

Online Physical Science Syllabus

Required Textbook(s):

Apologia Exploring Creation with Physical Science 2nd Edition Textbook (ISBN: 9781932012774)
Solutions and Test Manual (ISBN: 9781932012781)

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.

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 -

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
Atoms and Molecules

I. Purpose – To observe how atoms change into molecules and to learn how different atoms and molecules can be

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

1. Fill small glass $\frac{3}{4}$ full of water.
2. Stir in 1 teaspoon of baking soda and stir well.
3. Use partially stripped copper wires (Partially stripped on both ends) to attach to 9 volt battery terminals

4. Tape one wire to each terminal securely with electrical tape (make a good connection)
5. Without letting wire ends touch, place down in baking soda water in small glass.
6. If no bubbles produced, check connection of wire to terminal.
7. Allow to run for 10 minutes.
8. Record observations and clean up.

III. Observations

(Here you would draw diagrams and record all observations you made during the experiment. Be thorough.)

IV. Conclusion

Atoms are the smallest stable unit in creation and molecules are made up of 2 or more atoms bound together. Molecules have unique individual properties from the atoms that make them up as seen by the copper hydroxycarbonate no longer reacting with the water like the copper did.

(Please notice the conclusion stated a FACT or definition 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.)

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.

Physical Science 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 1-15
- 2) OYO
- 3) Prep for Lab 1.1

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

Prep for Class 2

- 1) Read pg. 15-20
- 2) OYO
- 3) Complete lab write up 1.1
- 4) Prep for lab 1.2
- 5) Complete study guide

Watch "Physical Science Class 2, Part A & B"

Prep for Class 3

- 1) Complete lab write up 1.2
 - 2) Study for and take Module 1 test
 - 3) Read pg. 25-36
 - 4) OYO
 - 5) Prep for Lab 2.1 & 2.2
- Lab 2.3 is optional for extra credit

Watch "Physical Science Class 3, Part A" & "Physical Science Class 3, Part B"

-Test to be graded in this session.

Test 1- Grading

All answers are worth 6 points including 1a, 1b, 1c, 4a, and 4b. So each vocabulary word is worth 6 points each.

Prep for Class 4

- 1) Read pg. 36-50
- 2) OYO
- 3) Complete write up lab 2.1 & 2.2
- 4) Write up lab 2.3 for extra credit
- 5) Read "Global Warming Reading" and answer questions
(available on Digital Chalk once you have watched "Physical Science Class 3")
- 6) Complete study guide Module 2

Watch "Physical Science Class 4, Part A" & "Physical Science Class 4, Part B"

Prep for Class 5

- 1) Study for and take test Module 2
 - 2) Read pg. 55-66 top
 - 3) OYO
- Lab 3.1 is optional for extra credit

Watch "Physical Science Class 5, Part A & B"

-Test to be graded in this session.

Test 2- Grading

All answers are worth 6 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 6 points each.

Prep for Class 6

- 1) Read pg 66-76
- 2) OYO
- 3) Complete write up lab 3.1
- 4) Prep for lab 3.2
- 5) Complete study guide Mod. 3

Watch "Physical Science Class 6, Part A & "Physical Science Class 6, Part B"

Prep for Class 7

- 1) Study for and take Mod. 3 test
- 2) Read pg. 81-90
- 3) OYO
- 4) Prep for lab 4.1 & 4.2

Watch "Physical Science Class 7, Part A & B"

-Test to be graded in this session.

Test 3- Grading

All answers are worth 5 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 5 points each.

Prep for Class 8

- 1) Read pg. 90-101
- 2) OYO
- 3) Complete lab write up 4.1 & 4.2
- 4) Prep for lab 4.3
- 5) Complete study guide

Watch "Physical Science Class 8, Part A & Part B"

Prep for Class 9

- 1) Complete write up 4.3
- 2) Study for and take Mod. 4 test
- 3) Read pg. 105-120
- 4) OYO

Watch "Physical Science Class 9, Part A" & "Physical Science Class 9, Part B"

-Test to be graded in this session.

Test 4- Grading

All answers are worth 6 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 6 points each.

Prep for Class 10

- 1) Read pg. 120-127
 - 2) OYO
 - 3) Prep for lab 5.3
 - 4) Complete study guide Mod. 5
- Lab 5.1-2 are optional for extra credit

Watch "Physical Science Class 10, Part A" & "Physical Science Class 10, Part B"

Prep for Class 11

- 1) Study for and take test Mod. 5
 - 2) Read pg. 131-148
 - 3) OYO
 - 4) Prep for lab 6.3
- Lab 6.1-2, 4 are optional for extra credit

Watch "Physical Science Class 11, Part A" & "Physical Science Class 11, Part B"

-Test to be graded in this session.

Test 5- Grading

All answers are worth 5 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 5 points each.

Prep for Class 12

- 1) Read pg. 148-153
- 2) OYO
- 3) Complete write up lab 6.3
- 4) Read "Catastrophic Plate Tectonic Model" & answer questions
(available on Digital Chalk once you have watched "Physical Science Week 11")
- 5) Complete study guide

Watch "Physical Science Class 12, Part A" & "Physical Science Class 12, Part B"

Prep for Class 13

- 1) Study for and take test Mod. 6
- 2) Read pg. 157-166
- 3) OYO
- 4) Prep for & begin lab 7.1

Watch "Physical Science Class 13, Part A" & "Physical Science Class 13, Part B"

-Test to be graded in this session.

Test 6- Grading

All answers are worth 5 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 5 points each and each answer for number 6 is worth 2 points making #6 worth 6 points total instead of 5 like the others.

Prep for Class 14

- 1) Read pg 166-176
- 2) OYO
- 3) Complete Study Guide 7

Watch "Physical Science Class 14, Part A" & "Physical Science Class 14, Part B"

Prep for Class 15

- 1) Study for and take test Mod. 7
- 2) Read pg 181-191 up to hurricanes
- 3) OYO
- 4) Continue lab 7.1

Watch "Physical Science Class 15, Part A" & "Physical Science Class 15, Part B"

-Test to be graded in this session.

Test 7- Grading

All answers are worth 5 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 5 points each and each cloud identification 2a, 2b, 2c are worth 5 points each.

Prep for Class 16

- 1) Read pg 192-199
- 2) OYO
- 3) Complete lab 7.1 by adding info from 8.2
- 4) Read "The Post Flood Ice Age and Continuing Catastrophes" and answer questions (available on Digital Chalk once you have watched "Physical Science Week 15")
- 5) Complete Study Guide 8

Watch "Physical Science Class 16, Part A" & "Physical Science Class 16, Part B"

Prep for Class 17

- 1) Study for and take Mod. 8 test
- 2) Read pg. 203-216
- 3) OYO
- 4) Prep for lab 9.1

Watch "Physical Science Class 17, Part A" & "Physical Science Class 17, Part B"

-Test to be graded in this session.

Test 8- Grading

All answers are worth 5 points including each vocabulary word, #3 each answer is worth 3 points making it worth 9 points total and #4 has two answers worth 5 points each so it is worth a total of 10 points.

Prep for Class 18

- 1) Read pg. 216-223
- 2) OYO
- 3) Complete Lab write up 9.1
- 4) Complete Study Guide 9

Watch "Physical Science Class 18, Part A & B"

Prep for Class 19

- 1) Study for and take test Mod. 9
- 2) Read pg 229-244
- 3) OYO
- 4) Prep for lab 10.1-3

Watch "Physical Science Class 19, Part A" & "Physical Science Class 19, Part B"

-Test to be graded in this session.

Test 9- Grading

All answers are worth 6 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 6 points each and #6 each are worth only 1 point so #6 total is worth 4 points.

Prep for Class 20

- 1) Read pg 244-249
 - 2) OYO
 - 3) Complete write up 10.1-3
 - 4) Complete Study Guide
- Lab 10.4 is optional for extra credit

Watch "Physical Science Class 20, Part A" & "Physical Science Class 20, Part B"

Prep for Class 21

- 1) Study for and take test Mod. 10
- 2) Read pg 255-269
- 3) OYO

Watch "Physical Science Class 21, Part A" & "Physical Science Class 21, Part B"

-Test to be graded in this session.

Test 10- Grading

All answers are worth 5 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 5 points each and #2 has three answers so it is worth 15 points.

Prep for Class 22

- 1) Read pg. 269-280
- 2) OYO
- 3) Prep for lab 11.3
- 4) Complete Study Guide 11

Watch "Physical Science Class 22, Part A" & "Physical Science Class 22, Part B"

Prep for Class 23

- 1) Study for and take test Mod. 11
- 2) Read pg. 284-308
- 3) OYO
- 4) Prep for lab 12.1 & 12.2
(Modify procedure using an electroscope that is already made)
- 5) Complete Study Guide 12

Watch "Physical Science Class 23, Part A" & "Physical Science Class 23, Part B"

-Test to be graded in this session.

Test 11- Grading

All answers are worth 8 points each. (We are aware this adds up to 104 points total but this is balanced out by other tests where the points were extremely lenient.)

Prep for Class 24

- 1) Complete write up 12.1 & 12.2
- 2) Study for and take test Mod. 12
- 3) Read pg 313-327 top
- 4) OYO

Watch "Physical Science Class 24, Part A" & "Physical Science Class 24, Part B"

-Test to be graded in this session.

Test 12- Grading

All answers are worth 6 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 6 points each.

Prep for Class 25

- 1) Read pg 327-336
- 2) OYO
- 3) Complete Study Guide

Watch "Physical Science Class 25, Part A" & "Physical Science Class 25, Part B"

Prep for Class 26

- 1) Study for and take test Mod. 13
- 2) Read pg 340-353 top
- 3) OYO

Watch "Physical Science Class 26, Part A" & "Physical Science Class 26, Part B"

-Test to be graded in this session.

Test 13- Grading

All answers are worth 5 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 5 points each, each answer for #2 is worth 5 points for a total of 10 points, 4a, 4b, 4c are each worth 5 points.

Prep for Class 27

- 1) Read pg 353-362
- 2) OYO
- 3) Prep for lab 14.3 & 14.5
- 4) Complete Study Guide

Watch "Physical Science Class 27, Part A" & "Physical Science Class 27, Part B"

Prep for Class 28

- 1) Complete write ups 14.3 & 14.5
- 2) Study for and take test Mod. 14
- 3) Read pg 367-381
- 4) OYO

Watch "Physical Science Class 28, Part A" & "Physical Science Class 28, Part B"

-Test to be graded in this session.

Test 14- Grading

All answers are worth 5 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 5 points each and each of the four answers on #10 are worth 2 points for a total of 8 points for #10.

Prep for Class 29

- 1) Read pg 382-392
- 2) OYO
- 3) Write up 15.1 & 15.3 the way we did them in class
- 4) Prep for lab 15.4
- 5) Complete Study Guide

Watch "Physical Science Class 29, Part A & B"

Prep for Class 30

- 1) Complete lab write up on 15.4
- 2) Study for and take test Mod. 15
- 3) Read pg 397-411
- 4) OYO

Watch "Physical Science Class 30, Part A" & "Physical Science Class 30, Part B"

-Test to be graded in this session.

Test 15- Grading

All answers are worth 6 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 6 points each.

Prep for Class 31

- 1) Read pg 411-418
- 2) OYO
- 3) Read "Stellar Evolution"
(available on Digital Chalk once you have watched "Physical Science Class 30")
- 4) Complete Study Guide

Watch "Physical Science Class 31, Part A" & "Physical Science Class 31, Part B"

Prep for Class 32

- 1) Study for and take Mod. 16 test
- 2) Read "Creation Astronomy"
(available on Digital Chalk once you have watched "Physical Science Week 31")

Watch "Physical Science Class 32, Part A" & "Physical Science Class 32, Part B"

-Test to be graded in this session.

Test 16- Grading

All answers are worth 4 points including 1a, 1b, 1c, etc. so each vocabulary word is worth 4 points each and #10 and #11 both have two answers so they are worth 8 points each with both answers being worth 4 points.

Answer the "Creation Astronomy Study Guide" questions as the last test. This study guide should be counted as a test grade and averaged into your other test scores even though you are allowed to use your notes) the answer key will be available on Digital Chalk once you have completed "Creation Astronomy Study Guide".

Test Creation Astronomy – Grading

Test on Creation Astronomy each answer on the test is worth 3 points. In those questions that require multiple answers, each answer is still worth 3 points, for example #1 is worth a total of 21 points with 7 - 3 point answers.