Etoys Computer Science for Kindergarten to Fifth Grade
Pathways to Programming
EtoysCS4K5
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Grade 5
Loco Dispatcher: Explorations of Time, Distance, and Rate of Speed

Description:	Students will: Model a mathematical formula. Make an interactive mathematics book. Choose the topic. Plan the pages. Create text, illustrations, and programming. Use digital images from the internet. Cite the sources for digital images.
Project View	
Subject:	Mathematics, Language Arts
Etoys Quick Guides	Click the question mark in Etoys to open the set of interactive tutorials for basic tools and techniques.
Vocabulary:	Scale factor, x and y locations, < >, conditional statements, variables, heading, fractions, decimals, tenths, hundredths, distance, time, rate of speed, formulas, increase by, decrease by, scale factor, digital images, x and y locations
Lesson 1:	This book project is designed to give 5th grade students a purposeful project to communicate interesting mathematical information. Making
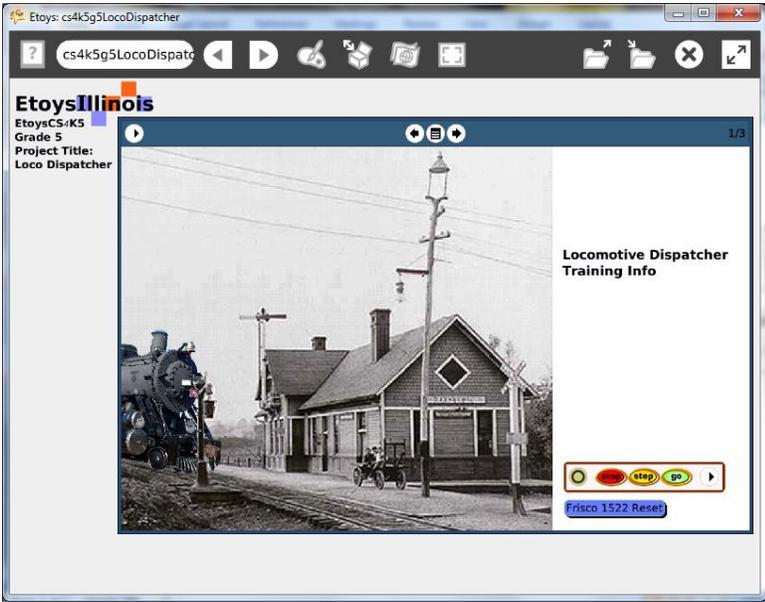
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	these interactive models will help them visualize concepts and deepen their knowledge.
	Students gain experience by combining ideas from mathematics, language arts, and programming.
Books: Top Border Icons Books: Expanded Controls Books: Working with Layers	All the books do not need to be the same topic. They should be as varied as the students' interests. When they are finished they provide a resource for other students. Use a real book as an example to help students understand the parts of the book, a real book and a virtual one. Proficiency in working with layers takes time to develop.
Supplies: Text	Drag a book from Supplies. Fifth grade students should type the text for their book.
Supplies: Digital Images	This example project uses these Quick Guide tools and techniques: Page 1 digital images from the internet for the train and the station 　　　　Scale factor, x and y locations, < >, increase by, conditional 　　　　Statement, heading Page 2 variables, speed, distance, constructed tiles using variables, 　　　　conditional statements, scripting controls, x and y locations Page 3 variables, speed, distance, time, constructed tiles, x and y 　　　　locations, a flap with information about using the formula tools
Navigator Bar: Keep Find Project	Keep the project. Name it: NameCounts e.g. KateMathBook Give students time to read the mathematics books by other students in the class.
Standards:	Common Core Standards Mathematics: 5.OA; 5.NBT.3.7; 5.NF.2.3.4.5.6.7; 5.MD.1.2; 5.G.1.2 Language Arts: 5.W.2.a.b., 2. 6.; 4.L.1.2 Bloom's Taxonomy/Cognitive Domain: Knowledge: knows Comprehension: gives examples, rewords, Application: demonstrates, produces, uses, changes

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	Analysis: analyzes, compares, experiments, plans Synthesis: categorizes, explains, creates, modifies, plans Evaluation: compares, reviews, investigates NETS: 1. a, b 2. b 4. a, b 5. a, b, c, d
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 www.squeakland.org software and Etoys projects www.nctm.org Standards and Focal Points for each grade level
kh February 2011	