Syllabus & Pacing

1.) Course Description

A high school physical science course explores the fundamental concepts of physical and chemistry, serving as an introductory course or foundational course for more specialized science courses. It introduces concepts related to the laws of physics, atoms, and molecules. It integrates principles from both disciplines to provide a broad understanding of matter and energy and their interactions.

This course is the first semester of a 2-semester course (full-year)

2.) Conceptual Physics Outline

This course consists of the following units:

1. Describing Motion
2. Contact Forces and Motion
3. Momentum and Conservation of Momentum
4. Energy and Energy Transfer

3.) Course Requirements

Course Materials

All courses require you to have access to a working computer and to the Internet.

All course work will be completed and graded through a digital learning management system known as Onfire.

Course Requirements

Students are required to do all testing on a computer.

Any attachments must be made in a Word document file, PDF, or Google Doc shareable link and turned in through OnFire.

Course Resources

Included in the resources section are a periodic table and a common ion chart. It is recommended that you have a hard copy of these. Beyond these materials, you will need occasional laboratory materials, access to a printer, and a calculator. A scientific calculator is sufficient for this course.

Online Technologies

This course takes place online. Since we will not meet face-to-face, you must have the necessary technology and technical know-how to work effectively in this online learning environment. This online course will utilize OnFire as the learning management system. Please get in touch with your instructor if you have trouble logging in or viewing any of the documents and links posted.

4.) Grade Breakdown

Grading Procedures

A 94-100%	C 73-76%
A- 90-93%	C- 70-72%
B+ 87-89%	D+ 67-69%

B 83-87%	D 63-66%
B- 80-82%	D- 59-63%
C+ 77-79%	F 58% or below

Grade Weight Groups:

- Quizzes and Assignments: 60%
- Post-Assessment: 15%
- Tests: 15%
- Lab: 10%

Parents/Guardians will be able to observe and view their student's progress through Onfire.

5.) Pacing Guide

Tentative Course Schedule

Students will be allowed to complete the course at a pace that best suits them. The students will be responsible for completing and turning in all assignments according to their individual needs.

A student may choose to go FASTER than the minimum pace. Below is a suggested pacing guide. However, make sure to look at your school's deadlines, to ensure that you are completing courses on track. Some schools have an average of 8-10 weeks, per term. This is a 8-week pacing guide but can be done quicker.

Term 1

Week 1	❏ Safety Contract Unit: Describing Motion ❏ Lesson: Units and Unit Conversions ❏ Assignment: Unit Conversion Practice
Week 2	Unit: Describing Motion ❏ Quiz: Units ❏ Lesson: Graphing Linear Motion ❏ Activity: Creating Position-Time Graphs
Week 3	Unit: Describing Motion ❏ Lesson and Quiz: Interpreting Motion from Slope of a Line ❏ Activity: Interpreting Position-Time Graphs ❏ Lesson and QUIZ: Changing Speed and Velocity for Linear Motion
Week 4	Unit: Describing Motion ❏ Quiz: Go Kart Position-Time Graph ❏ Lesson and Quiz: Graphing Changes in Motion ❏ Unit Test: Describing Motion

Week 5	Unit: Contact Forces and Motion ❏ Lesson and Quiz: Mass and Inertia ❏ Quiz: Interpreting Net Force ❏ Lesson and Quiz: Newton's First Law
Week 6	Unit: Contact Forces and Motion ❏ Lesson and Quiz: Newton's Second Law ❏ Lesson and Quiz: Newton's Third Law ❏ Lab: Basics of Forces and Motion
Week 7	Unit: Contact Forces and Motion ❏ Unit Project: Protect Your Egghead
Week 8	Unit: Contact Forces and Motion ❏ Unit Test: Contact Forces and Motion ❏ Term 1 Post-Assessment and Grade Submission

Term 2

Week 1	Unit: Momentum and Conservation of Momentum ❏ Lesson and QUIZ: Momentum ❏ Lesson and QUIZ: Momentum and Impulse
Week 2	Unit: Momentum and Conservation of Momentum ❏ Assignment: Momentum and Impulse ❏ Lesson and QUIZ: Isolated Systems and Conservation of Momentum ❏ Lesson and QUIZ: Elastic and Inelastic Collisions
Week 3	Unit: Momentum and Conservation of Momentum ❏ Unit Project: Collision Comic Strips
Week 4	Unit: Momentum and Conservation of Momentum ❏ Unit Test: Momentum and Conservation of Momentum Unit: Energy and Energy Transfer ❏ Lesson and Quiz: Kinetic and Potential Energy
Week 5	Unit: Energy and Energy Transfer ❏ Assignment: Energy Skate Park PhET ❏ Lesson and Quiz: Transforming Energy

Week 6	Unit: Energy and Energy Transfer ❏ Activity: Roller Coaster Rollback ❏ Lesson and Quiz: Heat and Temperature ❏ Lesson and Quiz: Heat Transfer
Week 7	Unit: Energy and Energy Transfer ❏ Lesson and Quiz: Conservation of Energy ❏ Unit Lab Project: Icy Challenge
Week 8	Unit: Energy and Energy Transfer ❏ Unit Test: Energy and Energy Transfer ❏ Term 2 Post-Assessment and Grade Submission