

OCEAN DYNAMICS (5350)

Lab #4: Design Your Own Tank Experiment! (15 pts)

Name: _____ Lab Report Due: **Group A: 07 Oct 2008**
Group B: 14 Oct 2008

Purpose

The purpose of this lab is to have you design, carry out, and evaluate a fluid experiment involving the rotating tank.

Available Equipment / Supplies

The following supplies are available to you for this lab:

- Food coloring (red, blue, green, yellow)
- Paper dots
- Ice
- Salt
- Objects for bottom topography (you can bring your own as long as it does not damage our acrylic tank)
- Potassium permanganate crystals
- All rotating tank accessories (buckets, jars, etc.)

Procedure

1. Think of a scientific question about rotating or non-rotating fluids that you would like to investigate.
2. Design a simple tank experiment that can be completed within a single lab period and will attempt to answer the question you've posed. Briefly describe your experiment on the next page.
3. Write down what you expect to happen on the next page. How do you expect the fluid to behave and why?
4. Carry out your experiment. Note the step-by-step procedures used to carry out your experiment.
5. Write down what actually happened during your experiment.
6. Evaluate your experiment. Did it work? Why or why not? Did the fluid behave as you expected? Did you answer the question you sought to answer?

LAB 4: NOTES PAGE

(A) State the scientific question relating to fluids you wish to answer:

(B) Briefly describe how you intend to answer this question (i.e. describe your experiment):

(C) Briefly describe what you expect to see happen AND why:

(D) Describe what actually happened:

(E) Evaluate your experiment (Did it work? Why or why not? Did the fluid behave as you expected? Did you answer the question you sought to answer?):

Lab Report

Your lab report must contain the following:

1. A typed cover sheet with the name of the lab, date submitted, and your name.
2. A typed summary paper (double-spaced, Times New Roman 12 pt font) which addresses each of the five parts of the Notes Page (previous page). In other words, hand in a formal write-up of your Notes Page. Be sure to discuss each part as completely as you can. Include in your summary a description of the physical processes/forces at work in your experiment (this can be worked into the existed parts of the Notes Page).