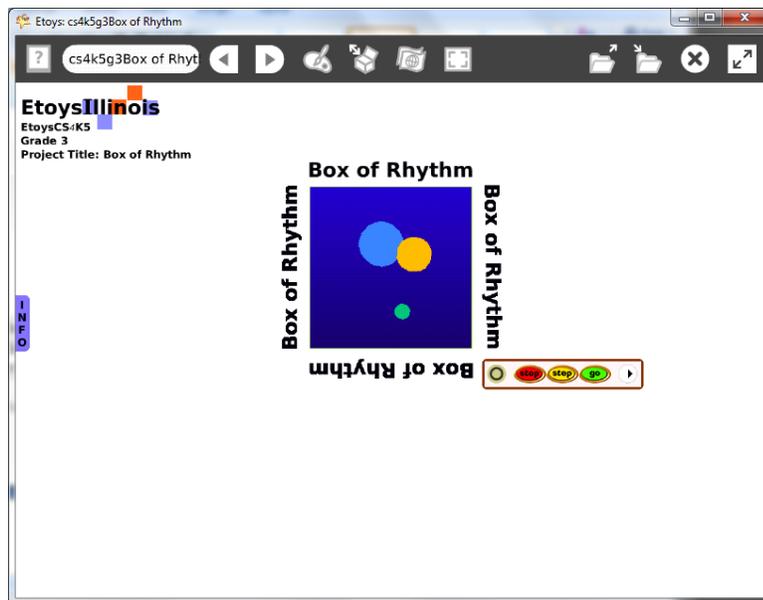


EtoysIllinois
 EtoysCS4K5
Grade 3
Box of Rhythm

Description: Students will:
 Paint a shape.
 Make a script with forward and bounce tiles.
 Record a short sound.
 Save the sound and add it to the bounce tile in the script.
 Copy the shape, change its scale factor, and color.
 Use a playfield to limit the motion.
 Experiment with different lengths and widths for the playfield.
 Experiment with forward by values to control the polyrhythm.
 Experiment with starting location of shapes to control the polyrhythm.
 Experiment to control the location so all three shapes never touch simultaneously, or so they touch simultaneously every cycle.
 Add a title.
 Add a flap if additional information is needed.

Project View



Subject: Mathematics, Music

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

Vocabulary:	Patterns, rhythm, polyrhythm, multiply, divide, x and y locations, forward by, heading. ratios, scale factors
Lesson 1: Script Tiles: Bounce Motion Paint Tools: Brushes Script Tiles: Forward and Turn Supplies: Sound Recorder Navigator Bar: Keep Find Project	<p>A microphone is needed for this project or, if unavailable, use the set of sounds that are in the bounce tile.</p> <p>Paint a circle.</p> <p>Make a script with forward by and bounce tiles in it.</p> <p>Get a Sound Recorder from Supplies.</p> <p>There will be noise.</p> <p>Record a short sound. The example project uses “tch” spoken in a voiceless rhythm of three sets of sixteenth notes and one quarter note at the end. Student ideas will vary. You might ask them to use vocabulary from a classroom topic. Hearing a word over and over again makes deep memory.</p> <p>Experiment with different sounds and save the best to add to the script.</p> <p>Keep the project. Call it nameRhythm. E.g. KateRhythm.</p>
Lesson 2: Halo: Size, Color, Copy	<p>Get a playfield from Supplies and put the circle in it. Use playfield’s Viewer category fill and border to change the color.</p> <p>Experiment with the size of the playfield to control the repetition of the rhythm.</p> <p>Experiment with the circle’s forward speed to control repetition of the rhythm. One circle moving at the right speed inside the playfield can make a polyrhythm. That is, one loop of the sound is still playing when the second loop begins. Listen.</p> <p>Make copies of the circle, change the scale factor, forward speed and heading to make an interesting polyrhythm.</p> <p>Multiply the speed of one to make the speed of another. Multiply its speed to make the speed of the third circle. Listen.</p> <p>Experiment to control size and speed so that one circle’s sound is repeating twice as often as another’s sound.</p>

<p>Script Tiles: Scale Factor</p>	<p>Use the scale factor to make exact size ratios between the circles.</p> <p>Give students time to experiment.</p> <p>Give students time to try other student’s projects.</p> <p>Give students time to revise their project.</p> <p>Keep the project.</p>
<p>Standards:</p>	<p>Common Core Standards Mathematics: 3.OA.3.7; 3.NF.1.3.b</p> <p>Bloom’s Taxonomy/Cognitive Domain: Knowledge: describes, selects Comprehension: estimates Application: constructs, discovers Analysis: analyzes, experiments Synthesis: categorizes, explains Evaluation: compares, reviews</p> <p>NETS: 1. a, b, c 4. a, b, c, d</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 tools and techniques.</p> <p>www.etoysillinois.org projects, lesson plans, software download www.mste.Illinois.org more math, science, and technology resources www.corestandards.org Common Core Standards www.squeakland.org software and Etoys projects www.nctm.org Standards and Focal Points for each grade level</p>
<p>kh February 2011</p>	