

Science Standards - Physical Science



Course Focus (Apply the following for each content standard.)

PSC.1 Identify the principles of SDA Christian 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 Critical and creative thinking skills (analysis, evaluation, divergent questioning, modeling).
- PSC.2.2 Problem solving (scientific method).
- PSC.2.3 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: Topics: 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.