

Online Chemistry Syllabus

Suggested Materials:

Texas Instruments Calculator, TI-30 (any 30 series should work fine).

Required Textbook(s):

Apologia Exploring Creation with Chemistry 2nd Edition Textbook (ISBN: 9781932012262)
Solutions and Test Manual (ISBN: 9781932012279)

Course Procedure:

Students will follow the detailed reading and homework assignments (listed below) in preparation for watching the "Online Class Session" (accessed at www.catiefrates.digitalchalk.com).

The below indicates when students should take tests and which "Online Class Session" include grading.

Courses must be viewed in sequence (class 1, class 2, class 3), and are not available to be viewed out of order (class 9, class 3, class 8).

* Every week students are to complete all "On Your Own" questions as homework.

** For this course to be accredited to your student as a "High School Science with Lab", you must grade the Lab Write ups thoroughly and with care.

Vocabulary:

Students should use definitions we go over in the "Online Class Sessions" whenever possible OR use their own words to define the terms NOT copy the textbook and memorize its words (unless they have a photographic memory and retain everything they see for extensive periods of time)!

Tests:

Tests should be taken as specified below, after all assigned homework including lab write ups are completed (often even the lab write ups help prepare students for the tests). We recommend that tests be taken as soon as possible after watching the "Online Class Session" where the Study Guide has been covered, as indicated below. We will grade the test together at the beginning of the "Online Class Session" as indicated below. We recommend parents watch the portion of the "Online Class Session" where tests are graded to properly grade their student's tests. (These sessions are indicated below)

Please show all your calculations on your tests so that you may receive partial credit whenever possible.

Grading:

We suggest factoring the following three sections into your student's grade.

Homework:

To grade the homework section you would include:

1. Your student's neatly completed "On Your Own Questions".
2. Your student's neatly completed "The Study Guide (or Review and Practice Problems)".

Remember, homework is for the student's benefit and should never be counted against them as long as it is neat and complete. The effort is what is graded on the homework. Accuracy is graded on the tests.

The homework section = 33% of the grade.

Lab Write-Ups:

To grade the “**Lab Write-Ups**”, look over each lab write-up and make sure that it is neat, and contains the 4 parts listed below. Please see the detailed lab write-up instructions below, under the “Labs” section for full details.

**** For this course to be accredited to your student as a “High School Science with Lab”, you must grade the Lab Write-Ups thoroughly and with care. Lab Write-Ups can be graded with equal weight as tests.**

Lab Write-Ups = 33% of the grade.

Tests:

Factor the test grade in as the last third of the grade.

Tests = 33% of the grade.

Please have students show all their calculations on tests so that they may receive partial credit whenever possible.

Some parents prefer to only average the student's tests for their grade and ignore the homework grading. The homework being graded is to benefit your student(s) and increase their average for work they are doing; in a school, their homework would count as part of their grade. It is not until college that only the tests are averaged for their grade and the lab write ups in college will be an entirely different grade. Grading of the course is at the parent's discretion, parents are welcome to only factor tests grades in for the final score.

Science (as is math) is graded in colleges on a 10 point scale (90-100% is an A, 80-89% is a B, etc.) therefore I use the same grading scale for our student(s). I know the state went to a 7 point scale in a futile attempt to increase our standard of education but I prefer to stay with the college standard.

We recommend that students complete and save all assigned work in a portfolio or notebook as evidence of course completion and credit.

After completing our science courses, if students are comfortable with the subject material, we recommend students look into taking CLEP and/or SAT II subject tests for college admissions (to provide further evidence of your student's subject retention). Students should use the SAT II or CLEP study manuals to properly prepare for these exams after completing our courses. Some Universities require standardized test scores before they will accept high school science credits (with home school and public school credits alike).

Labs:

To receive a full lab credit for this course, your student must watch or perform labs in class and then complete correct “Lab Write-Ups” for each of these labs. Below are instructions on how to complete a correct lab write-up.

Lab Write-Up Instructions:

Example Lab Write-Up

Lab write-ups should contain the following divisions and information.

EXPERIMENT 1.1 ***Using a Biological Key***

(At the top of the page list the **number and name** (when giving in text) **of lab**.
4 Roman numeral designations, Skip lines between the different roman numeral sections.)

Parts I and II should be completed before watching the "Online class session" (as indicated below). Part III, calculations and IV Conclusion should be completed after watching the "Online class session".

I. Purpose -

Write out why/what you hope to learn by performing this lab - this info can usually be found in the introduction of the lab in the book

II. Procedure -

Write out a BRIEF but accurate list of the steps you will do to perform this lab, including materials to be used either at the top of this section or mentioned in the listed steps. Steps should be in a list style (NOT paragraph style) numbered as follows:

1. First we took prepared slide of...
2. Then we observed the structures listed below in the observation section...
3. Etc...

(As many steps as you need but DO NOT copy from the book. Put it in your own words and don't copy explanation portions that are listed in the book.)

III. Observations and Calculations

Under this heading include all labeled drawings, measurements taken in the lab, and calculations done with those measurements. If there was a problem in the actual performance of the lab, that should be explained here.

IV. Conclusion -

The conclusion should state the scientific fact that you were supposed to learn / observe by performing this lab. This is usually stated in the textbook either at the latter portion of the lab or in the text just after the lab. The conclusion should somehow be related to the purpose, frequently restating the purpose with the words "as observed by" and then explain how your observations supported the factual concept you have stated. The conclusion is NOT the place for your observations!!!

Example Lab Write Up

Experiment 1.1 Air Has Mass

I. Purpose - To determine if air has mass (This is usually found in the title)

II. Procedure (Notice this is short form in your own words)

1. Loosely tie balloons to strings so they can be untied later.
2. Tie strings to either end of a meter or yardstick and tape down.
3. Balance on shower rod (or wherever you do it).
4. Notice where it balances.
5. Untie and blow up one of the balloons.
6. Retie on the string and try to balance again in the shower rod at the same place.
7. Record observations and clean up.

III. Observations & Calculations (If there are calculations to be done, you would do them in this section.)

The balloon full of air pulled the stick off balance and the filled balloon was heavier.

IV. Conclusion

Matter is anything that has mass and takes up space. Air has mass as seen by the balloon full of air weighing more than the empty balloon.

(Please notice the conclusion stated a FACT from the text that you were supposed to be learning about and that is why we did the experiment, then that fact was tied together with the observations.)

A great resource to use throughout the year: <http://www.periodicvideos.com:80/>

Questions:

Any questions are to be submitted by email or phone (cfscienceclasses@gmail.com or 239-352-1357). Live online interaction is available by request. Please allow 48 hour response time. Longer during holiday breaks.

Chemistry Syllabus

Reading assignments for each week are indicated by page numbers and include reading the labs within the assigned pages.

* OYO = Complete all On Your Own Questions in Reading

** Prep for lab = Read assigned lab, begin lab write up, by writing up the Headings, title, I. Purpose & II. Procedure

*** When completing Study Guide, the vocabulary is to be in your own words and short

**** Complete Lab write up = Writing up III. Observations & IV Conclusion which should be done after viewing "online class session".

***** Extra Credit Lab Write ups, parents are responsible to grade & log for extra credit on the tests

Make sure you have watched, "Creation Interpretation Parts 1-3-Course Prequel" on Digital Chalk as a course prequel.

Prep for Class 1

- 1) Read pg 1-27
- 2) OYO
- 3) Make a copy of the Periodic Table of elements and the page across from it in the front cover of your text book and place in a plastic sleeve protector to use throughout the course. You may not write on the one used for tests!
- 4) Perform Lab 1.2 at home and complete a lab write up (follow directions above).

Log on (www.catiefrates.digitalchalk.com) and Watch "Chemistry Class 1, Part A" & "Chemistry Class 1, Part B"

Prep for Class 2

- 1) Read pg 27-31
- 2) OYO
- 3) Prep for lab 1.3, 1.4
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 2, Part A" & "Chemistry Class 2, Part B"

Prep for Class 3

- 1) Complete lab write up 1.3 & 4
- 2) Study and take Module 1 test
- 3) Read pg 69-83 top
- 4) OYO
- 5) Prep for lab 3.1

Log on and Watch

"Chemistry Class 3, Part A" & "Chemistry Class 3, Part B"

-Test to be graded in this session.

Prep for Class 4

- 1) Read pg 83-93
- 2) OYO

- 3) Complete write up lab 3.1
- 4) Prep for lab 3.2
- 5) Complete Review and Practice Problems Mod. 3

Log on and Watch

"Chemistry Class 4, Part A & B"

Prep for Class 5

- 1) Complete write up lab 3.2
- 2) Study for and take test Module 3
- 3) Read pg 98-115
- 4) OYO
- 5) Prep for lab 4.1 & 4.4

Log on and Watch

"Chemistry Class 5, Part A" & "Chemistry Class 5, Part B"

-Test to be graded in this session.

Prep for Class 6

- 1) Read pg 115-125
- 2) OYO
- 3) Complete write ups 4.1 & 4.4
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 6, Part A & B"

Prep for Class 7

- 1) Study for and take Mod. 4 test
- 2) Read pg 201-223
- 3) OYO
- 4) Prep for lab 7.1

Log on and Watch

"Chemistry Class 7, Part A" & "Chemistry Class 7, Part B"

-Test to be graded in this session.

Prep for Class 8

- 1) Read pg 223-240

- 2) OYO
- 3) Complete write up 7.1
- 4) Prep for lab 7.2
- 5) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 8, Part A" & "Chemistry Class 8, Part B"

Prep for Class 9

- 1) Complete write up 7.2
- 2) Study for and take Mod. 7 test
- 3) Read pg 246-263
- 4) OYO

Log on and Watch

"Chemistry Class 9, Part A" & "Chemistry Class 9, Part B"

-Test to be graded in this session.

Prep for Class 10

- 1) Read pg 264-276
- 2) OYO
- 3) Complete Review and Practice Problems
- 4) Start to memorize Table 9.1 p. 288

Log on and Watch

"Chemistry Class 10, Part A & B"

Prep for Class 11

- 1) Study for and take test Mod. 8
- 2) Read pg 285-298
- 3) OYO

Log on and Watch

"Chemistry Class 11, Part A & B"

-Test to be graded in this session.

Prep for Class 12

- 1) Read pg 298-308
- 2) OYO
- 3) Prep for Lab 9.1 & 9.2
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 12, Part A & B"

Prep for Class 13

- 1) Complete write up Lab 9.1 & 2
- 2) Study for and take test Mod. 9
- 3) Read pg 133-149
- 4) OYO

Log on and Watch

"Chemistry 13, Part A" & "Chemistry Class 13, Part B"

-Test to be graded in this session.

Prep for Class 14

- 1) Read pg 149-156
- 2) OYO
- 3) Prep for lab 5.1
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 14, Part A & B"

Prep for Class 15

- 1) Complete write up 5.1
- 2) Study for and take test Mod. 5
- 3) Read pg 163-176
- 4) OYO
- 5) Prep for Lab 6.1

Log on and Watch

"Chemistry Class 15, Part A & B"

-Test to be graded in this session.

Prep for Class 16

- 1) Read pg 176-190
- 2) OYO
- 3) Complete write up 6.1
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 16, Part A & B"

Prep for Class 17

- 1) Study for and take Mod. 6 test
- 2) Read pg 319-334
- 3) OYO
- 4) Prep for Lab 10.1 (for procedure only list something short like: Test the following substances with red and blue litmus paper: etc.)

Log on and Watch

"Chemistry Class 17, Part A & B"

-Test to be graded in this session.

Prep for Class 18

- 1) Read pg 334-341
- 2) OYO
- 3) Complete write up 10.1

Log on and Watch

"Chemistry Class 18, Part A & B"

Prep for Class 19

- 1) Read pg 341-345
- 2) OYO
- 3) Prep for lab 10.2
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 19, Part A" & "Chemistry Class 19, Part B"

Prep for Class 20

- 1) Complete write up lab 10.2
- 2) Study for and take test Mod. 10
- 3) Read pg 353-367
- 4) OYO
- 5) Prep for lab 11.1 & 11.2

Log on and Watch

"Chemistry Class 20, Part A & B"

-Test to be graded in this session.

Prep for Class 21

- 1) Read pg 367-375
 - 2) OYO
 - 3) Complete write up 11.1 & 11.2
 - 4) Complete Review and Practice Problems
- Lab 11.4 may be done at home for extra credit

Log on and Watch

"Chemistry Class 21, Part A" & "Chemistry Class 21, Part B"

Prep for Class 22

- 1) Study for and take test Mod. 11
- 2) Read pg 383-399
- 3) OYO

Log on and Watch

"Chemistry Class 22, Part A" & "Chemistry Class 22, Part B"

-Test to be graded in this session.

Prep for Class 23

- 1) Read pg 399-408
- 2) OYO
- 3) Prep for lab 12.1
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 23, Part A" & "Chemistry Class 23, Part B"

Prep for Class 24

- 1) Complete write up 12.1
- 2) Study for and take test 12
- 3) Read pg 36-53
- 4) OYO
- 5) Prep for lab 2.1

Log on and Watch

"Chemistry Class 24, Part A" & "Chemistry Class 24, Part B"

-Test to be graded in this session.

Prep for Class 25

- 1) Read pg 53-60
- 2) OYO
- 3) Complete write up 2.1
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 25, Part A" & "Chemistry Class 25, Part B"

Prep for Class 26

- 1) Study for and take test Mod. 2
- 2) Read pg 417-435
- 3) OYO

Log on and Watch

"Chemistry Class 26, Part A" & "Chemistry Class 26, Part B"

-Test to be graded in this session.

Prep for Class 27

- 1) Read pg 436-449
- 2) OYO
- 3) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 27, Part A" & "Chemistry Class 27, Part B"

Prep for Class 28

- 1) Study for and take test Mod. 13
- 2) Read pg 459-474
- 3) OYO
- 4) Prep for lab 14.1

Log on and Watch

"Chemistry Class 28, Part A" & "Chemistry Class 28, Part B"

-Test to be graded in this session.

Prep for Class 29

- 1) Read pg 474-484
- 2) OYO
- 3) Complete write up lab 14.1
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 29, Part A & B"

Prep for Class 30

- 1) Study for and take test Mod. 14
- 2) Read pg 491-507
- 3) OYO

Log on and Watch

"Chemistry Class 30, Part A" & "Chemistry Class 30, Part B"

-Test to be graded in this session.

Prep for Class 31

- 1) Read pg 507-518
- 2) OYO
- 3) Prep for lab 15.2
- 4) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 31, Part A" & B"

Prep for Class 32

- 1) Complete lab 15.2
- 2) Study for and take test Mod. 15
- 3) Read all of Module 16
- 4) OYO
- 5) Complete Review and Practice Problems

Log on and Watch

"Chemistry Class 32, Part A" & "Chemistry Class 32, Part B"

-Test to be graded in this session.

Study for and take test Mod. 16

Log on and Watch

"Chemistry Class 32, Part C"