

The activities in this book are arranged in order of topic difficulty. Nearly all the topics are within reach of early middle school students, and all are within the range of upper middle school students. The later activities involve computations with formulas for areas and volumes that can easily be considered in a less formal approach. Although some activities may seem too elementary for high school students, this generally is not true. If students have not had the opportunity to work with three-dimensional figures in earlier grades, they still need the benefits such experiences provide, regardless of their grade level.

**Each activity contains the following parts:**

**Overview:** A brief description of the tasks involved in the activity.

**Mathematics Concepts and Skills:** A list of the concepts and skills that students will utilize, strengthen, or expand during the activity.

**Materials:** A list of materials needed for the activity.

**Setting:** A suggestion for how to arrange students in the class for the activity. Most activities will benefit from a group setting or a pairing of students.

**Starting Out:** Suggestion for introducing the topic at hand and the activity to follow.

**Teaching Tips:** Ideas, explanations, or further information about the topic, management of materials in the classroom, and potential student difficulties.

**Extension:** Further investigations of the activity concept or additional challenges for students.

**Solutions:** Solutions for the tasks in the activity and in the extensions.

**Historical Background:** Some concepts have a rich history in mathematics. This section examines this history by including important developments along with human interest facts that students will find appealing. The topics and individual mathematicians described in this section are potential topics for additional research by students.

These activities with **View Thru™ Geometric Solids** will enliven your approaches to geometry and strengthen your students understanding of many geometric concepts. The **View Thru™ Geometric Solids** are a visual and tactile manipulative that will enrich your student's mathematical experiences and solidify their understanding of many geometry topics.

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