

# Ocean View Christian Academy

# Physical Science SCI900

**Teacher:** Mr. Williams

**Room:** 201

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**Textbook:** *Physical Science* by BJU Press, 5<sup>th</sup> Edition

## I. Basic Course Information

### OVCA Course Philosophy

Science is the study of God's creation and how it works. By exploring the work of God, students can see the divine order of creation. Also, it is vital that our students explore this subject because science remains the yardstick by which an innovative nation progresses. God has created an orderly world. And thereby, order and reason govern our study of science.

### Course Description

Physical Science is a two-semester course designed for students entering 9<sup>th</sup> grade. Its goal is to lay the foundations for the studies of physics and chemistry later in high school. In this course, we will cover several topics in physics and chemistry from a Christian worldview including the following: structure of an atom, elements, compounds, chemical reactions, stoichiometry, Newtonian mechanics, magnetism, electricity, energy, waves, and more.

### Course Goal

The goal of this course is for students to step away from rote memorization as the main source of learning and begin learning to grasp broad concepts and apply them to an array of scenarios. Students will learn how to ask testable questions, develop a hypothesis, design experiments to test the hypothesis, compile data, analyze the data, and write a conclusion to their experiment. Additionally, students will learn to perceive science as a means of bringing glory to God rather than contradictions.

### Course Materials

- Mechanical pencils (please, no pens)
- Binder reserved for physical science
- Scientific calculator

## **II. Course Overview**

Unit Name	Topics
The Structure of Matter	Classification, density, changes of state, atomic model, nuclear atom, periodic table, periodic trends
Introduction to Chemistry	Compounds, chemical formulas, reactions, mixtures, solutions, acids and bases, salts
Magnetism	Magnets, domains, poles, fields, Earth's magnetic field, electromagnetism, magnet strength
Electricity and Energy	Static electricity, Potential energy, kinetic energy, current, voltage, resistance, batteries, circuits, energy transfer, Ohm's Law
Newtonian Mechanics	Motion, word descriptions, Newton's Laws, Gravity, forces, kinematics equations, displacement, velocity, acceleration, graphing

## **III. Course Policies**

### Guided Notes and Homework

We will use guided notes and homework packets to maximize the amount of class time spent practicing math skills. Your student will receive a packet with fill-in-the-blank notes and homework for the entire unit at the beginning of each unit. This minimizes the time the students spend copying information, the time I spend passing out papers, and helps boost organization so students can develop a clear picture of the curriculum and connect lessons throughout the school year.

### Extra Credit

Opportunities for extra credit will be limited to questions on quizzes and tests that reflect an understanding above and beyond the expectation of the course. However, I may offer optional assignments or challenges throughout the year that students may complete to earn *extra homework grades* to bolster their grade. Additional work/tasks will not be assigned to students seeking extra credit to improve their grade.

### Late Work

- Daily homework may not be completed and turned in late unless for sickness or excused absence. Students will receive either a zero or half-credit for choosing not to complete their daily homework assignment in full.
- If a student misses a quiz or test, it is assumed that they will complete it after school on their first day back unless they communicate otherwise. Lack of communication will result in a deduction of 10% per day up to five days. After the fifth day, the student will receive a zero.
- The penalty for other assignments such as long-term projects, papers, lab write-ups, etc. is 10% per day for up to five days. After the fifth day, the student will receive a zero.

### Help Sessions

Help sessions will be available Monday, Tuesday and Thursday from 2:45 PM – 3:30 PM or by appointment. I am always happy to help by appointment!

## Academic Dishonesty

Any student caught committing or facilitating academic dishonesty will receive no credit for the assignment and be referred to the office staff to discuss further consequences. Refer to your parent/student handbook for further details.

## Classroom Guidelines

1. Be **ready** in your seat when the bell rings.
2. Be **respectful** of others, their property, and opportunity.
3. Be **responsible** for your own learning.

Consequences for not following the guidelines are listed below and will be carried out in a manner that seems fit depending on the severity of the offense.

- Verbal warning
- After class discussion
- Parent intervention
- Drop in effort/conduct grade
- Office intervention

## Communication

Students are welcome to communicate by stopping by my classroom or via email. I will not respond to emails from students after 6:00 PM or over the weekends.

Parents desiring a personal conference should communicate with me first via email. I will not hold drop-in meetings concerning a student's academic performance.

## Final Comments

Please see the parents/student handbook for any questions not addressed in the syllabus. I have refrained from including OVCA school guidelines and procedures in this syllabus to conserve the school's resources.

On the next page is a contract of agreement. Please sign the agreement, students and parents, and return it by Wednesday, August 21, 2018. It is a homework grade.

Science can be a little scary, but I truly believe that each and every student has the potential to learn this material and succeed. You are in good hands, and I promise to provide any and all resources that I have in order to help you reach your goals. I am excited to watch you grow as a student but more important in Christ. We are going to have fun this year!

A handwritten signature in black ink, appearing to read "Mrs. L. Will".

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### Contract of Agreement

#### Student

I have read the class syllabus and understand the classroom guidelines and policies as outlined. I agree to abide by the expectations and will commit myself to submitting quality work this school year.

Name (print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

#### Parent

I have discussed the syllabus with my student. I understand the syllabus, support it, and will make every effort to ensure my student's academic success as outlined in the syllabus.

Name (print): \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_