

Timber Creek Regional High School Science Summer Assignments

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Timber Creek Honors Lab Chemistry

Summer Assignment

Mrs. Bagienski

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(Please visit the eboard for important up to date information throughout the summer and school year on the course).

You will be given a test during the first week of the 2009-2010 school year. The test will be based on:

1. Chapters 1, 2, 3 of your text (Modern Chemistry). Questions will come from chapter vocabulary and reviewing concepts questions at the end of these chapters.
2. A Chemistry Article called "Letting off Steam" from Chem Matters.

This test will be worth 100 points and be a major portion of your grade for 1st marking period. During the first week of school, you will be expected to have completed the following:

Part 1 – Read Chapter 1, 2, and 3 of the Modern Chemistry Textbook. (collected the first day of school)

Questions:

1. List 10 safety rules discussed in the text in YOUR OWN WORDS.
2. What are thermal insulators and how are they used?
3. Do the practice problems page 70 A-G
4. Do the following problems:

Chapter	Pages	Problems
1	25-26	16-28
2	47	24-37
3	78	36-41, 53-65

Part 2**Read the article on “Letting off Steam”. It is posted on eboard.**

Fill in the following table and answer the questions that follow(incomplete sentences).

Letting Off Steam***Directions:*** As you read, complete the chart below to describe the components of geysers in Yellowstone National Park, and how each component affects the geysers.

Components	Description	Effects on geysers
Vents and Caves		
Magma chamber		
Water		

Bacteria		
Change		

Letting Off Steam

1. What three discoveries have scientists made regarding geysers and hot springs?
2. What volume of water is ejected daily by the hot springs and geysers in Yellowstone?
3. Is the boiling temperature of water always 100°C?
4. What two factors determine if extremely hot underground water surfaces as a geyser or as a hot spring?
5. Describe the cycle of eruption of a geyser.
6. What is the underground source of heat for Yellowstone's hot springs and geysers?
7. How did scientists at the University of Utah discover the underground geology of Yellowstone?
8. According to the author, what are the two main chemicals found dissolved in high concentrations in the hot waters of Yellowstone?
9. Name four other, potentially toxic, chemicals found in hot springs in Yellowstone.
10. How are *Candidatus Chloracidobacterium thermophilum* different from other bacteria growing in hot springs?
11. What limits scientists' understanding about the underground geology of Yellowstone?
12. What do scientists believe is the cause of upward and downward movements of the ground in Yellowstone?
13. How is the simulated volcano, which you might have made according to the directions in the article, different from an actual volcano, in terms of driving forces?

APES - Timber Creek High School

Summer assignments;

1. Environmental Laws and public policy --

a. Create a timeline of the environmental laws and policies

b. Write a short description of each law or policy and its impact on the public -- particularly on the following topics: ocean resources, fishing, marine mammals, air pollution, resources

2. Research nuclear accidents that had occurred worldwide.

- a. Write a brief summary of each accident (why or how they occurred, and repercussions).
- b. Explain the fission process
- c. Describe the types of reactors

3. Economics

- a. The American whooping crane and the California condor are 2 of North America's largest birds. Although both are endangered and rare, they are protected, and large preserves are available for them. The 2 species, however, seem to be responding differently to the conservation efforts.

--- DESCRIBE two measures that have been taken to protect these species.

--- DESCRIBE 2 important characteristics of an endangered species that would cause it to be slow to recover

--- Make 1 economic and 1 ecological argument for protecting the condor, the whooping crane, or another endangered species and 1 argument against protecting it.
(ch 3)

There will be a quiz on the environmental laws and policies on the 2nd or 3rd day when we meet in September.

The summer reading assignment in "The Hot Zone", by Richard Preston. You must have this book read by the time school starts in September.

Thanks,
C Renner

Timber Creek AP Biology

Mrs. Guida

Recommended Supplemental Text:

How to Prepare for the AP Biology (Barron's How to Prepare for the AP Biology Advanced Placement Examination)

By Deborah T. Goldberg

*** Although this is not a required text it will be used often throughout the year and failure to obtain it may put you at a disadvantage when preparing for the A.P. Exam***

Summer Reading Assignment:

For each group of organisms, you should outline the material including the following information:

1. Classification of the group. (Domain, kingdom, phyla and classes for some groups)
2. Examples of members of the group.
3. Major characteristics that separate each group from another group.
4. What evolutionary advancements have been made over the previously outlined group?

When you have completed your outlines create a chart of the information that you have collected. **This is a required assignment. There will be a practicum during the first week of school.**

Assignments: BIOLOGY 6th Edition	Assignments: BIOLOGY 7th Edition
<ol style="list-style-type: none"> 1. Pages 884 – 885 (sponges) and pages 886-889 (cnidarians) 2. Pages 890 – 893 (flatworms) 3. Pages 894 – 895 (roundworms) 4. Pages 900 – 905 (mollusks) 5. Pages 906 – 909 (segmented worms) 6. Pages 913 – 931 (arthropods) do each Class separately. 7. Pages 936 – 943 (echinoderms) 8. Pages 945 – 949 (non-vertebrate chordates) 9. Pages 950 – 957 (fishes) 10. Pages 958 – 961 (amphibians) 11. Pages 962 – 969 (reptiles) 12. Pages 970 – 973 (birds) 13. Pages 974 – 979 (mammals) 	<ol style="list-style-type: none"> 1. Pages 636-638 (sponges) and pages 638-641 (cnidarians) 2. Pages 642-645 (flatworms) 3. Pages 646-648 (roundworms) 4. Pages 652-657 (mollusks) 5. Pages 658-663 (segmented worms) 6. Pages 664-675 (arthropods) do each Class separately. 7. Pages 676-681 (echinoderms) 8. Pages 684-687 (non-vertebrate chordates) 9. Pages 688-689- (Characteristics of vertebrates) 10. Pages 690-697 (fishes) 11. Pages 698-701 (amphibians) 12. Pages 702-709 (reptiles) 13. Pages 710-713 (birds) 14. Pages 714-718 (mammals)

Assignments: BIOLOGY 8th Edition

1. Pages 636-639 (Sponges) and pages 640-544 (cnidarians)
2. Pages 644- 648 (Flatworms)
3. Pages 644-650 (Roundworms)
4. Pages 654- 660 (Mollusks)
5. Pages 660- 663 (Annelids)
6. Pages 666- 675 (Arthropods)
7. Pages 676-678 (Echinoderms)
8. Pages 683- 684 (Non-vertebrate Chordates)
9. Pages 684-685 (Vertebrate Chordates)
10. Pages 686-690 (Fishes)
11. Pages 690- 694 (Amphibians)
12. Pages 694- 699 (Reptiles)
13. Pages 700-704 (Birds)
14. Pages 704-714 (Mammals and Evolution of Primates)

Enjoy your reading and have a nice summer!

Mr. Manero – Timber Creek AP Physics

Please go to the following websites and review trigonometry before attending the first class.

<http://www.zaimoni.com/Trig.htm>

and

<http://www.clarku.edu/~djoyce/trig/>

be ready to start with vectors by watching

<http://video.google.com/videoplay?docid=-5277638361219102296>

AP Chemistry 2009 Summer Assignment

Welcome to AP Chemistry!

I am so glad you chose to take AP Chemistry, I am looking forward to a great year! I know you learned a lot of chemistry this year, and in AP we will go deeper, and further in the topics you've already learned, and then go beyond to learn new topics. AP Chemistry is challenging, but rewarding. One of the challenges is the pace. We need to cover the curriculum by mid-April. With this in mind, we need to go at break-neck speed through about the first ten chapters, which ideally should be completed by the winter break. The good news is you have already learned much of this. In order to get off to a good start, I have developed this summer assignment. You have already learned this, it is a review. You need to do this yourself, on your own, without any help except from your notes from this year, your lab notebook, and the text. This assignment is worth 5 homework grades.

Timing: I would spread the assignment out throughout the month of August, with a pace of about one chapter per week. I realize you may be on vacation, so adjust accordingly. Do NOT let this go until the last few days before school, it is too much to do at once! Set yourself a schedule, leave some extra time for unexpected events, and stick to it!

Being “done”: you will not be “done” with this assignment when you have answered all of the questions and solved all of the problems, showing all work. You will be *done* when you have answered all of the questions and solved all of the problems, showing all work AND have learned AND understood the material, AND are ready to take and pass a test to prove it.

Again, this is a review, so you should be fine.

Reading for AP: for this course, reading includes all of the pictures and graphics along with their captions, “boxes” within the body of the text, such as Sample Exercises and Chemistry at Work, margin notes, etc. Read for *understanding*.

Expect and be prepared to turn in the “Written Assignments” on the first day of class.

Solubility Rules and Polyatomic Ions- are NOT given when you take the AP exam. You have to know them. To this end, after each chapter below I have included one solubility rule to memorize while you are working with the chapter. Say it to yourself every day for a week, and you'll know it!

Resources:

This year's class notes, handouts, etc.

This year's lab notebook – keep it handy, we will continue to use it.

Text: Brown, LeMay and Bursten. *Chemistry: the Central Science*, 9th ed. 2006. Upper Saddle River: Pearson, Prentice Hall.

Assignment:

Practice Exercises – (PE) Found after the Sample Exercises in the tan highlighted areas of the book.

Visualizing Concepts/Exercises – (Vis) At the end of each chapter, following the summary and Key Terms. I leave out the chapter numbers, for example, from Chapter 1, Vis 1.1, 1.2, and 1.3 are assigned as 1, 2, and 3.

Chapter 1: Read, take notes as needed. Be able to define/discuss/differentiate all bolded key terms.

Written Assignment: PE 1, 2, 3a, 4 through 7. Vis: 1, 2, 3, 5, 9, 19, 21, 23, 24 a, b, c, 26 a, 27, 36a-d, 39 a, b, 42 a

*****Solubility Know: All nitrates (NO_3^{-1}) are soluble

Chapter 2: Read, take notes as needed. Be able to define/discuss/differentiate all bolded key terms.

Written Assignment: PE 1 through 16, Vis 1, 2, 7, 11, 17, 20, 22 a, b, 27 a, 29, 32, 33, 41, 42, 44, 46, 49, 51 - 60, 62, 64, 66, 71 a, b.

*****Solubility Know: All Group 1 (alkali metal ion) compounds are soluble

Chapter 3: Read, take notes as needed. Be able to define/discuss/differentiate all bolded key terms.

Written Assignment: PE 1 through 6, 8 through 20. Vis 1, 3, 5, 9, 12, 14 a, d, 26, 29, 33, 41, 48, 50, 58, 64, 69, 77.

***** Solubility Know: All acetates ($\text{C}_2\text{H}_3\text{O}_2^{-1}$) are soluble

I know this is a lot, but you'll be better off in the long run!

Have a great summer!