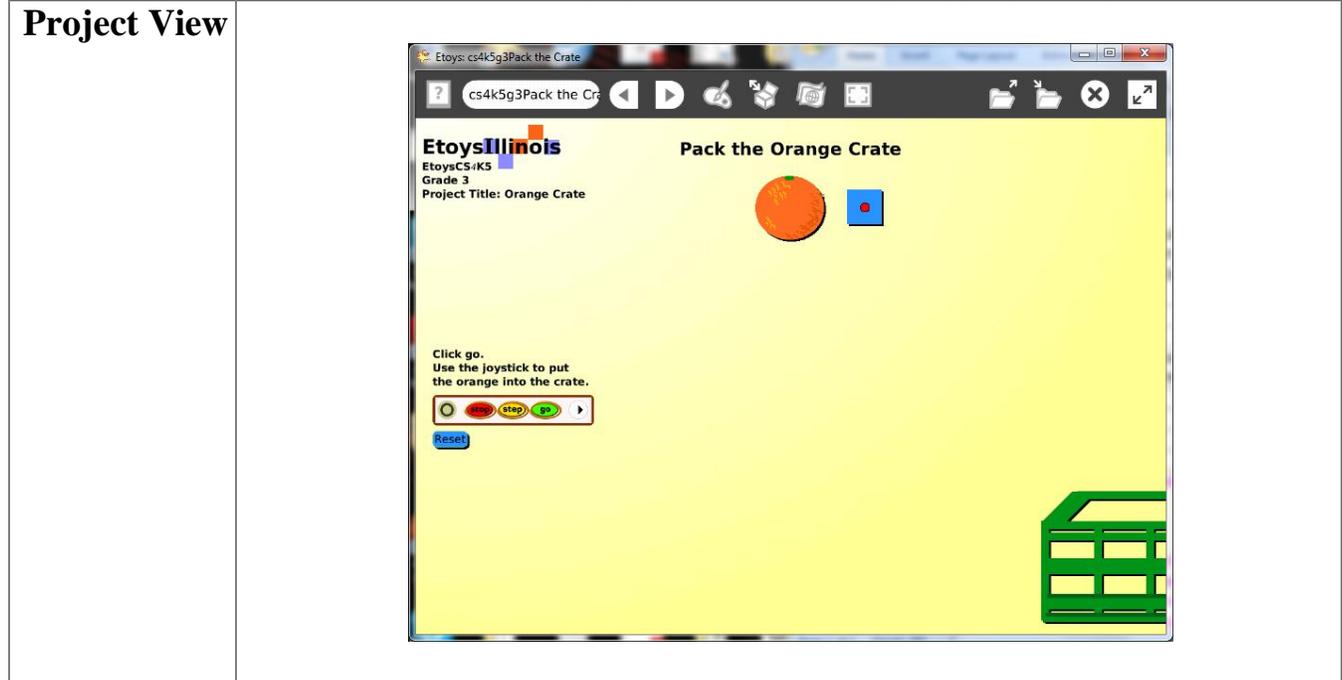


**EtoysIllinois**  
 EtoysCS4K5  
**Grade 3**  
**Pack the Crate**

**Description:** Students will:  
 Plan a game with two moving objects.  
 Make a script to control simultaneous motion on the x and y axis.  
 Construct new commands from two objects' script tiles.  
 Experiment with script tiles for x/y increase and/or decrease.  
 Make reset scripts to position objects at specific locations.  
 Type or draw a "You Win" message.  
 Create a script that displays the win message appropriately.



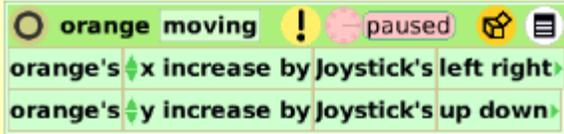
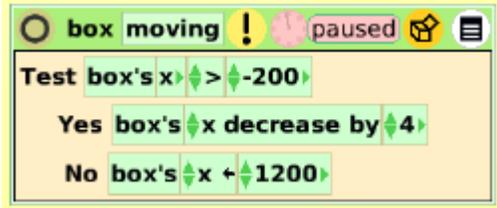
**Subject:** Mathematics

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

**Vocabulary:** X and y axis, locations, x increase by, x decrease by, y increase by, y decrease by, conditional statements, < , >

**Lesson 1:** Discuss ideas for projects that have two moving objects and where they will meet. Examples: an orange in a box, sprinkles on a cupcake, hat on a head, nose on a face, spaceship on a moon.

**Paint Tools:** Paint one of the objects that will move and keep it. Open a new paint  
**Brushes**

<p>Supplies: Joystick Control</p>	<p>palette, draw the other object that will move and keep it. This project's two objects are a box that moves right to left like it is on a conveyor belt and an orange that moves down.</p> <p>Start with the object that will be controlled with a joystick.              The Orange's script: this script uses a joystick from Supplies to control direction on the x and the y axis.</p>  <p>Give students time to experiment with combinations of these commands.              Discuss: x and y, increase and decrease, and left right and up down.              Give students more time to experiment.              Ask what if: orange's x decreased by joystick's up down?              Ask students to decide what combination of these pairs of options will work best in their project.              Make the script and give it a meaningful name. This project has four scripts so naming each object and each script is important and will prevent some confusion.</p> <p>Keep the project: Namejoy e.g. KateJoy</p>
<p>Lesson 2:  Script Tiles: X and Y Locations</p>	<p>The Box's script:              Discuss the direction of motion for the second object. This box moves across the screen like on a conveyor belt.</p>  <p>Give students time to experiment with how far off the screen and how long it will be before it appears in the new location. Distance and time and related. It is also interesting for students to look at the x and y location information in the Viewer while the script is ticking and to realize they know where something is, even when they cannot see it.</p>



	<p>Keep the project.</p> <p>Give students time to enjoy their project and to try ones made by others in the class. They build a wealth of knowledge during these experiments that can be discussed and applied.</p> <p>Discuss ideas they have after seeing other projects. Give them time to modify their project again.</p> <p>Keep the project.</p>
<b>Standards:</b>	<p>Common Core Standards          Mathematics: 3.MD.3.4</p> <p>Bloom’s Taxonomy/Cognitive Domain:          Knowledge: knows          Application: uses, constructs, changes, discovers          Analysis: analyzes, compares, experiments          Evaluation: reviews</p> <p>NETS          1. a, b, c          2. a          4. a, b</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 January 2011	