

\*You only need to print the first page for this week's information!

### **End of Week 14 – Last Update!**

#### **LAB**

- Your Aspirin Lab and your Buffers lab must be turned in by Wednesday, June 4<sup>th</sup> at the end of my office hour (3:10 pm). You now have all of the information that you need to complete the questions. I will not accept labs at the final exam.
- The Lab Practical information is posted. Don't forget your calculator and the appropriate dress...you do NOT want to get dismissed from this lab!

#### **Final Exam Information**

- The Final Exam is cumulative: [Chapters 1-12]. We still have to discuss some topics in Chapter 10, plus 5 topics in Chapter 11 and one section in Chapter 9. These are:
  - Chapter 9: include only sections 1, and 4-6 (already discussed)
  - Chapter 10 all sections EXCEPT for 5, 10, 11, and 13. We will finish Ch. 10 on Monday.
  - You will also need to memorize the 6 strong acids and 5 strong bases.
  - Chapter 11, sections 1-4, and section 12. We will not discuss Gamma radiation, even though it is also discussed in these sections. The five topics you need to learn about are 1) alpha radiation, beta radiation, half-lives, fusion and fission. We will finish Ch. 9 and Ch.11 on Wednesday (you will see that this is not nearly as bad as it sounds!)
- For the other chapters, omit the same material that was omitted from the previous exams and quizzes (see the descriptions in this document). That is the information that I will consult when writing the exam.
- The style of the final exam is the same as for your other exams. You will have an Information page and the periodic table for the final exam, just like the regular exams.
- Don't forget to review the polyatomic ions, the Metric system, and the very first handout, the Elements, States and Particulate Structures handout.
- The new (not yet tested) material will be at least 15% of the final exam, which means 30 /200 points.
- ALL of the chapters will be approximately evenly represented, except for Ch. 9 as there is a lot less information in that chapter. The Elements, States and Particulate Structures handout goes with chapter 1, as does the atoms, ions and molecules, elements and compounds definitions.

To study or not to study!

- That would depend on how much you need to pass the class, and what your current grade is. If you are trying for a "C", a "B" or an "A" then you have to average a 65%, an 80% or a 90%. If you are borderline, you MUST earn the higher grade on the final exam or you will end up with the lower grade.
- Start reviewing your old quizzes and exams. Problems that show up more than once are probably ones that I think contain information that is important for you to learn.

- This class is 90% practice...so to study for the final, start by tackling one chapter set of problems at a time, then combine problems from different chapters so that you can start to recognize all of the different types, without a reference.
- Office hours end on the last day of classes (June 4<sup>th</sup>), but I will be accessible via email to answer questions, if you have any.

### **AFTER THE FINAL EXAM**

- Web Advisor displays the grades as soon as they are posted. There is no faster way of obtaining your final grade in the class. Final grades are supposed to be posted no later than 5 days after the final exam is taken, and I adhere to that policy.
  - If you want your final exam returned to you (along with your last laboratory assignment) you may give me a self-addressed and stamped envelope and I will mail it to you. You may leave the envelope in my mailbox, or give it to me at the final exam or before then. I suggest 3 stamps and a 9"x12" manila envelope. Write your own return address as the return address.
  - You may ask me for your graded work at any time up to one year after the class has ended (I keep all student work for a year). Come by my office and I will give it to you, or leave an envelope and I will mail it to you.
  - If you have a question about your grade, the best way to contact me is by email. I do not check email all the time during the summer, so be patient! I am not ignoring you – I could simply be away or avoiding the computer (I'm on vacation!).
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### THE NEXT CLASS:

- Chem 1A: you need to know the stoichiometry (Ch.6), and Lewis structures (ch. 4 and 5) more than anything.
- Chem 2B: you need to know Organic (Ch 12) more than anything. Also you should recall covalent Lewis structures and VSEPR (both in Ch. 5)
- Review this material before starting class and you will be very happy that you did!
- Chem 2A repeated – I will not be teaching chem. 2A again until Spring 2009, and I am not on campus over the summer or winter, but if you take chem2A with someone else, and you would like to come to my office hours in the fall, [posted on my website], you are very welcome to do that. You can also always email if you have questions, even in the summer or winter.

### **End of Week 13:**

#### Exam 3 Information

- I have not yet tested on Chapter 6, section 6, Balancing equations.
- Chapter 7, all sections except section 8.
- Chapter 8, sections 1-4 and Molarity in section 5.
- Chapter 9 sections 4-6 which was taught in lab along with experiment #9 : Rates of Reactions. Those notes from lab are your lecture material for these sections of chapter 9.
- Chapter 12, all sections except section 11, 14, 15, and omit all of section 17 EXCEPT include the part about the combustion reaction. Everyone should know
- The name "combustion reaction"

- The reactants and products: any organic molecule + O<sub>2</sub> + heat → CO<sub>2</sub> (g) + H<sub>2</sub>O (g)

**Lab as usual** –as the weather gets warmer, please remember to still wear LONG PANTS, CLOSED TOE SHOES AND SOCKS, SHIRTS THAT COVER YOU (or bring a long T-shirt to put on over your regular clothes.

**End of Week 12:**

*Quiz 6 Info – Monday Lab: Last Quiz!*

- Chapter 12 sections 12, 13, 16, 17: combustion reaction only.
- Chapter 7 sections 1-7.

*Quiz 6 Info – Wednesday Lab: Last Quiz!*

- Chapter 7 sections 1-7, 9, 10,13.

**Lab as usual** –as the weather gets warmer, please remember to still wear LONG PANTS, CLOSED TOE SHOES AND SOCKS, SHIRTS THAT COVER YOU (or bring a long T-shirt to put on over your regular clothes.

*And Happy Mother's Day to all of you who are Moms!*

**End of Week 10:**

*Quiz 5 Info – Monday lab*

- Chapter 12 sections 1-9

*Quiz 5 Info – Wednesday lab*

- Chapter 12 sections 1-10, 12, 13, 16 and section 17, the combustion reaction only.

*For the future: Exam 3 information. So Far:*

- I have not yet tested on Chapter 6, section 6, Balancing equations.
- Chapter 9 sections 4-6 which was taught in lab along with experiment #9 : Rates of Reactions. Those notes from lab are your lecture material for these sections of chapter 9.
- Chapter 12, all sections except section 11, 14, 15, and omit all of section 17 EXCEPT include the part about the combustion reaction. Everyone should know
  - The name “combustion reaction”
  - The reactants and products: any organic molecule + O<sub>2</sub> + heat → CO<sub>2</sub> (g) + H<sub>2</sub>O (g)

**Lab as usual** –as the weather gets warmer, please remember to still wear LONG PANTS, CLOSED TOE SHOES AND SOCKS, SHIRTS THAT COVER YOU (or bring a long T-shirt to put on over your regular clothes.

**End of Week 9:**

No quiz this week.

We will continue lecture on Chapter 12.

There are no extra worksheets for chapter 12, if you can do the problems at the back of the book, those are test-caliber problems (Not that you need to start studying this weekend –we haven't done much yet!)

**Lab as usual** –as the weather gets warmer, please remember to still wear LONG PANTS, CLOSED TOE SHOES AND SOCKS, SHIRTS THAT COVER YOU (or bring a long T-shirt to put on over your regular clothes.

Enjoy the weekend – it's supposed to finally get warm!

### End of Week 8:

#### Exam 2 Information

- Learn the Elements, States and Particulate Structures handout.
- Memorize the metric conversion factors and the metric system units, abbreviations and types of measurements on the handout given in lab (worksheet #2 on the website).
- You will need to know *all* of the information on the green polyatomic ion sheet. The “reason to know” information does not have to be memorized exactly.
- Chapter 4, all sections
- Chapter 5, all sections
- Chapter 6, sections 1-5, 7 and 8.
- We will learn how to balance chemical equations on Monday (chapter 6, section 6), but this will not be on the exam.
- For chapter 6, you should know that the unit for the chemical reaction is the mole.
- You should also be able to verbalize a chemical reaction, the way that I showed you in the notes:  $\text{AgNO}_3(\text{aq}) + \text{NaCl}(\text{aq}) \rightarrow \text{AgCl}(\text{s}) + \text{NaNO}_3(\text{aq})$
- The above equation is verbalized as “ 1 mole of aqueous silver nitrate reacts with 1 mole of aqueous sodium chloride to form 1 mole of silver chloride and 1 mole of sodium nitrate”.
- Be able to define “aqueous”.
- For chapter 4, when you write a compound (like NaCl) , there are no charges shown in the compound.
- When you draw a Lewis structure for an Ionic compound, you **MUST** show the charges and where the electrons have moved to.
- When you write the symbol for an ION, you must show the charge. A neutral ionic compound contains ions, but since it is neutral, no charges are shown. If you are asked for an ion, (like the sodium ion) then you must write the charge as part of the symbol: for example  $\text{Na}^+$ .
- For chapter 6, worksheets 13, 14 and 15 are test caliber problems. As usual, start with the text book problems, and move up to the worksheets.
- For naming compounds, scramble the ionic and covalent types of problems so that you learn to ask yourself whether a substance is ionic or covalent.

Lab will be as usual next week - wear appropriate clothing and write a pre-lab.

I will not be on the computer often this week, but I will check for emails once a day. Please email if you have questions!

Enjoy the break from classes (if not from studying!)

### **End of Week 7:**

Quiz Info – Monday lab

- Chapter 4 sections 6-11.
- With regards to Lewis structures of ionic compounds – we *will* include Ionic Lewis structures on this quiz, but we will NOT include the Ionic Lewis Structures of compounds containing polyatomic ions for this quiz.
- For the polyatomic ion sheet, you only need to learn the 11 ions and their corresponding names for this quiz. You do not have to learn the first three columns, only the last two columns.
- Chapter 5 sections 1, 2 and the rules for making covalent Lewis structures (refer to the orange handouts). We will not include multiple covalent bonds or structures of polyatomic ions on this quiz.

Quiz Info – Wednesday lab

- Chapter 5 sections 1-7.
- All of the orange handout from last week, including the ionic Lewis structures.
- I will tell you if a substance is ionic or covalent if you are asked to draw a Lewis structure.

### **LAB**

- Yes, we still have a lab class meeting next week!
- Please bring the orange Covalent Lewis structure instructions to lab with you! You will need the last page that we haven't discussed in lecture.
- There is no pre-lab due next week.
- You can dress any way that you like for lab!
- Still, no food or drinks allowed in lab.
  - We have a “Dry Lab” next week meaning there will be no experiment, and it will be more like a lecture than a lab. You have to attend to receive credit, but if you show up and finish the worksheet, and show me before you leave, everyone will receive their 20 points for that day's work.

### **Into the Future:**

- For Exam 2, you will need to know *all* of the information on the green polyatomic ion sheet. The “reason to know” information does not have to be memorized exactly.
- For Exam 2, you will also need to learn how to draw covalent Lewis structures and ionic Lewis structures (with and without polyatomic ions), as well as the VSEPR information that we will learn in lab. You will have a periodic table and the electronegativity table to use on an exam, but there will be no model kits or other instructions on the exam.
- Model kits are available at the library from the reserve desk for loan for a 2 hour period.

**End of Week 6:**

**Note:** When *naming ionic compounds*, there are some exceptions that we did not discuss in class. There are a few transition metals (Ag, Cd, Zn) that always get only one charge, and so the names of compounds containing these ions do NOT have roman numerals (example: silver chloride is AgCl) Silver always gets a 1+ charge and Cd and Zn always get a 2+ charge. You do not have to memorize this, but I don't want you to be confused when doing the homework. Also, in the main group metals, a few main group metals can have variable charges (Lead,  $\text{Pb}^{2+}$  or  $\text{Pb}^{4+}$ ) and Tin (also 2+ or 4+ charges), so you will see these main group metals DO have roman numerals in their names. Again, you do not have to worry about these exceptions.

## Quiz Info – Monday lab

- Chapter 3 sections 7, 8 (electron configurations through barium, and including the noble gas electron configurations).
- Chapter 4 sections 1-7.

## Quiz Info – Wednesday lab

- Chapter 4, all sections except section 8.
- For the polyatomic ion sheet, you only need to learn the 11 ions and their corresponding names for this quiz. You do not have to learn the first three columns, only the last two columns.

Lab – nothing new, just check the schedule, have your pre-lab done, remember to dress appropriately – see lab info from last week.

**End of Week 5:**

- No quiz info this week.

## Lab

- Our experiment this week is a water analysis experiment. Bring in a sample of your home water if you would like to test it! You don't need much, half of a cup would be plenty.
- As usual, do your pre-lab. This means 1) hand-written procedure summary (photocopies not allowed), 2) the data table from your lab manual should be hand-copied into your notebook or photocopied and STAPLED OR TAPED into your notebook BEFORE coming to lab, if you want credit for it. The pre-lab requirement is for all labs, all semester, unless told otherwise.
- The weather is getting warmer, but you still need to be appropriately dressed for lab. SOCKS and closed-toe shoes. No scoop necks or tank tops or spaghetti strap tops, without another shirt over it, and the bottom of the shirt must be 6 inches longer than the tops of your pants. Anyone who isn't dressed appropriately will be asked to leave lab, all semester long.

*That's it, have a good weekend!*

**End of Week 4:****Exam 1 Information**

- Learn the Elements, States and Particulate Structures handout.
- Chapter 1 all sections.
- Chapter 2, all sections.
- Memorize the metric conversion factors and the metric system units, abbreviations and types of measurements on the handout given in lab (worksheet #2 on the website).
- Formulas, constants (like density and specific heat values) and conversion factors will be given to you on the test.
- An individual, one-color periodic table will be given to you for use on the test.
- Chapter 3, all sections.
- There are some small pieces of Ch. 3 that we did not discuss in class and these will *not* be on the test. They are:
  - orbital diagrams
  - electron configurations after Ca
  - electron spin
  - inner transition elements
  - also, representative elements are the same as main group elements. Either term is acceptable.

**OOPS! I gave the class an incorrect answer on #3 (in the specific heat section, page 3) of the pink worksheet we did in class on Monday. I gave the answer 0.55 kcal. The answer should be 0.46 kcal. Sorry!**

**LAB**

- We are doing Expt. 6 this coming week. Instead of the tables given in the lab manual, use the tables linked on the Worksheets page of our website. The tables are similar, but not the same. You will not receive full pre-lab credit if you use the lab manual table. Download 2 copies of the tables: one for your composition notebook (must be taped in or stapled in for credit) and one for the report turned in a week later.
- The link on the website is under Worksheet #6 in a white box.
- It says “Density: Experiment #6”

**End of Week 3:****Quiz #2 material for Monday will include:**

- Learn the second half of the Elements, States and Particulate Structures handout. Spelling counts when learning the element names. Element names are not proper nouns and do not have to be capitalized. Memorize the entire underlined portion of the particulate description for full credit. The letter code for particulate description will not be given any credit. (worksheet #1 on the website).
- Chapter 2 sections 1-7.

- Memorize the metric conversion factors and the metric system units, abbreviations and types of measurements on the handout given in lab (worksheet #2 on the website).
- In addition to the homework on-line that goes with the textbook, you should also do Worksheet #4 which is extra dimensional analysis problems.

**Quiz #1 material for Wednesday will include:**

- The above information and
- Basic density problems, like your textbook, not like Worksheet #6.

**Homework:**

- For the first exam, you will want to be able to do any problems on Worksheets #3-6, in addition to understanding the definitions and concepts in chapter 1. Worksheet #6 has a mixture of specific heat problems (which we still need to practice) and density problems. They are test-caliber, meaning they are the same degree of difficulty as my exam problems will be.
- Don't forget to work on your back-of-the-chapter homework! Start with these and work up to the on-line worksheets.
- Understanding everything in lecture is NOT the same as being able to do the work yourself on an exam. To be sure you understand everything in lecture, try the homework problems and the worksheets...and if they are easy to you, great. Now you are really prepared. If you have trouble, please come to office hours or go to a tutor or send me an email so that you can figure out what you don't know.

**Lab**

- All experiments need a written pre-lab. You may not photocopy the procedure, but you may photocopy the questions and tables; you may also hand-write the questions and tables – leave room for answers! If you photocopy, the photocopied paper MUST be stapled or taped into the lab notebook BEFORE class in order to receive credit for that portion of the pre-lab. Do not come in with a loose piece of paper with the photocopied tables and expect to receive credit for it. The idea behind the notebook is so that you will get in the habit of writing your professional information for work in a notebook and not on loose pieces of paper.
- **Remember your notebook and proper clothing and a calculator for the quiz.**

**End of Week 2:**

**STUDENTS WAITING TO ADD** the chem. 2A class may take the first quiz after class during office hours on WEDNESDAY, because they are not allowed to participate in lab. *Enrolled students do NOT have this option!*

**Quiz #1 material for Monday will include:**

- Chapter 1, all sections.
- Learn the first half of the Elements, States and Particulate Structures handout: Ag (silver) through I (iodine). Spelling counts when learning the element names. Element names are not proper nouns and do not have to be capitalized. Memorize the entire

underlined portion of the particulate description for full credit. The letter code for particulate description will not be given any credit. (worksheet #1 on the website).

- Chapter 2 sections 1-4.
- Memorize the metric conversion factors and the metric system units, abbreviations and types of measurements on the handout given in lab (worksheet #2 on the website).

**Quiz #1 material for Wednesday will include:**

- All the information for Monday's quiz, plus sections 5 and 6 in Chapter 2.

**LECTURE – Buy those calculators and bring them to class.**

**LAB**

- Remember that Experiment 1 needs a written pre-lab. You may not photocopy the procedure, but you may photocopy the questions and tables; you may also hand-write the questions and tables – leave room for answers! If you photocopy, the photocopied paper **MUST** be stapled or taped into the lab notebook **BEFORE** class in order to receive credit for that portion of the pre-lab. Do not come in with a loose piece of paper with the photocopied tables and expect to receive credit for it. The idea behind the notebook is so that you will get in the habit of writing your professional information for work in a notebook and not on loose pieces of paper.
- Experiment 3 is the **ONLY** experiment that does **NOT** require a pre-lab because it is not really an experiment. For this, you only need the form from your lab manual.

**End of Week 1 :**

**Quiz #1 material will include:**

- Chapter 1, all sections.
  - Learn the first half of the Elements, States and Particulate Structures handout: Ag (silver) through I (iodine). Spelling counts when learning the element names. Element names are not proper nouns and do not have to be capitalized. Memorize the entire underlined portion of the particulate description for full credit. The letter code for particulate description will not be given any credit.
  - Homework problems and lecture notes are always part of your study materials.
  - If you have any questions, email me.
  - Next week, more material will be added to the Quiz 1 study material so be sure to check the website!
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**Lab next week: Don't forget!**

- **a small green 50 question scan tron form.**
- **a composition notebook**
- **the lab manual**
- **a calculator!! (for class more than lab)**
- There is a **SAFETY QUIZ** on Feb. 25 /27. You will be given the information that you need to pass the safety quiz in lab, on the same day that you will take the safety quiz. This is not part of your grade, but you must pass the quiz in order to participate in lab.
- We also have a safety video that is mandatory before doing any wet lab. Until you have seen this video, you are not allowed to participate in lab.

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- All quizzes and exams are closed-book and closed-notes. All students will be provided with a periodic table for each quiz and exam except for the first (and sometimes the second) quiz.
  - The use of cell phones is not allowed during a quiz or an exam.
  - The use of graphing calculators is not allowed during a quiz or exam. If you have any questions regarding whether you are able to use your particular calculator for a test, you are expected to find out ahead of time, so ask me before or after class.
  - No talking is allowed during a quiz or exam.
  - Students are not allowed to switch labs without permission and an explanation *in advance*. See me, or email me, as soon as you know that you may miss a lab.