



PINEWOOD – THE AMERICAN INTERNATIONAL SCHOOL OF THESSALONIKI, GREECE

NAME OF COURSE: *Science 7*

GRADE LEVEL: 7

SCHOOL YEAR: 2011 - 2012

COURSE DESCRIPTION

The seventh grade science curriculum integrates earth and life science. Science concepts and principles place emphasis on the nature of science and inquiry. It builds upon the experience in the life, helps students to recognize and appreciate the application of earth science to everyday living and provides the foundation for further studies in high school biology. It presents a scientific study of the structure and function of living organisms; it develops an awareness of living things, the processes that support life and the relationship among organisms.

The student will construct an understanding of science concepts through systems and diversity.

LEARNING OBJECTIVES

- to learn about the basic parts and activities of a cell and how microscopes are used to study cells
- to learn the characteristics of organisms in each kingdom
- to learn the characteristics of different kinds of plants and how plants are classified
- to learn the characteristics of different kinds of animals and how animals are classified
- to gain an understanding about populations, communities of organisms and ecosystems
- to gain an understanding about energy flow in food chains and mineral cycling
- to learn about natural resources: renewable and non-renewable
- to learn about pollution and how to reduce it as well as about conservation

SCOPE AND SEQUENCE *

During the first and second quarter the emphasis is on life's structure and function and life's diversity. The students are exposed to the process of scientific method, to the study of taxonomy, cytology, microbiology, botany and zoology (invertebrates).

In the third and fourth quarter students continue work in the field of zoology (vertebrates) as well as on the structure and function of ecosystems, on pollution and ways to remedy the problems, on the structure and processes involved in the atmosphere, and on factors affecting weather.

QUARTER I

Chapter 1 Exploring and classifying life
What is science- Living things- Where does life come from?- How are living things classified?

Chapter 2 Cells – The units of life
The world of cells- the different jobs of cells

Chapter 3 Bacteria
What are bacteria?- Bacteria in you life

QUARTER II

Chapter 4 Protists and Fungi
Protists- Fungi

Chapter 5 Plants
An overview of plants- Seedless plants- Seed plants

Chapter 6 Invertebrate Animals
What is an animal?- Sponges, Cnidarians, Flatworms, and Roundworms-
Mollusks and Segmented Worms,-Arthropods and Echinoderms.

QUARTER III

Chapter 7 Vertebrate Animals
Chordate Animals- Amphibians and Reptiles- Birds- Mammals

*Chapter 12 Ecology – Interactions of Life
Living Earth – populations – interactions within communities

*Chapter 13 Ecology – The non-living environment
Abiotic factors – cycles in nature – energy flow

QUARTER IV

**Chapter 19 Conserving resources
Resources – Pollution – The three R's

Chapter 10 Atmosphere
Earth's Atmosphere- Energy Transfer in the Atmosphere- Air Movement

Science Project

**Note that the order in scope and sequence is subject to change during the school year.*

HOMEWORK POLICY

All homework must be handed in on time. Late homeworks get minus 10% penalty for their grade. No late homework will be accepted beyond four days.

ASSESSMENT

- Semester exams to test the student's mastery of the semester concepts
- Chapter tests to test the student's ability to follow the course.
- Quizzes announced and unannounced to test how well the student is keeping up and understands concepts.
- Homework and classwork assignments will be used for reinforcement, review and evaluation
- Laboratory reports
- Participation in class discussion
- Student effort and application

- Test - 50%
- Quizzes – 10%
- Homework, worksheets, notebook – 20%
- Lab. work and lab reports – 10%
- Participation, attitude – 10%

RESOURCES

- Main Textbook:
National Geographic Society, Alton Biggs, Lucy Daniel, Ralph Feather, Norman Lederman, Peter Rillero, Susan Snyder, Dinah Zike. 2003. **Integrated Middle School Science . Level red.** Glenco/McGraw-Hill, Orion Place, Columbus, Ohio
- Additional support material and various other reference texts including older Life Science and Earth Science textbooks.
- *National Geographic Society, Alton Biggs, Lucy Daniel, Ralph Feather, Norman Lederman, Peter Rillero, Susan Snyder, Dinah Zike. 2003. **Integrated Middle School Science . Level Green.** Glenco/McGraw-Hill, Orion Place, Columbus, Ohio
- **National Geographic Society, Alton Biggs, Lucy Daniel, Ralph Feather, Norman Lederman, Peter Rillero, Susan Snyder, Dinah Zike. 2005. **Integrated Middle School Science . Level Green.** Glenco/McGraw-Hill, Orion Place, Columbus, Ohio
- Resource books and handouts
- School Library
- Overhead projector
- Board
- Computer

ACADEMIC HONESTY

Academic honesty is fundamental to the integrity and operation of our school. Acts of academic dishonesty, including plagiarism (the act of presenting others' words and ideas as one's own without crediting the source), stealing in quizzes and tests, copying work from other students or allowing their own work to be copied, or using notes during a test, are considered serious offences. The consequences of academic dishonesty will be a zero grade on the specific test/assignment, and additional disciplinary action. The said student will be ineligible or removed from the National Honor Society.