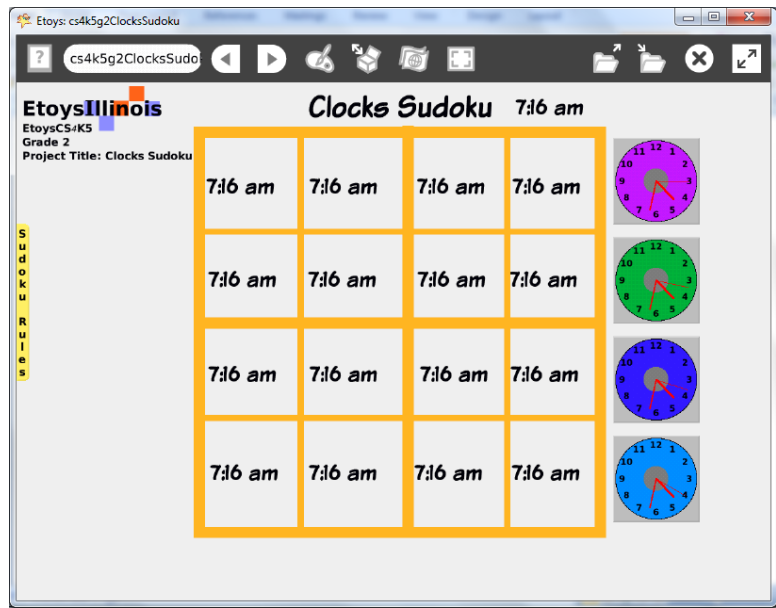


**EtoysIllinois**  
 EtoysCS4K5  
**Grade 2**  
**Clocks Sudoku**

**Description:** Students will:  
 Paint a Sudoku grid estimating equidistant positions for dividing lines.  
 Use analog and digital clocks from Supplies.  
 Modify the color, size, and shape of the clocks.  
 Put four of the clocks on Maker Buttons.  
 Make a flap and add the Sudoku rules.  
 Play with the grid and time.  
 Make patterns or Sudoku solutions using the terms: rows and columns  
 Keep copies of patterns and store solutions in the flap.  
 Learn to tell time.

**Project View**



**Etoys Quick Guides** Click the question mark in Etoys to open the set of interactive tutorials for basic tools and techniques.

**Vocabulary:** Time, hours, minutes, grid, rows, columns, divide, half, quarter, estimate, solve, patterns, rules, analog, digital,

**Lesson 1:** Making the grid: draw a grid with two different sizes of brushes to show the outline, divisions of the square in half horizontally and vertically and smaller divisions of the quarter squares. Give them time to practice  
 Paints: Straight Line Tools

<p>Supplies: Object Catalog</p> <p>Halo Handles: Size, Color, Copy</p> <p>Object Catalog: Maker Buttons</p> <p>Navigator Bar: Keep Find Projects</p>	<p>estimating and drawing even divisions with the paint tools. Or, open a playfield and use the white menu: playfield options: make graph paper Trace for more accurate grids.</p> <p>Open the Object Catalog, click on Just for Fun. Drag out one analog clock and one digital clock.</p> <p>Use the halo handles and make three copies of each. Change their size color and shape. Students should decide which to use. Put four on Maker buttons and use the others decorate the project.</p> <p>Get four Maker Buttons from Supplies and put a design motif on each.</p> <p>Keep the project: NameClocksSudoku, e.g. KateClocksSudoku</p>
<p><b>Lesson 2:</b></p> <p>Supplies: Add a Flap</p> <p>Supplies: Text</p> <p>Navigator Bar: Keep Find Projects</p>	<p>Plan the finished puzzle: decide where the grid and maker button designs should be for easy use by players.</p> <p>Add a flap for the rules and solutions.</p> <p>Use Text from Supplies and type a title and the rules. Typing takes time; it is easier for young students to drag a copy of the rules stored on the desktop.</p> <p>When all the puzzle pieces and text are in their final locations. Open the Viewer for the grid, select the white menu and click: be locked. This will keep the grid from reacting to the cursor and being accidentally thrown away.</p> <p>Students can use the grid to develop experience with rows and columns. Ask students to make a row and then move the same pieces to make a column. Ask student s to put a motif in row 2 column 3, etc.</p> <p>Keep the project: NameClocksSudoku.</p> <p>Ask students to take turns telling the group row/column locations for one or two clocks. For example: put a clock in row 1 column 1 and another in row 3 column 2.</p> <p>Give students time to enjoy their puzzle and the ones their neighbors</p>

	<p>made. No matter how many times you ask: what time is it, someone will answer. It is a most enjoyable kind of practice.</p> <p>Sudoku solutions could be collected in the flap as a reference. Ask students if incorrect solutions should be kept. Why? Why not?</p> <p>An additional flap could store designs that are not Sudoku solutions but are patterns students want to keep.</p>
<b>Standards:</b>	<p>Common Core Standards          Mathematics: 2.OA.3.4; 2.MD.7</p> <p>Bloom’s Taxonomy/Cognitive Domain:          Knowledge: knows          Application: uses</p> <p>NETS          1. a, c</p>
<b>Resources:</b>	<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 tools and techniques.</p> <p><a href="http://www.etoysillinois.org">www.etoysillinois.org</a> projects, lesson plans, software download  <a href="http://www.mste.Illinois.org">www.mste.Illinois.org</a> more math, science, and technology resources  <a href="http://www.corestandards.org">www.corestandards.org</a> Common Core Standards  <a href="http://www.squeakland.org">www.squeakland.org</a> software and Etoys projects  <a href="http://www.nctm.org">www.nctm.org</a> Standards and Focal Points for each grade level</p>
kh February 2011	