. Switch to the pipet after making your observations. Notice the differences between the eyedropper and the pipet.

Can you think of any other things you could make into a diver?

ANALYSIS:

1. What causes the diver to sink when you squeeze the bottle?

2. How does the buoyancy compare to the weight of the diver when it hovers?

3. What causes the diver to rise when you stop squeezing the bottle?

4. Why do you think there are differences in the rates of movement between the two divers?
