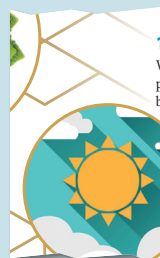




## Physical Science (6th Edition)

This research-based science course introduces students to chemistry and physics, equipping them to be student scientists. A clean, uncluttered layout helps students focus on key details and information. Going beyond science facts, students will learn to think critically about real-world science problems. Case studies, worldview sleuthing activities, ethics boxes, and mini-labs all give students opportunities for hands-on experiences with real-world problems. Additionally, they will be given strategies for making ethical decisions based on a biblical worldview.

Instructional materials include a teacher edition, student edition, lab manual, lab manual teacher edition, assessments, and assessments answer key.



### 1.2 WHY IS ORDER IMPORTANT?

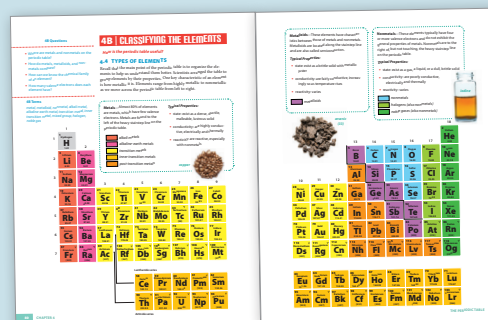
Why can we study the universe systematically? If phenomena were completely random, we would have to accept just watching events happen, but investigating them would be impossible. However, our world is orderly, and order allows us to study the events that occur.

#### Evidence of Order

As we wake up each morning, the periodic changes of day into night, days into weeks, weeks into months, and months into years remind us of the order in nature. The cycles that we know as seasons have been guiding farmers in the planting and harvesting of crops since Creation. We see order in the repeated

### Biblical Worldview in Physical Science

Students will analyze, evaluate, and draw conclusions about five themes in physical science on the basis of biblical teaching, including (1) order in nature, (2) science and dominion, (3) role of modeling, (4) pursuit of science, (5) ethics of science.



### Balanced Learning

Students have an opportunity to prepare for future learning as they first study concepts in chemistry. These initial concepts give them time to master the math needed for units covering physics.



## ETHICS

### CHRISTIAN ETHICS

#### BIBLICAL PRINCIPLES

**What does God's Word say?**

**God's Image Bearers.** Foundational to our ethical decision-making is the understanding that we all bear God's image. Therefore, we must make decisions out of respect for all people and for their protection (Gen. 1:26-28).

**Creation Mandate.** God's first commandment to us is to have dominion over the world that He created. Therefore, we must wisely care for God's creation. We must balance the appropriate use of the world's resources with the needs of people around the world. Nothing belongs to us; we are stewards of God's world (Gen. 1:26-28).

**God's Whole Truth.** God's image in people and the Creation Mandate touch on many ethical issues. But other parts of Scripture also give us helpful insights into what God wants us to do. Part of making wise ethical decisions requires

**Glorifying God.** Just as Jesus came to glorify God, everything we do should glorify God (Matt. 5:16; 1 Cor. 6:20; 10:31). Our decisions should show God that we love and honor Him. This obligation includes every aspect of our lives: school, work, and play. So it is not enough that our decisions help others or that creation thrives. Our decisions must always give God the honor that He is due.

#### BIBLICAL MOTIVATIONS

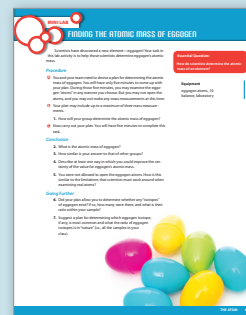
**How can I grow through this decision?**

**Faith in God.** The Bible discusses works versus faith (Jam. 2:14-26). The passage concludes that we are to live out our faith in God through our works. We are motivated to act because of our faith in God. Good works can stem only from our faith in God (Rom. 14:23; Heb. 11:16).

**Hope in God's Promises.** In the Bible, hope is

### Ethics in Physical Science

Ethics boxes give students specific opportunities to handle real-world ethical issues in physical science. They will be asked to address the issues using biblical principles, outcomes, and motivations.



### Application Opportunities

Students will have abundant opportunities for direct application, many of which draw on higher-order thinking skills. In-text mini-labs require direct application of lesson concepts; full labs give opportunities for extended hands-on application; and ethics boxes, case studies, and worldview sleuthing activities involve written application.

## Student Edition

Four units—two for chemistry and two for physics—introduce students to key elements of the study of physical science. Chemistry units move the student from matter and what it is made of to how matter interacts in chemical reactions, nuclear changes, solutions, and acids and bases. In the physics units, students will learn about how matter and energy move and why they move as well as the different forms of energy. Clear, scientifically accurate images help them picture the structures they study. Case studies, worldview sleuthing activities, mini-labs, ethics boxes, and questions help students think like scientists and view physical science from a biblical perspective.



## Teacher Edition

The teacher edition presents research-based teaching strategies, including active learning, inquiry activities, group discussions, and formative assessments, all of which are aligned with educational objectives. The strategies focus on explaining concepts to students by moving from concrete to abstract and by linking scientific concepts and processes with prior learning. Strategies also consider the affective as well as cognitive domains. The teacher edition features a suggested teaching schedule, icon-coded items like weblinks and demonstrations, complete answers to review questions, and background information to enhance classroom instruction. The teacher edition also includes a full-year lesson plan overview.

## Lab Manual

The lab manual gets students exploring God's world through a variety of activities. Students will solidify their understanding of concepts by connecting the content with real-world problems. They will develop key science, engineering, and problem-solving skills through observing, recording, and analyzing samples and data to make models. They then test those models to understand their workability. Students will have opportunities to complete both STEM lab activities and inquiry-based labs.



## Assessments

The assessment packet includes 22 summative assessments to measure students' knowledge and understanding of key concepts. The tests include opportunities for students to infer information from images in addition to testing recall and higher order thinking skills. All questions are aligned with educational objectives.

