** CABRILLO HIGH SCHOOL**

*Home of the Conquistadores*

**Science/Physics 2019-2020/ Semester 1 and 2**

**Teacher Name and Contact Information**

**Mrs. Phillips**

*e-mail: phillips.tracy@lusd.org*

phone: 742-2900

Office Hours: Before School: 7:20 – 7:40

7th Period and after school: 1:45 – 3:00

**Introduction**

General Physics provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, waves, sound, light, electricity, magnetism, and how they are related. By nature, Physics is a process of inquiry that helps develop explanations about phenomena in nature. In this course, students will develop models, plan and carry out investigations, analyze and interpret data, use mathematical computations, and use their analyses to formulate well-supported arguments and conclusions. The course is built on the framework of the Next Generation Science Standards, and some of the specific Performance Expectations have been cited in unit summaries below.

**Course objectives/key learning outcomes**

Upon completion of this course students will be able to:

1. Identify how physical laws explain the occurrence of certain natural processes.
2. Develop a working knowledge of physics related vocabulary.
3. Demonstrate an ability to apply mathematical models and equations to observed natural occurrences.
4. Demonstrate and ability to apply logic and critical thinking skills to scientific problems and to appropriately apply the scientific method.
5. Demonstrate an ability to apply basic learned physical laws to more advanced technological situations.

**Sequence of topics/units**

Unit 1: Representing Motion (3 weeks)

Unit 2: Acceleration (2 weeks)

  Unit 3: Newton's Laws (2 weeks)

Unit 4: Motion in Two Dimensions (3 weeks)

   Unit 5: Forces in Two Dimensions (1 ½ weeks)

   Unit 6: Circular Motion (3 weeks)

Unit 7: Momentum (1 week)

Unit 8: Work, Power, Energy (3 weeks)

   Unit 9: Waves (1 week)

   Unit 10: Sound (1 week)

   Unit 11: Light (2 ½ weeks)

   Unit 12: Electrostatics (1 ½ weeks)

   Unit 13: Current and Circuits (2 weeks)

   Unit 14: Magnetism (1 week)

   Unit 15: Electromagnetism (2 weeks)

**Assignments/Projects**

Within each unit there will be at least one laboratory project and exam. There will also be a cumulative final exam at the end of the semester.

**Instructional Materials**

Students will be provided with a consumable workbook and lab book and a text will be provided for home use. A copy of the textbook will also be available for in class use as well.

Text: ***Inspire Physics,*** *McGraw Hill*

**Instructional Structure of the Class**

During each class the previous night’s homework will be reviewed and new material presented. Labs, designed to support the presented material and develop critical thinking skills, will be given (on average) weekly. Tests and/or quizzes will be given during and at the end of each instructional unit. Students are encouraged to work cooperatively on both the labs and class work.

**Progress Monitoring**

Grades will be based on the total points earned on tests (70%), labs (15%), and class and homework (15%). The grading scale is as follows:

90 - 100 % A

80 – 89 % B

70 – 79 % C

60 – 69 % D

Grades will be updated weekly and posted on Zangle as well as in the classroom.

**Homework Policy**

Homework will be assigned daily. The intent of homework is not to keep students busy but to provide the necessary practice to master a difficult subject. Students are expected to turn in their own work (not “borrowed” work from other students or from the internet). Students will not be graded based on “right or wrong” answers but on effort. Late work will be accepted if submitted with a ticket.

**Support/Intervention**

I am available before school or after school for help. In addition, all class notes and assignments can be accessed from my faculty page on the Cabrillo website ( [www.lusd.org/chs](http://www.lusd.org/chs) ).

**Classroom Norms**

As this is a lab class, all lab safety rules outlined in class must be strictly adhered to. In addition, students are expected to follow the classroom norms listed below:

Be Prompt – in your seat when the bell rings

Be Prepared – bring materials to class EVERYDAY

Be Productive – turn **cell phones off**, follow directions, and do not leave the room without

permission

Be Positive – have a good attitude

Be Polite – be kind to others

Five tickets will be issued to each student at the beginning of the semester. Tickets will be forfeited for tardiness, to turn in late work, or for behavioral infractions. Tickets remaining at the end of the semester can be redeemed for extra credit. Tickets will be taken from students who fail to meet these expectations.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Student Signature Date**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Parent Signature Date**