Adventist Education
A JOURNEY TO EXCELLENCE

Physical Science

2010

SECONDARY SCIENCE STANDARDS
IN SEVENTH-DAY ADVENTIST SCHOOLS

OFFICE OF EDUCATION | North American DivisionSeventh-day Adventist Church

Science Standards—Physical Science

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

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

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

COURSE ABILITIES [APPLY THE FOLLOWING TO EACH CONTENT STANDARD.]

PSC.2 Develop abilities in science.

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

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

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

COURSE CONTENT: Structure and Properties of Matter, Measurement and Conversions, Interactions of Matter, Force and Motion, Energy [Understand, explore, analyze, apply]

PSC.4 Be able to understand the relationships between matter and energy and how they interact.

- PSC.4.1 Recognize God as the Designer and Creator of our physical world.
- PSC.4.2 Introduce the fundamental structure and properties of matter (physical, chemical, periodic table).
- PSC.4.3 Demonstrate understanding of scientific measurement and expression (conversions, scientific notation).
- PSC.4.4 Become acquainted with the interactions of matter (bonding, reaction types).
- PSC.4.5 Familiarize students with the fundamental properties of force and motion (Newton's laws, velocity, acceleration)
- PSC.4.6 Present the basic concepts of different energy forms (sound, light, kinetic, potential, heat, nuclear, etc.).

PSC.5 Be able to safely explore Physical Science concepts.

- PSC.5.1 Observe the structure and properties of matter.
- PSC.5.2 Explore the interactions of matter.
- PSC.5.3 Investigate the properties and interactions of force and motion.
- PSC.5.4 Examine the fundamental concepts of different energy forms.

PSC.6 Be able to analyze Physical Science concepts.

- PSC.6.1 Exhibit understanding of the basic structure and properties of matter.
- PSC.6.2 Interpret the results of the interactions of matter.
- PSC.6.3 Relate the concepts of force to motion.
- PSC.6.4 Compare and contrast the different forms of energy.

PSC.7 Be able to apply fundamentals of Physical Science to life and the physical environment.

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