11th Grade Physics
Course Outline

Teacher Statement:

My name is Mac Mitchell. I have been a teacher with Family Christian Academy since the 2016-2017 school year. Prior to that I was a mechanical engineer at the Kennedy Space Center and a high precision machine and fabrication shop on the east coast for 12 years. God has always had me in a teaching role whether it was mentoring in college or teaching classes to other professionals.

I am excited to help our students experience and understand how God has allowed us to comprehend the workings of the universe. Through this he shows us how much he loves us and how powerful he really is.

Course Goals:

1. To prepare students in a manner that helps them to better understand and communicate their understanding of how science is used and applied in everyday life.
    a. A main focus of this goal is to be able to communicate and understand the reasons and implications of their belief system and how science fits into that belief system.
    b. This will include both Christian and secular ideas/theories to make sure that the students are not ignorant of either concept position.
2. To remove the fear of science that too many students have in schools.
3. To excite students to explore and to be bold in their exploration of how the world works.
4. To help them succeed in learning and retain their knowledge as it pertains to science.

General Information:

1. Each class has a textbook that will be used as a resource as we progress through the year's learning.
    a. Students are allowed to "check out" the book when needed to use at home. Please take care of the book and return it when done for use by the rest of the class.
2. Every student has an email account and access to the Microsoft Office 365 Suite of software.
    a. The email address for each student is firstname.lastname@fcaorlando.com.
    b. For the high school students, this email account is where they will receive communication from me about the class to include:
        i. Assignment information
        ii. Links to online Quizzes/Tests
        iii. Etc…
3. Each student is required to be ready for class every day at the opening bell. This includes being seated and with the correct materials on the desk in front of them. This also includes all materials that are to be with every student in their backpack.

General Expectations:

1. As much as is possible, students are responsible for their own learning and conduct in class.
    a. This is to help prepare the students for the rigors of high school and afterwards, college.
    b. I will be as clear as I can about the topics and concepts and mathematics involved in the class, and students are responsible for asking for clarification when they do not understand.
    c. I will provide information that will allow the students to know what material will be covered by the formal assessments given in class, and the students are responsible for their own studying and preparation for the assessments.
        i. They may of course seek appropriate help from me or other students prior to the assessments. I will be available as possible during lunch and after school.

General Assignment Guidelines:

1. All submitted assignments must be the student's individual work.
    a. Students may work together to complete assignments when needed or when instructed to aid in learning and understanding.
    b. Copying of another student's work is considered cheating and will result in a grade of zero (0) being given to all students involved.
    c. Plagiarism of any kind is considered cheating and will result in a grade of zero (0) being given for the assignment.
2. All submitted assignments when handwritten must be legible.
    a. Assignments may be typed if that works best for the student.
    b. Some assignments will be required to be typed.
        i. When this occurs, the specific font/spacing will be specified.
        ii. If the font/spacing is not specified, it should be assumed that the assignment should be submitted using a 12pt. "Times New Roman" font with double line spacing.
3. All assignments must be completed.
    a. If an assignment is left with any portion not completed, the assignment will receive a grade of "I" for "Incomplete" (which is calculated by the grading system as a zero (0%) and be averaged into the overall grade as such.
4. All math assignments are to be submitted with calculations done out to two (2) decimal places and with any appropriate units of measurements specified.
5. In high school, electronic devices such as Laptops and Tablets are used to aid in learning. It is recommended that every high school student has such a device.
    a. They will use/need such devices for college, so I will be using them in my classes for quizzes and tests.
    b. They may also be used to take notes.
    c. School rules regarding electronics and internet use must be followed at all times per the school behavior management plan.
6. Writing assignments, unless otherwise specified, shall be submitted written in third-person point of view (e.g. he, she, they, it, one, etc.). Assignments, particularly reports, essays, and paragraphs, may not be written from first-person point of view (I, we, our, etc.). If they are not written in this type of professional/non-conversational manner, the grade will be severely affected. This is done to teach a reliance on the data and research instead of a reliance on the student's feelings/opinions when discussing scientific matters.

7. A comprehensive semester exam will be given in this course at the end of each semester. Each exam will count as 15% of the student's semester grade. Students who exceed the maximum number of absences in a semester will be required to earn a minimum of 70% on the semester exam to receive credit for the course. Students will be expected to take the exam during the assigned time unless an exception has been approved by administration. Eighth through twelfth grade students with an "A" (90%) average in a high school course at the time of the exam may exempt a maximum of three semester exams. Students may exempt three semester exams per semester, provided that they have not exceeded the maximum number of absences allowed in each course.

Curriculum Outline:

*This course outline is an estimation of weeks and order allotted for the class curriculum. SAT review week and testing week are not shown in this outline. In addition, schedules may change to accommodate school programs, mission/field trips, science expo, and other school/class events. Because of this, this schedule does not extend to the last day of school.

First Semester

Force and Linear Motion.…….(8 weeks)

Gravity & Rotational Motion.…….(4 weeks)

Conservation and Energy……..(3 weeks)

Machines……...……..……(1 weeks)

Second Semester

Machines…….....…….……..(3 weeks)

Thermodynamics..…..…..……(1 weeks)

States of Matter & Gas Laws…….…….(4 weeks)

Waves & Light…….…..…….…….……...(4 weeks)

Science Expo Preparation..…….…….……...(2 weeks)

Electricity……...…….…….……...(2 weeks)

The textbook(s) used in this class is/are:

Title	ISBN #
Glencoe Physics - Principles and Problems	0-07-845813-7