

## Physical Science Agenda Fall 2020

**\*Parents—I will host a Zoom meeting the first week of school so that you, as the home teacher, know what to expect, how to read the agenda, etc. This will also give you an opportunity to ask questions.**

**\*\*Every student needs a Google Classroom account. I will email the class invitation. Unless we go to remote learning, I do not plan to use Google Classroom much the first semester. It is, however, a great way for students to ask questions, get input from other students, etc.**

**\*\*\*ALL Student Notebooks are to be turned in each Tuesday morning BEFORE Tutorial begins to aid it timely grading. Those that do not have a first class, should either take a photo/make a pdf and email to me OR arrive early so that it can be turned in to the Assistant for grading asap.**

Prior to the first class meeting:

- Read the Welcome and Letter to the Student at the beginning of the textbook
- Complete, print, and sign (if necessary) all of the “Preclass forms” on the website. Due 8/11
- Print and hole punch items listed under “Handouts” section
- Organize Binder:
  - Class Info
  - Handouts
  - Notes
  - Quizzes/Tests
  - Worksheets/Misc

### Pre-class Homework

Mod 1

At Home-Read Module 1, p 1 – 23. Using your Student Notebook p 22 - 34 (SN), take notes, answer OYO questions as you get to them in the reading and complete Study Guide (SG) questions that pertain to the reading (#1-1-4,7).

**\*\*We will not work the dimensional analysis problems yet. We will go over the math portion of Mod 1 before we begin Mod 6.\*\***

8/11 Mod 1

Turn In

- Pre-class forms from website

In class—

- Class intro, review of scientific method, finish Mod 1
- How to write a conclusion
- Introduce book report project or science fair project—due 12/8
  - Presentation for both will be 2<sup>nd</sup> semester

Hwk—finish reading Mod 1, OYO’s and SG’s, study for mod 1 quiz in 2 weeks

8/18 Mod 1

Turn in--nothing

In Class

- ACT Science Reasoning—reading and interpreting graphs and questions

Lab

- Experiment 1.2 (need SN!!!)

Hwk

- Study for Quiz Mod 1 (use notes, OYO’s, Study Guide questions)
- Complete Exp 1.2 in SN (follow format for conclusions)
- Read Mod 2 thru p 54, OYO, SG’s

8/25 Mod 2

Turn In—SN (for Exp 1.2)

Quiz—Mod 1

In Class

- Notes over Mod 2 thru p 54
- ACT Science Reasoning-practice
  - Analyze the data tables and graphs (write info on handout)
  - Answer the questions based on the passage

Lab

- Experiment 2.1
- You will create a bar graph of the data

Handout

- ACT handout-due next week

Hwk

- ACT Handout
- Read Mod 2 p 55 – 65, OYO's and SG's
- Complete Exp 2.1 in SN

9/1 Mod 2

Turn In—SN (for Exp 2.1), ACT handout

In Class

- Lecture over Mod 2 thru p 65
- Virtual Density Lab

Lab

- Virtual Density Lab
  - Students will view a density lab online and record data on handout
  - [http://phet.colorado.edu/sims/density-and-buoyancy/density\\_en.html](http://phet.colorado.edu/sims/density-and-buoyancy/density_en.html)
  - #5-8 will be completed for homework

Handout

- Virtual Density Lab

Hwk

- Complete Virtual Density Lab
- Finish Mod 2 reading, OYO's and SG's
- Study for quiz over Mod 2

9/8 Mod 2

Turn In—Virtual Density Lab handout

In Class

- Finish notes on Mod 2
- Review concepts for quiz next week

Lab

- Experiment 2.3

Hwk

- Study for Quiz 2 (use notes, SG, OYO's)
- Complete Exp 2.3
- Read Mod 3 thru p 93, OYO's and SG's

- 9/15 Mod 3  
Turn In—Exp 2.3 SN  
Quiz—Mod 2  
In Class
- Lecture over mod 3 thru p 93
- Handout
- Worksheet Mod 3A-Structure of Atoms
- Hwk
- Worksheet Mod 3A
  - Finish Reading Mod 3, OYO's and SG's
  - Study for Quiz Mod 3 in two weeks
- 9/22 Mod 3  
Turn in—Worksheet Mod 3A  
In Class
- Finish Mod 3 lecture
  - Fill in Periodic Table Handout (notes)
  - Worksheet Mod 3B-Bohr Model of Atom
- Handout
- Periodic Table Handout-Blank handout
  - Wkst Mod 3B
  - Modified Experiment 3.1 Instructions and Handout
- Lab
- Modified Experiment 3.1 (no lab report, you will not use the SN lab report for this)
- Hwk
- Study for Mod 3 quiz next week (notes, OYO's and SG's)
  - Read Mod 4 thru p 130, OYO's and SG's
  - Finish wkst 3B
- 9/29 Mod 4  
Turn in—Wkst Mod 3B  
Quiz—Module 3  
In Class
- Lecture and notes for mod 4 thru p 130
  - Practice balancing chem equations
  - Fill in Bonding Flowchart
- Handout
- Wkst--Balancing Chemical Equations
  - Bonding Handout
- Hwk
- Wkst—Balancing Chemical Equations
  - Finish reading module, OYO's and SG's
  - Study for quiz in 2 weeks

10/6 Mod 4

Turn in—Wkst Balancing Chemical Equations

In Class

- Finish lecture on Mod 4
- Video segment on cohesion, adhesion and surface tension
  - <https://www.youtube.com/watch?v=FTrFKPaOpm8>
- Video segment on hydrogen bonding and phases of water
  - <https://www.youtube.com/watch?v=AvxjhM3GaUA>

Lab

- Experiment 4.3 (there are 4 parts, we will adjust as time permits)

Hwk

- Study for Quiz Module 4 next week (notes, video segments, OYO's and SG's)
- Read Module 5 thru p 161, OYO's and SG's
- Finish lab report in SN

10/13 Module 5

Turn in—Experiment 4.3 in SN

Quiz—Module 4

In Class

- Notes and lecture thru p 161
- Practice writing chemical formulas and chemical names

Handouts

- Target 3 & Target 4 (notes on writing and balancing chemical formulas)
- Wkst--Chemical Formulas
- Ion Sheet (notes)

Hwk

- Chemical Formulas-Wkst
- Read Mod 5 p 161 – 170, OYO's and SG's

10/20 Module 5

Turn in—Chemical Formulas Wkst

In Class

Notes mod 5 starting at p 161

- Types of Chemical Reactions handout
- Video-Water Electrolysis for use with Exp. 5.1
  - <https://www.youtube.com/watch?v=djuWNaJq4JY>

Lab

- Virtual Experiment 5.1
  - We will use the video to complete the lab in the student notebook

Handout

- Types of Chemical Reactions-notes
- Wkst-Identifying Reactions

Hwk

- Wkst-Identifying Reactions
- Complete Experiment 5.1 in SN
- Finish reading Mod 5, OYO and SG's
- Study for Quiz Mod 5 in two weeks

10/27 Module 5 & Begin Dimensional Analysis  
Turn In—Wkst-identifying Reactions, Experiment 5.1 SN

In Class

- finish Module 5 notes and lecture
- Notes on Dimensional Analysis

Lab

- YOU DO SCIENCE: ELEPHANT TOOTHPASTE (no lab report)
  - We will go outside for this and use food coloring so wear old clothes

Handout

- Dimensional Analysis Notes
- Wkst-Dimensional Analysis #1 and Key

Hwk

- Wkst-Dimensional Analysis #1
- Study for Mod 5 Quiz—you can use your notes
- Read Mod 6 thru page 200, OYO's and SG's
- **Print Usain Bolt Handout** off of webpage or email

**\*\*We will begin a project next week that will be due 12/8 (you will have 4 weeks)**

**Don't forget to work on your book report or sci fair project, it is due 12/15**

11/3 Module 6  
Turn In—Wkst-DA #1 (must turn in your work to receive credit)

Quiz—Module 5

In Class

- Notes thru p 200 focusing on speed & velocity calculations
- Analyzing Position-Time graphs
- Creating Position-Time graphs
- Introduction to Usain Bolt Math Lab

Handout

- Position-Time Graph Notes

Hwk

- Read p 200 – 215, OYO's and SG's
- Begin to work on Usain Bolt Handout—Using Table 1 to Create Table 2 Data

11/10 Module 6  
Turn in—nothing

In Class

- Finish Module 6
- Review creating position-time graphs, work acceleration problems, begin to look at velocity-time graphs

Handouts

- Velocity-Time Graphs

Hwk

- Create Position-Time Graph for Usain Bolt Handout using Table 1
- Study for Module 6 Quiz
- Read Mod 7 thru p 235, OYO's and SG's

11/17 Module 6

Turn in—Nothing

Quiz—Module 6

In Class

- Review how to create velocity-time graph
- Go over acceleration calculations for Usain Bolt handout

Lab

- Acceleration Lab

Handout

- Acceleration Lab: Instructions and Data Sheet

Hwk

- Create Velocity-Time graph for Usain Bolt handout
- Read the rest of Mod 7, OYO's and SG's
- Work on Book Report or Sci Fair Project—Report for both due 12/8
- Complete data sheet for lab in not completed in class

12/1 Module 7

Turn In--Acceleration Lab Data Sheet

In Class

- Notes thru p 235
- Work free fall problems
- Review for FE

Hwk

- Calculate acceleration at each split for Usain Bolt handout
- Study for FE
- Work any OYO's and SG's not yet completed

12/8 Module 7

Turn In—Usain Bolt Handout (ALL of it), Book Report or Sci Fair Report

In Class—we will study for FE after the lab is completed

Lab

- Calculating Acceleration Using Height and Time Elapsed
  - Students will calculate acceleration due to gravity for an object dropped from several different heights. They will then average the accelerations and compare to the accepted value to determine percent error.

Handout

- Acceleration Due to Gravity Lab

Hwk

- Study for FE
- Complete lab report at home

12/15 Final Exam

Turn in—Acceleration Using Height and Time Elapsed lab report

In class—Final Exam

- Students may make a 3" x 5" note card to use on the exam
- All formulas will be written on the white board so do not put them on the note card
- Students may use the Ion Sheet handout for the test
- I will provide a periodic table for the test