

# Davy Jones's Locker

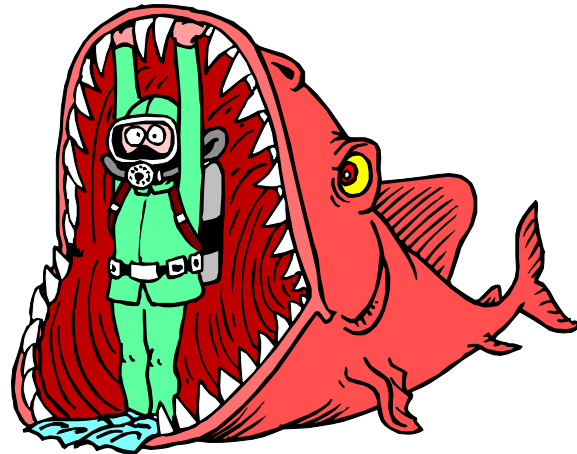
## Objectives:

Students will operationally define pressure.

Students will manipulate laboratory equipment.

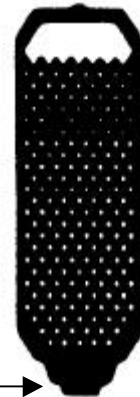
## Materials:

2 liter plastic soft drink bottle, plastic pipettes, hex nuts to fit droppers, scissors, colored acetate sheets, water



## Procedure:

1. Cut plastic dropper so that the tube portion measures approximately 1cm.
2. Cut a circle from the acetate sheet and punch a small hole in the center of it. Slide the circle onto the dropper. Screw the hex nut onto the dropper. (See diagram.)
3. Cut slits in the acetate circle which line up with the points on the hex nut. There should be 8 slits. Slits go from the edge of the circle to the hex nut, but no deeper.
4. Squeeze enough water into the dropper allowing its top to float just above the top of the water.
5. Fill the soft drink bottle with water. Push your diver into the soft drink bottle and screw on the top.
6. Squeeze the bottle and observe the motion of the diver.



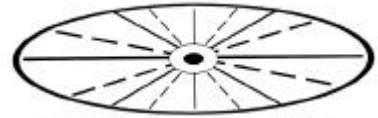
Hex Nut →

## Results:

1. What happens when you squeeze the bottle?
2. What happens when to the water inside the diver when you squeeze the bottle?
3. How the acetate circle affect on the diver?

4. Remove your diver from the bottle and fold the acetate circle along the slits at about a 45° angle down. (See diagram.) Put the diver back in the bottle and squeeze again.

5. Describe the motion of the diver.



**Cut on the solid lines, fold down on the dashed lines. Be sure NOT to cut the lines all the way into the center.**

6. Remove the diver and fold the circle up at about a 45° angle. (See diagram.) Re-insert the diver and squeeze. Describe the motion of the diver.

7. Why do prop planes have propellers in front while boats have propellers in back?

