| EtoysIllinois<br>EtoysCS4K5 |
|-----------------------------|
| Grade 4                     |
| <b>Parts</b>                |

**Description:** Students will:

Draw a simple background and lock it into place.

Add a digital image of a machine (bicycle) to the project.

Analyze and trace component parts of the machine.

Name the parts.

Script the parts to move.

Use the Scriptor menu: when should this script run?

Title the project.

Write directions to help or hinder assembly.

## **Project View**



| <b>Subject:</b>          | Science, Mathematics, Art   |
|--------------------------|---|
| <b>Etoys Quick</b>       | Click the question mark in Etoys to open the set of interactive tutorials |
| Guides                   | for basic tools and techniques.   |
| Vocabulary:              | Analyze, assemble, disassemble, construct, deconstruct, center of         |
|                          | rotation, mobile, kinetic art   |
| Lesson 1:                | Give students a set of digital images and time to look at them and select |
|                          | their favorite.   |
| Supplies: Digital Images | Students will have reasons for which image they selected. Discuss.        |

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|-------------------------------|--|
| Script Tiles: Scale<br>Factor | Change the size of the image using the scale factor tile in its Viewer. Make it a size that fits the screen and the paint tool scrim.  |
|                               | The digital image can be kept or discarded as the student decides but in both cases the web site should be credited with a link.   |
| Paint Tools                   | Paint/trace each visible part, each with its own paint palette. Name the part after closing the palette; e.g. wheel, seat etc.   |
| Navigator Bar:                | Give students time to think and to draw at the smallest part level where they are comfortable.   |
| Keep Find<br>Projects         | Keep the project: nameParts, e.g. KateParts  |
| Lesson 2:                     | The set of parts are now going to be scripted and the whole project will become a mobile or kinetic art. Students will choose which parts they want to see move: specify how much and, when.   |
| Script Tiles: Turn            | Script one of the parts: forward or turn.  |
| Menus: Scriptor<br>Icons Set  | Click and hold down on the word Normal in the top of the Scriptor.   |
|                               | Give students time to experiment with the menu: When should this script run? This menu has options beyond normal, ticking, and paused.   |
|                               | brace forward by ♦5   When should this script run? normal paused ticking mouseDown mouseStillDown mouseUp mouseEnter mouseLeave mouseEnterDragging mouseLeaveDragging opening closing more what do these mean? apply my status to all siblings |
|                               | This menu adds another level of control over the objects and scripts in a  |
|                               | project. Some students may want to use all of them in one project while  |
|                               | others may want to use one of them for every part. These kinds of  |
|                               | decisions give students practice in analysis. They should be able to   |

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|                             | , ,   |
|-----------------------------|---|
|                             | explain what they chose and why. Discuss.                                 |
|                             | Give students time to script every part they want to see move.            |
|                             |   |
|                             | Keep the project.   |
| Lesson 3                    | Type or draw a title for the project.                                     |
|                             |   |
| Supplies: Text              | Type directions to the new owner. The directions in this example          |
|                             | project are a spoof of confusing and incomplete directions.               |
|                             |   |
| Supplies: Add a<br>New Flap | Directions can be open or in a flap.                                      |
| New Plap                    |   |
|                             | Keep the project.   |
|                             |   |
|                             | Give students time to experiment with other students' projects. Give      |
|                             | them time to edit their project. Ask students to explain what changes     |
|                             | they made and why.  |
|                             |   |
|                             | Keep the project.   |
| <b>Standards:</b>           | Common Core Standards   |
|                             | Mathematics Practices: 1-8; 4.NF.6, 4.MD.1; 4.G1.2.3                      |
|                             | Language Arts: 4.W.2.d  |
|                             |   |
|                             | Bloom's Taxonomy/Cognitive Domain:  |
|                             | Knowledge: knows, names   |
|                             | Application: uses, constructs, changes                                    |
|                             | Analysis: analyzes, compares, experiments                                 |
|                             | Synthesis: explains, modifies   |
|                             | NETTO   |
|                             | NETS  |
|                             | 1. c  |
|                             | 3. b  |
|                             | 4. a, b, c, d   |
| Dogovenson                  | 5. a  Etays Halp Ovials Children always available in Etays Open Etays and |
| Resources:                  | 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.   |
|                             | www.etoysillinois.org projects, lesson plans, software download           |
|                             | www.mste.Illinois.org more math, science, and technology resources        |
|                             | www.corestandards.org Common Core Standards                               |

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|              | www.squeakland.org software and Etoys projects www.nctm.org Standards and Focal Points for each grade level |
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| January 2011 |   |