

PHYSICAL SCIENCE

I. Course Description

This course is an overview of Physical Science. Study begins with a detailed discussion of the world around us and what makes it work. It continues with a discussion on the universe and the majesty of God's creation.

II. Course Goals and Objectives – Students will:

- A. see God's hand at work through science;
- B. gain an understanding of the molecular building blocks;
- C. understand the composition and basic physics of the atmosphere;
- D. understand the wonder of water and the earth's hydrosphere;
- E. understand the basic composition of the earth and theories on formation of surface features;
- F. understand the earth's weather and its prediction;
- G. understand physics of motion and Newton's laws;
- H. understand the forces in creation;
- I. understand the basics of sound and light;
- J. gain a basic understanding of our surrounding universe.

III. Course Outline – Students will:

- A. demonstrate a knowledge of measurement and units;
- B. demonstrate the ability to convert between units;
- C. be able to describe the composition of air;
- D. be knowledgeable about the environmental issues of global warming, ozone, and air pollution;
- E. be able to identify layers of earth's atmosphere;
- F. understand temperature gradient in homosphere;
- G. define the composition of water;
- H. understand the physical characteristics of water;
- I. describe the hydrological cycle;
- J. understand the basic states of water on the earth's surface;
- K. describe basic composition of the earth's core mantle and lithosphere;
- L. state the differing theories on the development of the earth's surface features;
- M. understand the factors that influence weather;
- N. describe basic weather phenomenon, such as precipitation, thunderstorms, lightening, tornadoes, and hurricanes;
- O. gain understanding of the basic elements of meteorology;
- P. describe the basic elements of the physics of motion – speed, velocity, and acceleration;
- Q. memorize and understand Newton's three laws of motion;
- R. describe gravitational force;
- S. understand the basics of electricity and magnetism;
- T. understand the structure of the atom and radioactivity;
- U. understand the basics of waves in fluids;
- V. understand the basics of the physics of light;
- W. be exposed to the basic elements of our universe.

IV. Instructional Material

Textbook – Exploring Creation with Physical Science by Dr. Jay L. Wile, Apologia Educational Ministries, Inc., 2000

V. Teaching Methods

- A. Reading and discussion
- B. Experiments
- C. Lab notebook
- D. Section review questions
- E. Study guides

VI. Evaluation

- A. Final exam
- B. Unit tests
- C. Lab notebook

VII. Grading scale:

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