



## SYLLABUS 2021-2022

SECONDARY SCHOOL

9TH GRADE

### PHYSICAL SCIENCE

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#### LIFE AHEAD METHODOLOGY

Life Ahead: Personal growth is assured through the philosophical foundations and the school's Life Ahead Methodology. The Life Ahead Methodology promotes autonomy, organization, responsibility, and social skills. Its major goal is to produce self-reliant individuals who will assume an ever-greater responsibility for their own learning.

#### COURSE DESCRIPTION

Physical Science is the study of matter and the changes it undergoes. In this sense, the course teaches basic Physics and Chemistry concepts explaining the behavior and the interaction of matter, forces in solids and liquids. For the latter part, the Laws of Newton are used to explain equilibrium of objects. Work, energy and heat are introduced to help students in the understanding of real life phenomena.

#### OBJECTIVES

- Use International System of Units (SI) prefixes and indicate what multiple of ten each represents.
- Convert between metric units.
- Assemble the structure of the atom using average atomic mass and atomic number to develop a model for an atom with an accurate number of protons, neutrons, and electrons.
- Use the periodic table to classify and predict the characteristics of an element.
- Explain how atoms combine to form compounds and molecules that are chemically stable. Distinguish between ionic and covalent bonds.
- Write and name chemical compounds (binary and polyatomic).

#### CONTENT

The world of physical Science  
Elements, Compounds, and Mixtures  
Forces in Fluids  
Heat and Heat Technology  
Chemical Bonding  
Atomic Energy  
Electronic Technology  
The Nature of light

The properties of matter  
Matter in Motion  
Work in Machines  
Introduction to Atoms  
Chemical Reactions  
Introduction to Electricity  
The energy Waves  
Light and Our World.

States of matter  
Forces in Motion  
Energy and Energy sources  
The Periodic table  
Chemical Compounds  
Electromagnetism  
The Nature of Sound

## SKILL STRANDS

Critical thinking using the Scientific Method, analysis, data interpretation, interpreting and creating graphs, mathematical skills and problems solving, interpreting and analyzing quantitative and qualitative data, building confidence through experimentation.

## TEXTBOOK

Holt Science & Technology Physical Science

## EXPECTATIONS

Classes are instructed in English, students are held to the expectations to speak only English at all times, including during group work with peers. Students are expected to participate in class and ask questions when they do not understand the lesson being taught.

## ASSESSMENT

- Students are usually evaluated every Friday. (May be subject to change, due to other activities).
- Students will have the opportunity to improve all test grades, except semester and final exam.
- Grading system: 60% tests and quizzes, classwork, and homework 40

## WEEKLY FOLDER

Evaluations will be sent home in the Friday Folder, please sign, and return on Monday.

## CITAS

Si necesita consultar o expresar alguna inquietud sobre el desarrollo o evaluación de la materia, puede solicitar una entrevista con la docente en la recepción al 2316-7800 o enviar correo electrónico a [iamaya@colegiomaya.edu.sv](mailto:iamaya@colegiomaya.edu.sv)

## INFORMACIÓN

Para mayor información lo invitamos a visitarnos en:



[www.colegiomaya.edu.sv](http://www.colegiomaya.edu.sv)



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