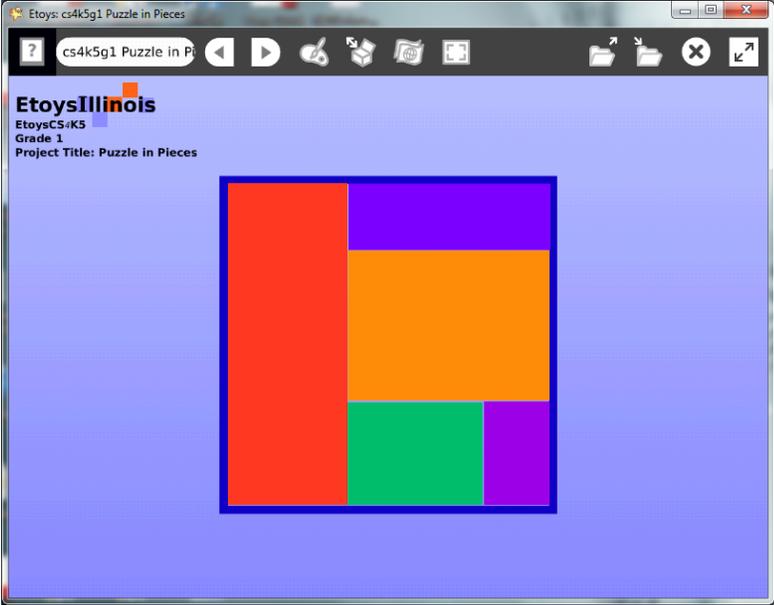


EtoysIllinois
 EtoysCS4K5
Grade 1
Puzzle in Pieces

Description:	<p>Students will:</p> <ul style="list-style-type: none"> Use clean line paint tools to draw a perfect square. Fill the square with five rectangles, each a different color. Describe the geometric attributes and properties of the puzzle pieces. Move the pieces to new locations to make different patterns. Stack the pieces to cover the least area of the square. Stack the pieces in the top left, top right and other locations. Identify, discuss and describe positive and negative shapes created using the pieces inside and outside the square border.
Project View	
Subject:	Mathematics
Etoys Quick Guides	Click the question mark in Etoys to open the set of interactive tutorials for basic tools and techniques.
Vocabulary:	Square, rectangle, vertical, horizontal, right, left, top, bottom, positive, negative
Lesson 1:	The puzzle is drawn as six pieces each using the clean line tools. The perfect square outline is paved with five rectangles drawn to fit. This example has five contrasting colors but, of course, if the class lessons

<p>Paint Tools: Rectangle Tool</p> <p>Navigator Bar: Keep Find Project</p>	<p>are about the sky, shades of blue could be used. If the class is studying fruit, colors could be related to that topic.</p> <p>Show the example project to students and give them time to play with it. Analyze shapes and colors. Ask students to make puzzles. Discuss whether all the puzzles will look the same. Take time to talk about similarities and differences.</p> <p>Open the paint palette and use the rectangle tool. Hold down shift to draw a square outline for the puzzle. Keep the square.</p> <p>Open a new palette and draw one rectangle inside the square. Keep it.</p> <p>Continue to open new palettes for each rectangle so that each is an object that can be picked up and moved to new places in the puzzle.</p> <p>Give students time to experiment with the paint tools and filling the square with rectangles. This project paves the square and it will take time for students to plan the sizes and shapes of the puzzle pieces, their colors, and locations.</p> <p>Keep the project, call it NameSquarePuzzle for example: kateSquarePuzzle</p>
<p>Lesson 2:</p>	<p>Give students time to experiment with their puzzle pieces and with their neighbor's puzzles. Make designs, patterns, stacks of pieces, add space between the pieces. Make designs that use the border to divide pieces.</p>
<p>Standards:</p>	<p>Common Core Standards Mathematics: 1.G.1,2</p> <p>Bloom's Taxonomy/Cognitive Domain: Knowledge: describes, knows Application: demonstrates, produces, uses Analysis: compares</p> <p>NETS 1. a, b 4. a, b</p>
<p>Resources:</p>	<p>Etoys Help Quick Guides: always available in Etoys. Open Etoys and click the question mark to open a set of interactive tutorials of basic</p>

	<p>tools and techniques.</p> <p>www.etoysillinois.org projects, lesson plans, software download</p> <p>www.mste.Illinois.org more math, science, and technology resources</p> <p>www.corestandards.org Common Core Standards</p> <p>www.squeakland.org software and Etoys projects</p> <p>www.nctm.org Standards and Focal Points for each grade level</p>
kh January 2011	