



Earth Science

2010

**SECONDARY SCIENCE STANDARDS
IN SEVENTH-DAY ADVENTIST SCHOOLS**

OFFICE OF EDUCATION | North American Division Seventh-day Adventist Church

Science Standards—Earth Science

COURSE FOCUS [Apply the following for each content standard.]

ESC.1 Identify SDA Christian principles and values in correlation with science.

- ESC.1.1 Recognize God’s power as Designer, Creator, Sustainer, and Redeemer in the universe.
- ESC.1.2 Acknowledge God as the Author of all scientific principles and laws regardless of man’s interpretation.
- ESC.1.3 Develop stewardship and service attitudes toward health, life, and earth’s environment.
- ESC.1.4 Apply Biblical principles of Christian morality, integrity, and ethical behavior to all aspects of life.
- ESC.1.5 Equip students with Christian perspectives on scientific issues.

COURSE ABILITIES [Apply the following to each content standard.]

ESC.2 Develop abilities in science.

- ESC.2.1 Develop critical and creative thinking skills (analysis, evaluation, divergent questioning, modeling).
- ESC.2.2 Understand and utilize the scientific method of problem solving.
- ESC.2.3 Utilize the principles and methodologies of cooperative learning.

ESC.3 Be able to apply science knowledge and skills to a variety of purposes.

- ESC.3.1 Recognize scientific principles and laws as tools to solve problems in everyday life.
- ESC.3.2 Apply the scientific method in analysis of controversial topics, e.g., cloning, global warming, stem cell research.
- ESC.3.3 Read, write, and interpret scientific documents (lab write-ups, journals, scientific publications).
- ESC.3.4 Conduct research in the content area.
- ESC.3.5 Engage in various uses of technology.

COURSE CONTENT: Terminology, Geology, Geologic History, Weather, Water [Understand, explore, analyze, apply]

ESC.4 Be able to understand the basic laws, principles, and theories of Earth Science.

- ESC.4.1 Recognize God as the Designer and Creator of our earth within the universe.
- ESC.4.2 Introduce and relate terminology appropriate to Earth Science.
- ESC.4.3 Demonstrate understanding of the structure and composition of earth (geologic time table, plate tectonics, rocks and minerals).
- ESC.4.4 Become acquainted with the geologic history of the earth (fossil record, absolute vs. relative time).
- ESC.4.5 Familiarize students with the factors that affect earth’s climate patterns.
- ESC.4.6 Present the basic concepts of earth’s hydrologic cycle (oceans, glaciations, economic value).

ESC.5 Be able to safely explore Earth Science concepts.

- ESC.5.1 Observe the structure and composition of rocks and minerals.
- ESC.5.2 Explore the fossil record of earth’s history from a creationist’s paradigm.
- ESC.5.3 Investigate principles of climate and global weather patterns.
- ESC.5.4 Examine earth’s water and factors affecting the hydrologic cycle.

ESC.6 Be able to analyze Earth Science concepts.

- ESC.6.1 Classify different types of rocks and minerals.
- ESC.6.2 Correlate the fossil record to earth’s history from a creationist’s paradigm.
- ESC.6.3 Analyze and predict the relationship between climate and global weather patterns.
- ESC.6.4 Interpret the relationship between earth’s water and the factors affecting the hydrologic cycle.

ESC.7 Be able to apply fundamentals of Earth Science to life and the earth’s environment.

- ESC.7.1 Strengthen belief in God as Designer and Creator by applying the fundamentals of Earth Science.
- ESC.7.2 Utilize the concepts of Earth Science to improve lifestyle choices.
- ESC.7.3 Apply the study of Earth Science to issues regarding the environment.