Archimedes prelab preparation

Worksheets, videos and all other lab-related content is located at:

`http://www.physics.brocku.ca/Courses/1P92/lab-manual`

- For a very entertaining and informative cartoon introduction to this lab experiment, and the famous story of Archimedes:

  `http://archimedespalimpsest.org/images/kaltoon/`

- To get a more quantitative feel for the concepts underlying this experiment, try the following simulation:

  `https://phet.colorado.edu/en/simulation/buoyancy`

  The section labelled "Intro" provides a basic introduction and the section labelled "Buoyancy Playground" allows you a lot more freedom to play.

- Devise an experiment to test the hypothesis that when a solid object is immersed in water, the volume of the water displaced by the object is equal to the volume of the object.

- Use your cell phone to make a short movie of your experiment.

- Open a word processor document and outline the steps that you intend to take to test your hypothesis. This document will be submitted to Turnitin.

  Your outline should itemize the steps in a sequence typical of the Scientific Method:

  1. **Hypothesis:** State the purpose of your experiment and the result that you expect to get.
  2. **Experiment:** Describe the experimental setup that you used and the procedural steps that you took to test your hypothesis. For example, you might have used an object of known volume or an aggregate of small particles, such as sand or rice, that will conform to the shape of a container and allow you to determine the volume.
  3. **Conclusion:** Summarize the outcome of your experiment: did your observations confirm or contradict your hypothesis?
  4. **Publish your results:** Upload the movie to your Facebook page or another social media site and include the link to the file as part of your Turnitin document.

     Login to Turnitin and submit your file to the Archimedes prelab assignment before the "Due" time and date shown. Do not wait until the last minute to submit your report. Turnitin will not accept submissions after the set due date/time. Note that overdue prelab reports are assigned a grade of zero.

☐ Print a copy of the experimental procedures from the Laboratory manual to bring to your scheduled lab session. The data, observations and notes entered on these pages will be needed when you write your lab report. Compile these printouts to create a lab book for the course.

CONGRATULATIONS! YOU ARE NOW READY TO PROCEED WITH THE EXPERIMENT!