

It's All Just Similar to Me

Summary

In this opening lesson for a unit on similar figures, students will learn about similar figures, corresponding sides, and scale factors. They will also discover that the angles in similar triangles are congruent. They will then measure and calculate the scale factors of similar triangles and use this information to find the measurements of missing sides in a figure. Students will also have the opportunity to practice measuring angles with a protractor and measuring lengths with a ruler. In the activity that follows, students will use virtual manipulatives to practice what they have learned.

Time Frame

3 class periods of 45 minutes each

Group Size

Small Groups

Life Skills

Thinking & Reasoning, Communication

Materials

Similar Triangles

- Copies of student handout (1st two pages single-sided on cardstock)

- Scissors

- Protractors

- Rulers

- Colored Pencils (optional)

- Calculator (recommended)

Virtual Manipulatives Activity

- Pencil

- Student Handouts

- Computer with Internet Access for each student

Student Prior Knowledge

- Measuring angles with a protractor.

- Measuring lengths of sides with a ruler.

Intended Learning Outcomes

- Develop positive attitudes toward mathematics, including the confidence, creativity, enjoyment, and perseverance that come from achievement.

- Become proficient problem-solvers by posing appropriate questions, selecting appropriate methods, employing a variety of strategies, and exploring alternative approaches.

- Think logically, using inductive reasoning to formulate reasonable conjectures and using deductive reasoning for justification, formally or informally.

- Cooperatively and independently explore mathematics, using inquiry and technological skills.

- Make connections between mathematical ideas, between mathematics and other disciplines, and to life.

- Communicate mathematics through writing, modeling, and visualizing, using precise mathematical language and symbolic notation.

Instructional Procedures

Similar Triangles

See attachment - Detailed Lesson Plan Similar Figures

See attachment - Similar Triangles Student Handout

Virtual Manipulatives Activity

See attachment - It's All Similar to Me Teacher Page

See attachment - It's All Similar to Me Student Page

See attachment - Similar Shadows Worksheet

Strategies for Diverse Learners

Various aspects of these lessons incorporate different techniques typically utilized for diverse learners (hands-on manipulatives and interactive online manipulatives for examples). Other options could be to have students work in pairs or small groups.

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