

Strategy Scenario
Ken Gates
Advanced Organizer

Individual Scenario #1

Name: Ken Gates

Strategy: Advanced Organizer

Content: In our unit on basic geometric shapes we learned about rectangles, triangles, and circles. We learned how to find the perimeter and area of rectangles and triangles and how to find the area and circumference of a circle. These basic shapes and the formulas used to calculate area, perimeter, and circumference can be applied to the study of more complex geometric shapes and solids. In our next unit we will learn to identify trapezoids, parallelograms, polygons, cones, cylinders and cubes. We will learn new formulas and terms to add to the ones we already know and we will use these to calculate the surface area of each shape and the volume of each solid.

Title: Introduction to Complex Geometric Shapes and Solids

Time: One class period that will be used to introduce the new geometric shapes and solids to be covered in the next unit.

Number of Participants: Twenty-five students at the middle school level

Target Audience: Middle school math class studying basic geometry

Goal of Activity: To introduce students to a new set of geometric shapes and to have them apply previous knowledge of shapes and formulas to solve problems related to the new material.

Goal of Script: To help students recognize the similarities and differences between the basic shapes and the complex shapes and solids. Understanding these similarities and differences will help students transfer their knowledge to the more complex material. To prepare the students for this introductory session each student will be given a worksheet to be completed before the introduction. The worksheet will be a review of basic shapes and formulas (for area, perimeter, and circumference). During the introduction the students will be given a sheet showing the new shapes and solids. After the introduction the students will receive detailed instruction on the new material.

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Learning Outcomes: Gagne's Intellectual Skills: Information, Concrete Concepts, Defined Concepts, Problem Solving

Learning Outcomes: Bloom's Taxonomy: Knowledge, Application, Analysis, Synthesis

Learner Characteristics: The students are middle school level and have knowledge of basic geometric shapes and formulas.

Entry Skills: None

Setting: Classroom

Media: Advanced organizer worksheet on basic geometric shapes and formulas. In-session handout showing complex geometric shapes and solids.

Process:

1. Students will complete worksheet on basic shapes and formulas as a homework assignment.
2. Introduce new material to students by noting similarities and differences between new material and previously learned material.
3. Give students the handout showing new material.
4. Lead discussion on new material and how it relates to previously learned material.
5. Answer any questions students may have about the subject of geometric shapes and solids.
6. Proceed to the unit lesson on complex shapes and solids.

Strategy Assessment: In this case an Advanced Organizer is a good tool to use to help students link the concepts of basic geometric shapes to more complex shapes and solids. By focusing on the many similarities and noting the differences the students will be able to connect the knowledge they have of basic shapes to the new material.

References:

West, C. K., Farmer, J. A., & Wolff, P. M. (1991). *Instructional Design: Implications from Cognitive Science*. Boston: Allyn and Bacon.

Anglin, G. J. (1995). *Instructional Technology: Past, Present, and Future*. Englewood, Colorado: Libraries Unlimited, Inc.