

Science

Science 1 (Level 1) (PACES 1001–1012)

The student:

- Pronounces and learns **new vocabulary words** as they are defined and used in the text.
- Discovers God’s wisdom as he learns about God creating Earth and Earth’s movements and the four **seasons**.
- Learns about the design and care of the human eye and ear; high, low, soft, and loud sounds.
- Learns about the importance of **personal health**—clean teeth and hands.
- Gains a **respect for God** as he learns about God’s wisdom, goodness, kindness, and that all things belong to God.
- **Reads** stories and answers questions about God’s creation.
- Continues to build **eye-hand coordination** by drawing shapes, irregular shapes, and directional lines.

Science 2 (Level 2) (PACES 1013–1024)

The student:

- **Expands his knowledge** of the days of Creation, the first man and woman.
- Learns about animals, the seasons and **weather**, heavenly bodies, plains, flat lands, valleys, hills, and mountains.
- Enlarges his **vocabulary** with the introduction of new words.
- Builds **reading comprehension**.
- Continues to build **eye-hand coordination** by drawing shapes, irregular shapes, and directional lines.
- Learns how God made every person **unique** through the introduction of fingerprints, etc.
- Learns about the **five senses**.
- Is encouraged in **character development** through examples given in each PACE.

Animal Science (Level 2) (PACES 1013–1024)

Second level students may enjoy Animal Science. These PACES include characteristics, habitats, and natures of specific animals. Animal activities are presented in interesting story form, and Scripture references to these animals are highlighted where appropriate. Students learn about sheep, dogs, horses, cats, cattle, unusual birds, and many more animals.

Science 3 (Level 3) (PACES 1025–1036)

The student:

- Observes the faithfulness of God while learning about the **solar system**.
- Learns about the concept and measurement of **time**.
- Learns about animal and plant **life cycles**.
- Recalls and continues the study of God’s **Creation**.
- Studies **Bible topics** such as Jesus’ return; sin, death, and the curse; man’s freedom to choose to love and obey God.
- Read stories using **new vocabulary** and **visual discrimination**.
- Looks at geological changes after the Flood—jungles and hot lands, tundra and cold lands, volcanoes and earthquakes.
- Is encouraged in **character development** through examples given in each PACE.

Science 4 (Level 4) (PACES 1037–1048)

The student:

- Learns about the **water cycle**—condensation, evaporation, precipitation, cloud shapes, and the characteristics of air and water.
- Studies living and nonliving **matter**, gravity, minerals and their uses, **plants’** needs, and plant conservatories.
- Identifies **simple machines**.
- Learns about **respiration** and blood **circulation**, the diaphragm and heart, digestion and saliva.

- Focuses on **good hygiene** and teeth; bacteria, viruses, and fungi; and the design and function of the skin.
- Is introduced to early **men of science**.
- Studies rockets and airplane **flight**.
- Understands the need for exercise, sleep, and **proper nutrition** for the human body.
- Is encouraged in **character development** through examples given in each PACE.
- Continues to add new **vocabulary** words.

Science 5 (Level 5) (PACES 1049–1060)

The student:

- Explores **living** and **nonliving matter** and active, dormant, and extinct volcanoes.
- Learns about **energy**—work, force, kinetic, potential, and radiant energy.
- Studies **oceanography**, **astronomy**, comets, and the aurora borealis and aurora Australis.
- Studies the outer, inner, and middle ear; hearing difficulties; and vibration, pitch, and frequency of sounds.
- Studies **molecular** and **atomic theories**; friction, heat, and gravity; and expansion and contraction.
- Views dinosaurs and fossils from a **Biblical perspective**.
- Learns the relationship between the Bible and botany, meteorology, and zoology.
- Discovers the Bible to be the **final authority** in scientific matters.
- Learns new **vocabulary words** in each PACE.
- Is encouraged in **character development** through examples given in each PACE.

Science 6 (Level 6) (PACES 1061–1072)

The student:

- **Expands** his vocabulary base with the addition of new vocabulary words.
- Explores the theories, properties, and laws of magnetism, and the uses of magnets; acids, bases, **elements**, solvents, solutes, and solutions in chemistry; higher and lower plants, and the process of **photosynthesis**.
- Looks at the history, nature, and uses of **electricity**; chemical, mechanical, and nuclear sources of electricity and measuring electricity.
- Learns about the central nervous system, the senses, the structure and function of the **skeletal** and **muscular systems**, infectious and noninfectious diseases, treatment of and defense against diseases, and digestion and nutrition.
- Builds knowledge of previously introduced **character traits**.

Science 7 (Level 7) (PACES 1073–1084)

The student:

- Continues exploring the **skeletal** and **muscular systems**, different types of viruses, bacteria, algae, and fungi.
- Studies characteristics of **birds** and **mammals** and **botany**—the needs, conducting, and reproductive systems of plants.
- Learns about **simple** and **complex invertebrate animals**, the structure and characteristics of vertebrates, embryos, inherited traits, **gene functions**, and alterations.
- Studies **ecology**—balance and cycles of nature, biomes, effects of water and air pollution, and how pollution can be controlled.
- Increases **vocabulary** with the introduction of new words in each PACE.
- Is encouraged in **character development** through examples given in each PACE and expands his ability to use each of these Godly traits in **real-life situations**.

Science 8 (Level 8) (PACES 1085–1096)

The student:

- **Explores** the wonders, resources, and cycles of God's Creation.
- Searches **proofs** of Creation and the Flood.
- Studies **astronomy**—the stars, familiar and unusual, their purpose and message, and planets of the solar system.

- Learns about the structure and measurable qualities of Earth’s atmosphere, **climates, weather factors** and **forecasting**, and the hydrosphere.
- Looks at the **foundations of the world**—Earth’s layers, topography and mapping of the world, soil formation and **conservation**, and weathering and erosion.
- Discovers Earth’s buried treasures—understanding, classifying, using, and appreciating our **mineral resources**.
- Is encouraged in **character development** through examples given in each PACE.

Biology (Level 9) (PACES 1097–1108)

The student:

- Views the wonders of the Creator as he studies the **structure** and **function** of man’s skin, skeleton, and muscles; the **central nervous system**; blood and circulation; **nutrition** and **growth**.
- Observes **scientific proof** for Creation of fish, amphibians, reptiles, and invertebrates.
- Examines mammals—their characteristics, migration, and hibernation; groups and body structure of birds; characteristics and classification of plants.
- Learns the system of **scientific classification**.
- Uses character stories to apply **Scriptural principles** to everyday situations.

Required Lab videos provide the benefits of a scientific laboratory, allowing students to observe “hands-on” lab experiments.

Physical Science (Level 10) (PACES 1109–1120)

Prerequisite: Algebra I

The student:

- Learns the **scientific method** and notation, powers of ten notation, significant figures; homogeneous and heterogeneous substances; air and atmospheric pressure, pressure and density of gases; formation of chemicals, elemental periods and families; metals and metalloids.
- Studies **laws of motion** and **gravity**, light, electricity, and **modern physics**.
- Applies **Scriptural principles** to everyday situations.

The required Lab DVD provides the benefits of a scientific laboratory, allowing students to observe “hands-on” lab experiments.

Chemistry (Level 11) (PACES 1121–1132)

Prerequisites: Physical Science and Algebra I

The student:

- Examines the **history** and **development of chemistry**, careers and fields of study, **nuclear chemistry** and **biochemistry**, chemical reactions and balancing equations, acids and bases, the four phases of matter, molecular bonding, and the Periodic Table of Elements.
- Learns about **thermodynamics** and quantitative and qualitative analysis.
- Uses **“Teen Life Principles”** to apply wisdom to everyday situations.

The required Lab DVD provides the benefits of a scientific laboratory, allowing students to observe “hands-on” lab experiments.

Physics (Level 12) (PACES 1133–1144)

Prerequisites: Algebra I and Physical Science

The student:

- Studies radiation and **nuclear energy**, heat energy and temperature, conduction, and convection.
- Studies electrochemistry, wave motion and sounds, the **Doppler effect**, and optics and optical instruments.
- Investigates states of matter—force, motion, gravity, momentum, and energy.
- **Reinforces** learned concepts by review.
- Learns to apply **Scriptural principles** to everyday situations.

The required Lab DVD provides the benefits of a scientific laboratory, allowing students to observe “hands-on” lab experiments.