

## The Course Notebook

### Introduction

Chemistry students in the Honors Chemistry course will need to acquire a dedicated course notebook for use in both the lab and the lecture/demonstration/discussion part of the course. Because it will be collected quite frequently for grading purposes, the notebook must be dedicated to Chemistry; there should be no Math work, History work, English work, etc. in the notebook. Virtually any notebook will do; though it is recommended that it contain approximately 100 pages to document your work on the approximately 50 labs performed in the course. Not only will you use the course notebook to document your work in the lab, you will also use it to keep notes on your learning, whether from textbook reading, classroom discussion or classroom lecture/demonstrations. The notebook will become a central tool to your learning; it will also comprise a good portion of the manner in which your performance and learning will be assessed in the course.

### What's It All About?

Chemistry is not a spectator sport. Those students who approach chemistry in *passive mode* will be less thrilled and most disappointed by the course. Chemistry involves involvement! It demands a proactive approach to learning. It demands pondering, thinking, problem-solving, inquiring. To be successful, you will have to both *sort it all out* and *put it together*. The course notebook represents an attempt to assist you in the task of being involved, being active, and being thoughtful. It should help you to *sort it all out* and *put it together*.

Perhaps the location in the room where you will be most *on your own* and most active will be in the laboratory. You won't be alone in the lab, but you will be on your own - on your own to ponder a question, to adopt an approach to answer it, to collect some data and to sort out the meaning of what the data says about the answer to the question. **Science happens in the lab.** We ask questions whose answers are found through observation, measurement and data analysis. This is what science education should be all about - training students to think like scientists and to engage in the types of activities which scientists engage in. In this course, you will be quite active in the lab, involved in a question, pondering and thinking through the results, and determining the answer to the question.

Your course notebook will be part lab notebook. Each of the approximately 50 labs will involve the completing of a lab report. These lab reports will be placed in your lab notebook. You will record your data, write your conclusions and discuss your results in the lab portion of your course notebook. General guidelines for reporting on your labs are found on the page titled the Lab Reporting Process. You should read this page several times and tape it into the front of your lab notebook for ready and frequent access. Specific guidelines for each lab will be handed out on a unit-by-unit basis.

For now, at the onset of the course, it is simply important that you understand that **the laboratory is sacred**. It is the place in the room where it is guaranteed that the student becomes an active participant. It is the place where the student becomes engaged in the doing of science. At the onset of the course, you will need to adopt the posture that there are answers that can be found in the back of the room - in the laboratory. In the laboratory, you will be engaged in one of the most important activities of science – asking and answering a question through observation, measurement and data analysis.

## **Left Side - Right Side**

Your course notebook will be part lab notebook and part lecture notebook. Lab and lecture. These are two entirely separate activities. One is very active; the other much more passive. One is a lot of labor; the other is a lot of oratory (at least on the part of the teacher). While every effort is made to make the back of the room and the front of the room seamlessly integrated, the activities that occur in each part are different in nature. In your course notebook, you will document your activities in the course – whether it is a lab in the back of the room or a lecture/demonstration/discussion in the front of the room. And because the activities are quite different, we will document it on *different halves of the page*. The right side of the page (*front* of each sheet of paper) will be reserved for lab work. The left side of the page (the *back* of each sheet) will be reserved for the front of the room (class notes, book notes, practice problems, discussion questions, etc.). When your course notebook is submitted for grading, the right side of the pages will be given careful scrutiny. Your lab grade in the course will be based on the reports which appear on the right side of every page.

If you are in the back of the room and making observations and recording measurement, you are doing right side work. Document this work on the right side of the page in one of the four sections of the lab – Purpose, Data section, Conclusion or Discussion of Results. If you come to the end of the page, you will turn the page over and continue recording your data and observations on the right side of the page (not the back of the page you were just writing on). Suppose you are in the front of the room and we are discussing the lab (*post-labbing*); and suppose you wish to take a note or two on what your teacher is saying; you would be recording those notes on the left side of the page. Your teacher's ideas and comments are never included in your lab report (the right side of the page); if you wish to annotate something he says, place it on the left side of the page. If your teacher starts the period by doing some board work – introducing or developing a topic, then you would be recording notes on the left side of the page.

## **Finding What You Need When You Need It!**

As mentioned earlier, specific guidelines for each lab will be handed out on a unit-by-unit basis. The guidelines provide the title of the lab, the question that we are trying to answer and the purpose of the lab, and a short description of what the lab report should include. Read these descriptions carefully; failing to include what is requested in the description will result in a low grade on the lab.

Occasionally, you will be provided with a diagram, a data table or a graph that will form the basis of the Data section of your lab. These will be provided on a unit-by-unit basis. When the time comes for the lab, you should cut them out and tape them into the Data section of your lab report. If it doesn't fit completely into your lab, simply tape one half of it into the notebook and fold the other half over so that it does fit (some of these things you could figure out on your own). Copies of these pages are maintained here on the course website for easy printing in the event that yours becomes lost; such copies are best accessed using the Labs link on the side navigation menu. Near the end of the unit, you will be given a grading sheet. This grade sheet identifies the point value of each lab and describes how the lab will be graded. If you miss a lab due to an absence, you should consult the Makeup Labs web page in order to find out how you will make it up.

## **Post-Lab Check Ups**

On occasion you will be given a short assessment on your activities in lab. The assessment will be in the form of a *post-lab checkup*. It will consist of a series of questions about the lab activity that will provide feedback to each of us as to the type of understanding that resulted from the lab. These post-lab check ups will typically be done in class at the beginning of the period. You will be able to use your lab notebook on a post-lab checkup.