

# Spark Higher-Level Thinking

Challenge your high school students to think critically about mathematics while exploring two- and three-dimensional shapes. *Geometry* builds critical-thinking skills with a balanced approach, including traditional geometric proofs and modern, real-world mathematics problems. Students will use mechanical and digital tools to create figures, prove relationships between figures using modern and traditional geometry, calculate measurements, perform transformations, and work with trigonometric ratios. While working with geometric figures, students will learn the value of God's design for reasoning, modeling, and ethics.

## How We Teach It

### Question

New for the 5th edition, each lesson starts with a clearly defined question and learning targets, which together help students focus on the lesson's major concepts. Essential questions are introduced at the start of each chapter to guide thinking and instruction.

### Explain

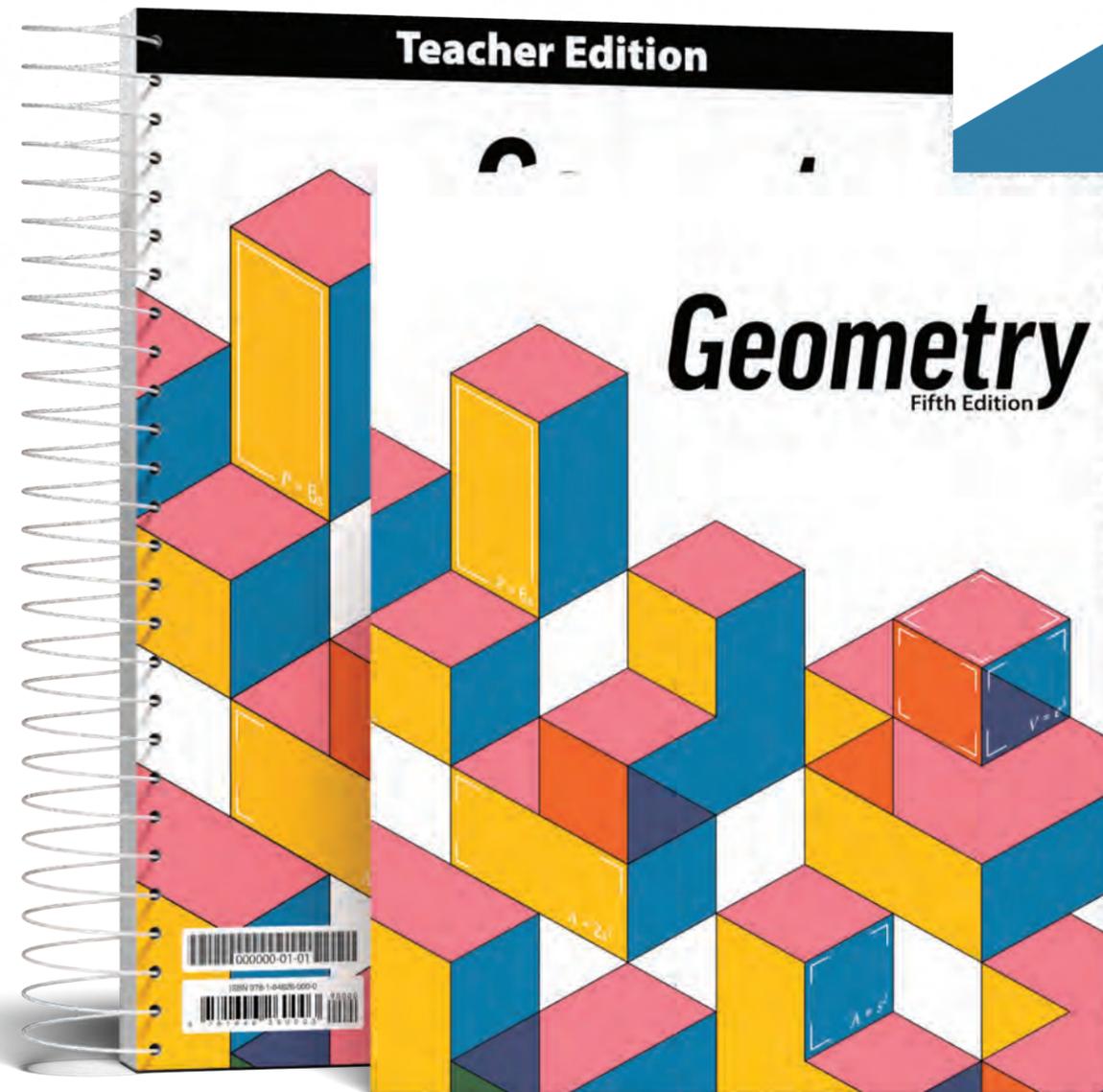
Concise definitions and explanations followed by step-by-step reasoning and examples teach key concepts with the goal of understanding, not rote memorization. This edition includes titled examples with references as well as vocabulary boxes before exercise sets. The Activities answer key and teacher edition have added step-by-step solutions to assist with instruction.

### Practice

Exercise sets are carefully sequenced to build on the essential question, add to mathematical understanding, and shape a biblical worldview. Lessons also use cumulative reviews to build fluency and help with standardized testing preparation. STEM projects and interactive individual and group activities encourage students to engage with geometric concepts in real-world applications. Free internet-based geometry software provides a technology connection for students to explore geometric figures.

### Assess

In addition to tests and quizzes, this edition has new Skill Check exercises that serve as formative assessments in each lesson. Assessment materials include 4 quarter exams and the option to create custom assessments.



Chapter Review



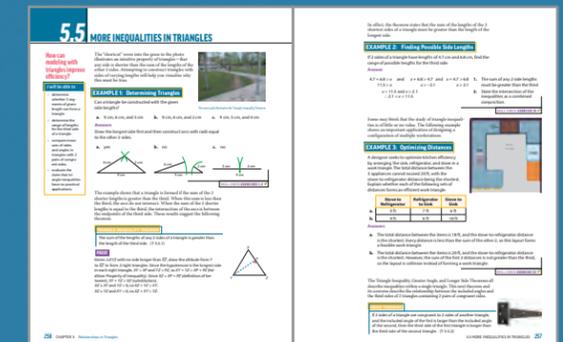
STEM Activities



Geometry in History



## Materials



### Student Edition

The student edition uses concise text and clear visual elements to engage learners. New content is strategically presented alongside vocabulary boxes and example problems. Skill checks provide an opportunity for formative assessment, and student exercises are grouped based on content and difficulty level. Each lesson and chapter centers on essential questions to guide student learning and focuses on a biblical worldview connected to geometric reasoning.

### Teacher Edition

Step-by-step examples, lesson plan overviews, a list of digital and printed resources, and suggested teaching strategies help teachers teach clearly and accurately. This edition adds the teaching cycle (engage, instruct, apply, assess) alongside teaching strategies that focus on varied instructional techniques to reach all learning styles. Visuals and figures from the teacher edition are available in BJU Press Trove™ for display within the classroom. Suggested assignments based on student ability levels allow for differentiated instruction.

### Activities

The student activities book supplements the student edition as needed. This edition adds 2 STEM projects for group or individual assignments. Dynamic Geometry Software Investigations uses an internet-based program to explore key concepts digitally. New to this edition, step-by-step solutions now appear in the Activities answer key.

### Assessments

Each of the 12 chapters has a corresponding chapter test. In addition, 4 quarterly exams and 3 to 4 quizzes for each chapter provide multiple opportunities to assess student learning.