

Lesson Title: Tangram Parts
Unit: Fun Fraction Projects
Grade Level: 6th grade
Estimated time requirement: 1 class period
Summary: Students will explore the relationships between the tangram pieces to get an understanding of parts of a whole. At the same time, students will be exposed to basic geometric properties and spatial relations of specific shapes.
Objectives:
<ul style="list-style-type: none"> • Students will gain an understanding about parts of a whole.
Content Standards:
TEKS: 6.1B, 6.2A, 6.6B
Assessment:
<ul style="list-style-type: none"> • Teacher made worksheet. • Students should be able to explain how the pieces relate to one another and to the whole piece.
Materials:
<ul style="list-style-type: none"> • Tangrams (directions for a student made set are included in a download)
Resources:
<ul style="list-style-type: none"> • Tangram Blocks Explorations, © 2001, Learning Resources, Inc. • Geometry and Fractions with Tangrams, © 1995, Learning Resources, Inc. • Virtual Manipulatives website http://matti.usu.edu/nlvm/nav/frames_asid_290_g_3_t_3.html?open=activities
Prior Knowledge/Skills: square, triangle, parallelogram, congruent figures, similar figures
Procedures: Teacher will guide the students through a step by step process to allow the students to make his/her own set of tangrams. In the process, the teacher will ask specific questions which will allow the student to discover geometric properties of each of the shapes. The student should also discover a relationship between the relative sizes of the shapes.
Technology Infusion:
<ul style="list-style-type: none"> • Virtual Manipulative Website for additional tangram activities • Document camera for teacher guided activity
Cultural Connections: Tangrams were thought to have evolved through the Chinese culture. Lewis Carroll, the author who wrote <i>Alice in Wonderland</i> , was a noted puzzle enthusiast and mathematician. Students can explore either of these topics to enrich this lesson.
Family Connection: Since tangrams can be easily made, students can involve parents by taking the tangram puzzle home for family members to try and reconstruct the famed seven piece square back to its original shape.
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