

# **SqueakCMI Notebook: Projects, Tools, and Techniques**

## **Introduction**

Welcome to eToys/Squeak: an object-oriented programming language. This notebook was written to introduce Squeak to curious beginners with step-by-step descriptions of projects and how they were done.

Advice is freely given in the hope that the path you take to learning eToys/Squeak is quick and smooth. The Squeak community will be generous with their time, their knowledge, and their willingness to help newcomers. The Office for Mathematics, Science, and Technology Education at the University of Illinois Urbana-Champaign invites you to use these materials to the benefit of students everywhere.

These projects can be explored on the computer by opening them from [www.Squeakcmi.org](http://www.Squeakcmi.org). This dynamic experience of projects on the computer in conjunction with the written materials should give you a range of ideas and possibilities to combine in many ways and for many purposes.

## **Section I**

This section contains two easy projects designed to help you get started with Squeak. They are followed by an extensive description of the rich resources, tools, icons, supplies, and conventions that make Squeak what it is.

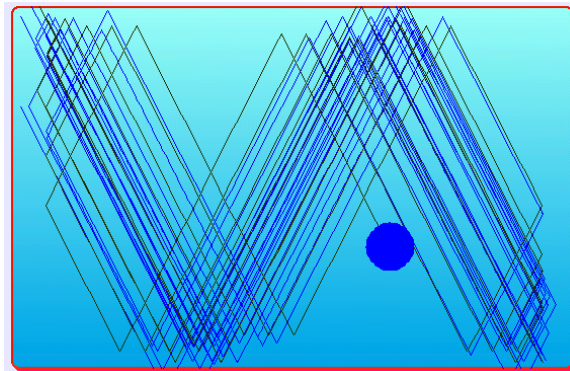
## **Section II**

This section explains more complicated projects. They are in alphabetical order by the name of a Squeak tool used predominantly in that project. The projects are not in sequential order by level of difficulty. The project's name can be used to locate that project at [www.Squeakcmi.org](http://www.Squeakcmi.org). So, if you wonder, "What is a scale factor and how could it be used in a Squeak project?" you can find out.

[www.Squeakcmi.org](http://www.Squeakcmi.org)

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[www.SqueakCMI.org](http://www.SqueakCMI.org)

Resources, projects, tutorials, and standards-based lessons applying Squeak in math, science, language arts, social science, and art. Additional projects and essays can be found on the website. Tutorials developed by math specialists show the myriad ways Squeak enriches the study of geometry and trigonometry. The SqueakCMI community can answer questions, share ideas, and schedule workshops.



[www.squeakland.org](http://www.squeakland.org)

The origin of Squeak: software, tutorials, and example projects. Get the most current versions of the software at Squeakland. The site includes interesting essays about the nature of learning, about programming and thinking.

[www.squeak.org](http://www.squeak.org)

Technical information for experienced programmers and developers

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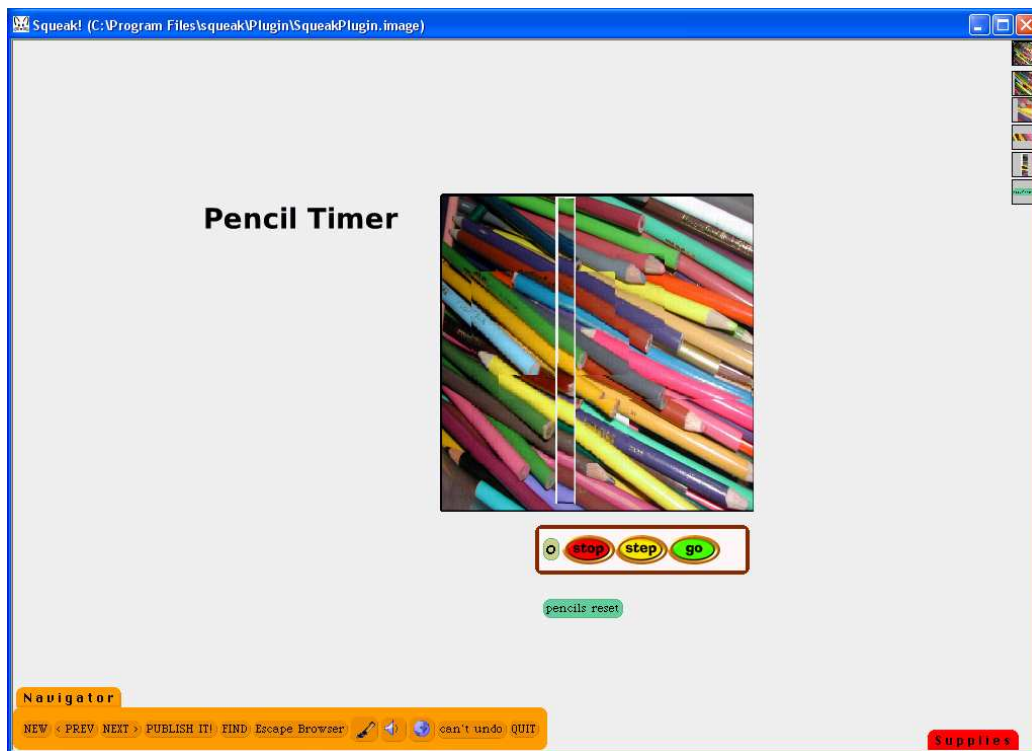
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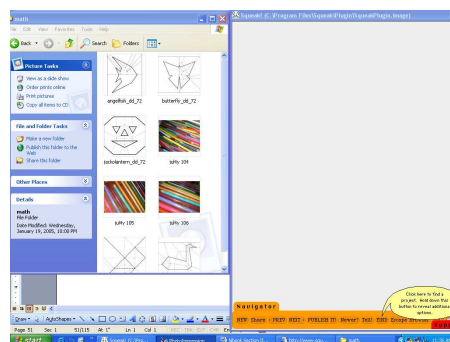


## Digital Images: penciltimernb

This project uses a digital photograph stored in a folder called My Pictures on the computer. It could be one you took or an image from the internet. The photo was cut using the Grab Patch tool and each part was scripted to turn.



Open the folder that contains the digital image and place the folder side by side with a New Squeak project screen open.



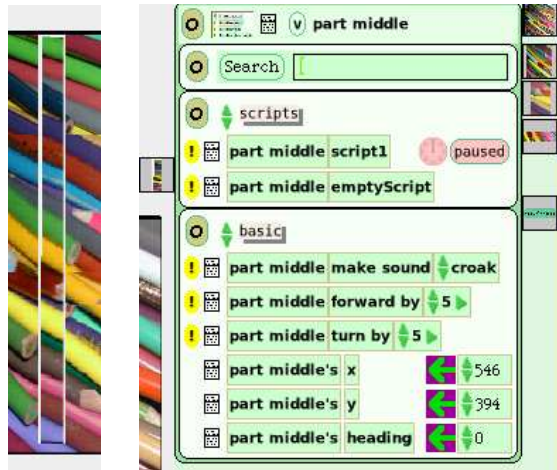
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Click on the photo you want in Squeak and drag it onto the Squeak screen. Drop it there. It will probably not be the correct size for the project. The photo is an object, just like any other object in Squeak, and will have a halo of handles. Alt/click and use the yellow handle to change the size of the photo by clicking on it and dragging it towards the center of the screen to make it smaller. If you want it bigger, move the whole digital image using the black handle at the top and give yourself room to drag the yellow handle away from the center of the image.

The photo in this project was cut into parts using the Grab Patch tool from Supplies and each part was scripted to turn.



The white line around the pencils shows one section that was created using a Grab Patch tool. Click on the new object to open the viewer of scripts. This object turns by 5 when the script is running.

