

# Physical Science Syllabus

**Teacher:** Mrs. Karen Mathews **Email:** [Karen.Mathews@fcstn.net](mailto:Karen.Mathews@fcstn.net)

**Phone:** 931-361-0300

## **Course Description:**

The Physical Science standards will integrate practices and crosscutting concepts within each core idea to provide students with a well-rounded education in science. Emphasis will be placed on critical thinking, problem solving and applications, and communication (written and verbal) of student learning. The process of observation, hypothesis testing, and refinement/application of ideas will be continually incorporated within the content of this course. Skills, such as pattern recognition, cause and effect, experimental design, scale and proportion, systems, structure and function, and stability, will be stressed through hands-on learning within the classroom.

## **Course Objectives:**

As a student you will be exposed to new scientific language and concepts, technology, and research. You will actively participate in laboratory investigations to develop or strengthen scientific attitudes and interests. You will be encouraged and guided towards taking an independent responsibility in your own learning, which will prepare you for college, technical school, and/or the workplace. This will be measured by your success in meeting the requirements to pass the class.

## **Class Requirements:**

1. Textbook: Physical Science
2. Chromebook
3. A lab fee of \$10.00 (a student on free or reduced lunch may not be required to pay the lab fee, but must complete a FEE WAIVER FORM and be approved).
4. A composition notebook, paper, pencils, colored pencils, earbuds.

## **Class Rules:**

1. Be Respectful
2. Be Responsible
3. Be Ready

## **Makeup work:**

All missed class work, tests, projects, etc. (excused or unexcused absence) is/are required to be made up. It is the responsibility of the student to see all work missed is completed to the satisfaction of the teacher. As stated in the student handbook, a student will be allowed an equal number of days to complete the make-up work as the number of days they missed. (Example: A student who is absent two days should have all work turned in by the second day that the student has returned to school.) More time for make-up work may be granted in special circumstances by making arrangements with the teacher involved.

Late work will be accepted (one day only) but will NOT receive full credit.

## **Grading System:**

All assignments are graded on a point system. The number of points for each assignment will vary depending on the type of assignment and the complexity of the assignment. For example, tests, labs, and projects will be assigned more points than classwork assignments. To calculate the student's average, the total number of points earned is divided by the total number of points possible.

Grading Policy: A= 90-100% B= 80-89% C= 70-79% D= 60-69% F= Below 60%

**Honors Classes** will be earning 3 extra points in a variety of ways. These students will be utilizing self-study, inquiry based learning, extended reading and writing assignments, virtual labs, and research projects.

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Topic	Textbook	Standard
Unit 1: Motion and Forces  Measurement, Motion, Speed, Velocity, Momentum, Acceleration, Forces, Newton's Laws of Motion	Chapter 1 Chapter 2 Chapter 3	PS2.1 PS2.2 PS2.3 PS2.4 PS2.5 PS2.6
Unit 2: Energy  Types of Energy, Work, Simple Machines, Thermal Energy, Electricity, Magnetism	Chapter 4 Chapter 5 Chapter 6 Chapter 7	PS2.7 PS3.1 PS3.2 PS3.3 PS3.4 PS3.5 PS3.6 PS3.7 PS3.8 PS3.9
Unit 3: Waves  Transverse and Longitudinal Waves, Wave Properties, Electromagnetic Spectrum, Sound, Light	Chapter 9 Chapter 10 Chapter 11 Chapter 12	PS4.1 PS4.2 PS4.3 PS4.4 PS4.5
Unit 4: Matter  Physical and Chemical Changes, States of Matter, Properties of Matter, Atomic Theory, The Atom, Isotopes, The Periodic Table, Naming Compounds, Gas Laws	Chapter 14 Chapter 15 Chapter 16 Chapter 17	PS1.1 PS1.2 PS1.3 PS1.4 PS1.5 PS1.6 PS1.7 PS1.8 PS1.9
Unit 5: Reactions  Bonding, Balancing Equations, Types of Reactions, Nuclear Chemistry, Acids and Bases	Chapter 18 Chapter 19 Chapter 20	PS1.10 PS1.11 PS1.12 PS1.13 PS1.14 PS1.15