

Physics, 2017/18

Mary Jean Jones (Ms. Jones)

Phone: 801.393.3900 x415

Office Hours: Mon, Tue 3-4pm, & by appointment

Email: mjones@venturelearning.org
(Email is the best way to reach me)

Class Webpage: Physics 17/18, Google Classroom
Code: gfxd04

“All of science is nothing more than refinement of everyday thinking.”
Albert Einstein

Anchor Texts and Resources:

- 1.) Hewitt, Paul G. *Conceptual Physics, 12th Edition.* (2014)
- 2.) Crawford, Michael. *Physics in Context (An Integrated Approach)* (2001)
- 3.) [University of Colorado Physics Education and Technology Simulations: https://phet.colorado.edu/](https://phet.colorado.edu/)

The Year At A Glance:

1. Kinetics – appropriately using and reporting numbers when discussing how stuff moves, in terms of Physics concepts
2. Waves – investigate features, behaviors, and impacts of waves in order to explore light and sound waves, as well as electricity
3. Energy Storage – describe how energy can be stored and used. We will explore Earthly and other celestial applications such as global air circulation and the life cycle of stars.
4. Energy Transfer - efficiency and resources available of various types of energy

Major Course Themes: 4 Strands of Science Learning

1) Science Conceptual Understanding	3) Nature of Science Understanding
2) Science Processes	4) Communication in Science

Student/Teacher Expectations:

1. Students will be expected to abide by the school habits of character as well as classroom rules and norms. These norms, as well as the habits of character, will be posted in the classroom for continuous reference. With strong character, advanced learning will take place.
2. Accommodations and modifications will be made in accordance with student IEP and 504 plans.
3. Please communicate with me if there are any issues with understanding or completion of assignments, or any other problems that may affect your quality of work.
4. In addition to office hours, I will be available most days before and after school by appointment.
5. Be aware that this syllabus is subject to change. Any changes will be communicated in writing.

Habits of Work and Character:

Students will be held to the Habits of Work and Character outlined in the Family Handbook. Students will receive a grade reflecting their performance on the following Habits of Work and Character in my course. *Please be aware that an Unsatisfactory grade (U) in **any** of the six habits will result in a U in the course.*

Grit	Respect
Leadership/Collaboration	Integrity
Responsibility	Attitude

Grades and Assessments: Students’ progress in this course will be assessed using classwork, journaling, quizzes, tests, and homework, all leading up to a final product. All assignments will be assessed by the mastery of **Long-Term** and **Supporting Targets**. Long-Term Learning Target grades will be averaged to determine a final course grade, as shown in the table below. **A score of less than 60% in *any* Long-Term**

Learning Target will result in an ‘F’ in the course. If an assignment is turned in *late*, or if the first submission is *less than a C*, the highest possible grade students can earn is a “C”.

Late Work will be accepted on a case-by-case basis after an individual conference. All late work will negatively impact a student’s Habits of Scholarship grade. If there are any concerns about deadlines, or special circumstances that may result in an assignment being turned in late, **please speak to me**. Certain assignments will have final cut-offs for late submissions.

Grade Revisions: We employ a culture of revision at Venture High School. Students may need more than one shot to do their best work. For any assignment, students may resubmit their work until 2 weeks prior to the end of each semester. Resubmitted work must include the original work, the marked rubric, and the revisions.

Assessments:

Exams	3
Quizzes	~12
Lab Reports	~12
Design Projects/Models	3
Problem Sets	3

Science Skill Targets:

Skills 1. Ask and answer questions derived from curiosity about everyday experiences.

Skills 2. Analyze a popular press scientific article.

Skills 3. Analyze a scientific paper.

Skills 4. Design and conduct a high quality scientific study.

Skills 5. Use science to argue a point of view.

Skills 6. Convey accurate scientific information in a written format.

Skills 7. Explain scientific information through a verbal presentation.

Labs:

1- Velocity and Acceleration of a Ball

2- Dodgeball “Kick”

3- Force of Friction

4- Density

5- Diffusion

6- Conservation of Momentum

7- Centripetal vs. Centrifugal

8- Harmonics

9- Bending Light

10-Circuits/Capacitors

11- Solenoid Motors

12- Specific Heat

Projects:

1- *Rube Goldberg*: Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

2- *Thermal Equilibrium*: Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system

Acknowledgement: Copy and complete the following both as **student AND parent/guardian** and email to mjones@venturelearning.org for your **FIRST ASSIGNMENT** due Friday, Aug. 25.

Student Name

Parent/Guardian Name

I have read and understand the syllabus and accept the classroom rules and norms. I am the (student/parent/guardian).