

## Sugar! SoaS Brings This Sweet Educational Software To Almost Any Computer

Caryl Bigenho, OLPC/Sugar Labs Volunteer

SCaLE 10X

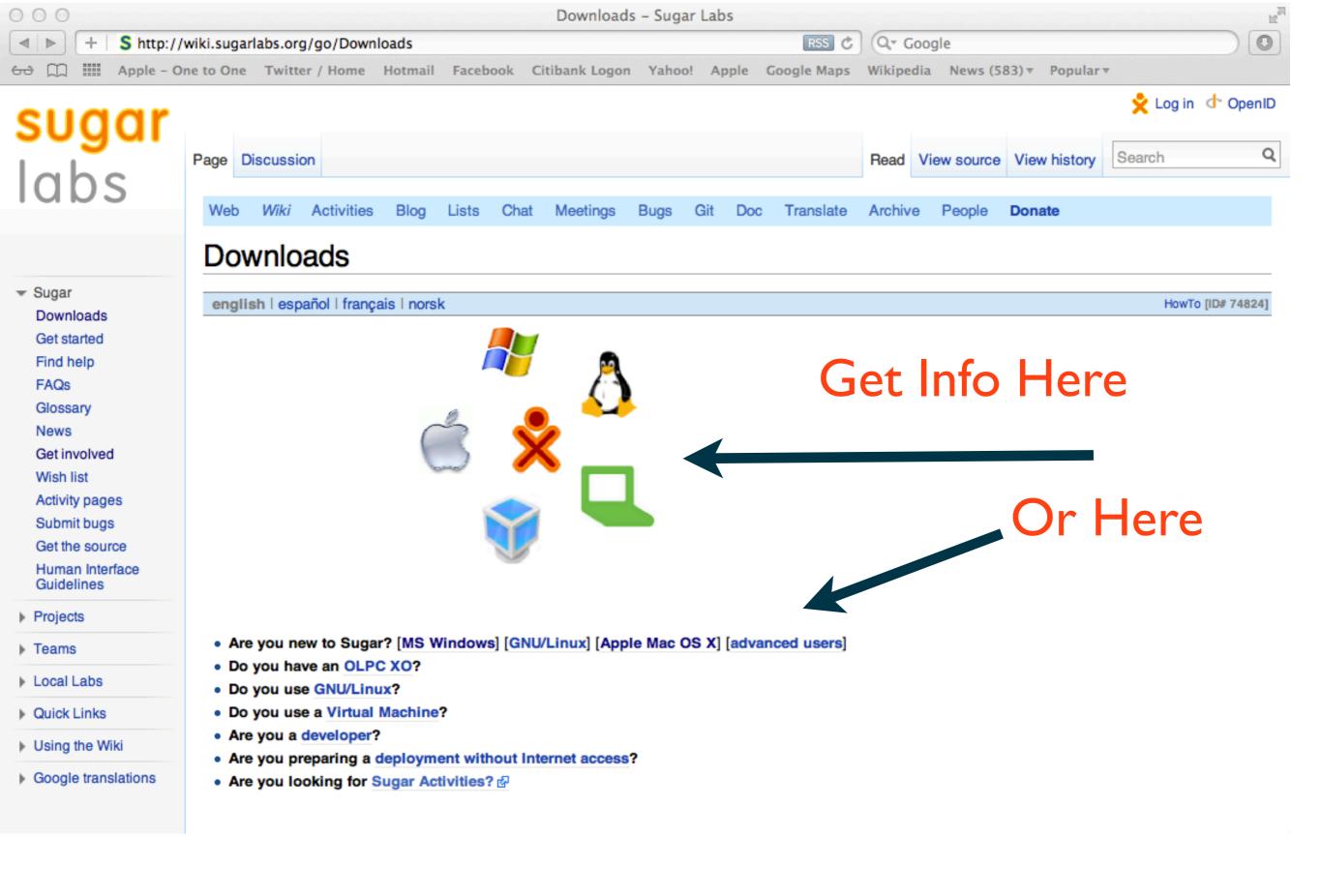
Hilton LAX Saturday January 21, 2012

## Getting Sugar For Your Computer

 Go to the Downloads page on the Sugar Labs Wiki <u>http://wiki.sugarlabs.org/go/Downloads</u>

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## Getting Sugar For Your Computer

- Go to the Downloads page on the Sugar Labs Wiki <u>http://wiki.sugarlabs.org/go/Downloads</u>
- Get info to decide what you need to download
- Follow the instructions for your Computer or OS

## Very Easy Process for Windows Users

## Follow the link for a list of options and instructions

#### MS Windows







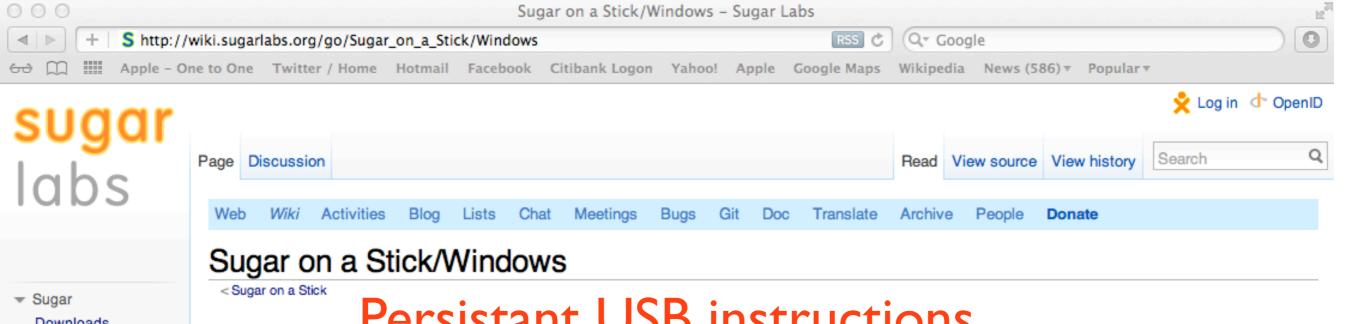
- 2. Download the latest Sugar on a Stick .iso file.
- Load: Insert a USB flash drive (or SD Card) with 2 GB or more of free space into your computer and launch Fedora Live USB Creator to create a Sugar-on-a-Stick bootable image.

Note: Be sure to set the persistent storage slider to a non-zero value.

 Boot: Insert the USB stick into a USB port on your computer. Set the option to "boot from USB" in your computer's BIOS setup, and then start up the computer.

Detailed installation instructions for Windows and booting instructions are available. There is also a guide to exploring Sugar.





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### Persistant USB instructions

#### Introduction

This page is designed to help you to put your Sugar on a Stick image on a thumbdrive using Microsoft Windows. If you have questions, trouble or feedback, please let us know on the Sugar on a Stick talk page. If you can improve these instructions, please edit the page and do so!

#### with Microsoft Windows



There are three ways to do this:

## Scroll down for other options

#### 1. Use Fedora Live USB Creator

(This installation method is not recommended for long-time usage of Sugar on a Stick. See why.)

- Download the Live USB Creator from Fedora .
- 2. Insert a USB flash drive (or SD Card) with 2 GB or more of free space into your computer.
- Launch Live USB Creator.
- Select the 'Browse' button to 'Use existing Live CD' and find the downloaded .iso file image on your system.
- 5. Adjust the Persistent Storage slider. This enables you to save changes to the system and additional Sugar Activities onto the device.
- Select your flash drive as the target, and click the Create Live USB button.
- Wait for the process to finish, then close the Live USB Creator program.
- 8. Stop your flash drive with the Safely Remove Hardware and Eject Media notification area icon dialog, and eject it. See a video of an earlier version of this process here &.



## Live CD Option

#### . 2. Burn a CD-ROM disc, boot from it, then run the script, livecd-iso-to-disk

- Use Windows 7 built-in Disk Image Burner @ or a free utility, like ImgBurn @, to write the downloaded Sugar on a Stick .iso file onto a blank CD.
- 2. Insert a USB flash drive (or SD Card) with 2 GB or more of free space into your computer.
- Boot your computer with the CD-ROM disc. You probably need to press F1, F10, F12, Esc, or a similar key as the computer starts up in order to set the boot source for your computer to
  the CD-ROM device.
- 4. A successful boot will take you into Sugar on a Stick. You can From there, open the Terminal Activity, 🖳 🝙, from the Home view
- Click the 'Become root' icon, #\_\_\_ , to gain administrative permissions in the Terminal session.
- Change the working directory to /LiveOS/ cd /LiveOS/
- Be certain of your USB/SD scsi drive node name (such as sda, sdb, etc.) and partition (such as 1, 2, etc.), yielding, for example, /dev/sdb1.
   Use the df -Th command to confirm your devices before executing the following script.
- 8. execute the Linux command line:

  ./livecd-iso-to-disk --reset-mbr --overlay-size-mb 300 --home-size-mb 175 --delete-home --unencrypted-home /dev/sr0 /dev/sd?1
- Shutdown the physical machine.
- Reboot from the newly-installed Live USB with Sugar on a Stick.

#### . 3. Launch a virtual machine, then run the script, livecd-iso-to-disk

- Download and install VirtualBox (for example; you could do something similar with another vm).
- Create a new virtual machine.
- Choose Linux for the Operating System and Version Fedora (64 bit) if available, or Fedora, on systems lacking 64-bit functionality.
- 4. Attach the Sugar on a Stick .iso file as a CD in the Storage Section
- Insert a USB storage device into your physical computer and enable the VirtualBox USB controller. Then add a filter to recognize the inserted device in the USB section of the VirtualBox machine setup.
- Start the new virtual machine.
- Verify that the USB device is recognized in the running virtual machine.
  - Your device appears in the hover box for the USB stick icon in the virtual machine bottom frame.
  - af -Th reveals your device mounted mounted on a device node, for example, /dev/sda1, on a filesystem volume mount point, such as /media/<USBdeviceManufacturer>

You should see something like the following: [show ▼]

- Continue from step #4 in the Burn a CD-ROM disc section above.
- Shutdown the virtual machine.
- Reboot your physical computer from the newly-installed Live USB with Sugar on a Stick.

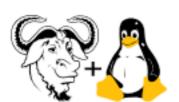
Category: HowTo

Virtual Machine Option

This page was last modified on 20 January 2012, at 22:47.

## Also An Easy Process for Linux Users Follow the link for a list of more options and detailed instructions

#### GNU/Linux









- Prepare: Use this script http://bit.ly/livecd-iso-to-disk of to create a bootable image.
   (You may need to run chmod +x tools\_livecd-iso-to-disk.sh after you download the script to make it executable.)
   You should have the isomd5sum package installed so that the script can verify the download.
- 2. Download the latest Sugar on a Stick .iso file. (older versions) &
- Load: Insert a USB stick of 2 GB or greater capacity. Execute, as the root user, in the directory where you downloaded the script, in one command with arguments, the following:

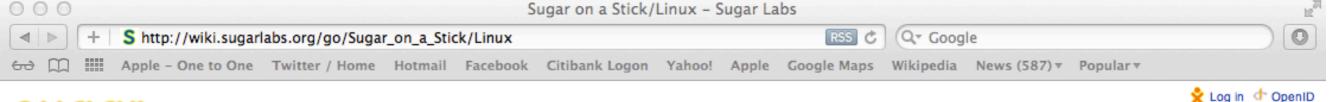
```
./tools_livecd-iso-to-disk.sh --reset-mbr --overlay-size-mb 500 --home-size-mb 900 --delete-home --
unencrypted-home /path/to/source.iso /dev/sd?1

where '?' in the final parameter represents the target bootable device node, such as sdb1 or sdc1, etc. and
/path/to/source is the location and name of the .iso file. You can use the blkid or df command to get the device node name.
```

- Boot: Insert the USB stick into a USB port on your computer. Set the option to "boot from USB" in your computer's BIOS setup, and then start up the computer.
  - You may create more Sugar Sticks on extra USB or SD devices from within a running Sugar on a Stick by running this
    command in the Terminal activity as root (doesn't work with alternative installation methods):

```
/LiveOS/livecd-iso-to-disk --reset-mbr --overlay-size-mb 300 --home-size-mb 175 --delete-home --
-unencrypted-home /dev/sr0 /dev/sd?1
```

Detailed installation instructions for GNU/Linux and booting instructions are available. There is also a guide to exploring Sugar. GNU/Linux users may also want to install the Sugar packages on their favorite distro, apart from Sugar on a Stick.



Translate

### sugar labs

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#### Sugar on a Stick/Linux

< Sugar on a Stick

### A sample of extensive instructions and options

Contents [hide]

Load SoaS onto a stick using Fedora or Ubuntu

livecd-iso-to-disk transcript

Introduction

What's next?

#### Introduction

This page provides additional detail for loading Pineapple, the most stable, released version of Sugar on a Stick (SoaS), available at this download site @, onto a USB/SD flash storage device using GNU/Linux.

Bugs

Git Doc

To explore a variety of **experimental** options for putting a <u>Sugar</u> image on a USB or SD flash drive under GNU/Linux, see the following pages:

SoaS test builds I OLPC XO-1 I openSUSE I Trisquel I VirtualBox I VMware I non-compressed Fedora I Live USB: (all known portable Sugar distributions)

If you have questions, trouble, or feedback, please let us know on the discussion page. If you can improve these instructions, please edit the page and do so!

See this reference for more background details: fedora: How to create and use Live USB

#### Load SoaS onto a stick using Fedora or Ubuntu

This is known to work in Fedora and Ubuntu.

First, download a SoaS .iso image from http://spins.fedoraproject.org/soas/#downloads @, then return here.

Make sure you have the syslinux package installed on the operating system that you will use to prepare the Live USB image. It is recommended that you also have the isomd5sum package installed. The cryptsetup package is another option potentially used by the "livecd-iso-to-disk" installation script. (On Ubuntu, sudo apt-get install syslinux isomd5sum cryptsetup will install the packages. They are also available through the Synaptic Package Manager.)

(On Gentoo, one needs to uncomment 'SAMPLE FILE' in /etc/mtools/mtools.conf to make syslinux work.)

- syslinux is needed to set up booting on the FAT file system of the USB disc or Live CD.
- isomd5sum is needed for the recommended verification step, which checks that the .iso file is complete after its travels. If there is a problem with the .iso file, the script will exit and provide a failure message. The verification step can be bypassed by using the —noverify option.
- cryptsetup is only needed for the option to provide password protection and encryption for the persistent /home/liveuser folder. It is not necessary if one applies the recommended —
   unencrypted—home option. The —unencrypted—home option is preferred because the reduced overhead improves robustness with the compressed SquashFS file system employed by the
   Live USB deployment.
- Plug in a 2 GB or larger USB stick into your computer.
- Mount the 'SoaS.iso' image to reach the onboard livecd-iso-to-disk installation script:

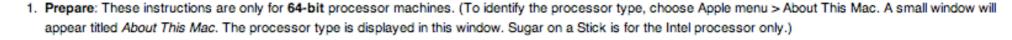
sudo mkdir /mnt/soas/

## A Tricky Process for Mac Users!

#### Apple Mac OS X

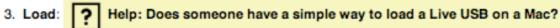
DRAFT: These instructions are incomplete. Please help with testing and documentation. In the meantime, we recommend the Virtual Machines instructions below.











Here is a simple way to recognize a bootable USB on a Mac.

Go to rEFIt (http://refit.sourceforge.net/@) and make a bootable cd. There is no need to install rEFIt on your mac. In fact installing rEFIt may make it impossible to upgrade the Mac OS to a newer version later on (personal experience, I had to do a clean install). Put the rEFIt CD in and hold the option key after turning the computer on. The Mac will recognize the CD because it uses EFI and then the CD will recognize the bootable USB.

★ How to Burn a rEFIt CD @

You can rename the .cdr file to .iso for use in GNU/Linux.

- Building and Booting a Live USB on a Mac
- Boot: Insert the USB stick into a USB port on your computer. Is this correct?: During the startup sound, press and hold the c key. If the Apple logo appears, Sugar is not booting. Restart and try again.
  - . the c key must be pressed during the startup sound and you must continue to hold it down.
  - you may release the c key once the Sugar logo appears.
- Have a MacBook? Consider these options:
- \* MacBook Persistent SoaS v5 USB EFI Boot
- Bootable F15 Gnome3 CD on MacBook Pro
- Bootable DVD of F14 for MacBook Air
- Bootable CD of Trisquel 4.5 for MacBook Air See other installation variations at Sugar Creation Kit \*



 Have an iBook or PowerPC Mac? See Community/Distributions/Ubuntu/PPC.\*

Be sure to explore all the options\* to find the one that suits you and your Mac best!

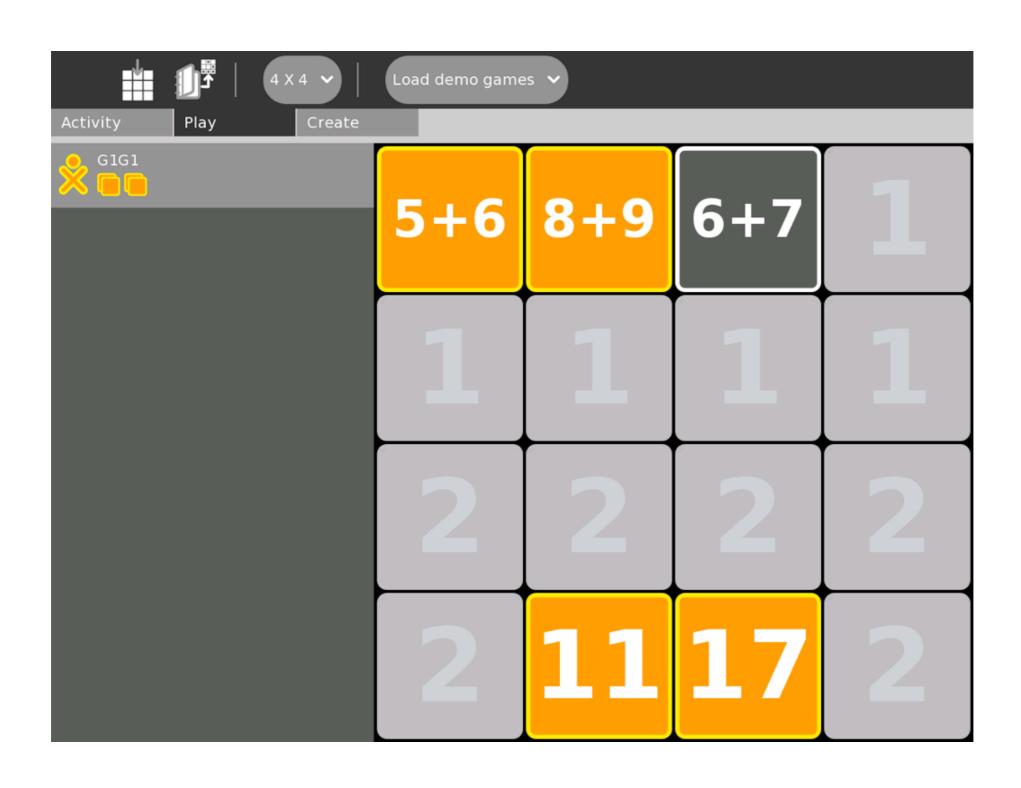
You may want to install SoaS as a virtual machine using Virtual Box, Parallels, or Fusion

\*
Alternative installation instructions for Mac OS X. Also, these older installation instructions and booting instructions may be consulted.

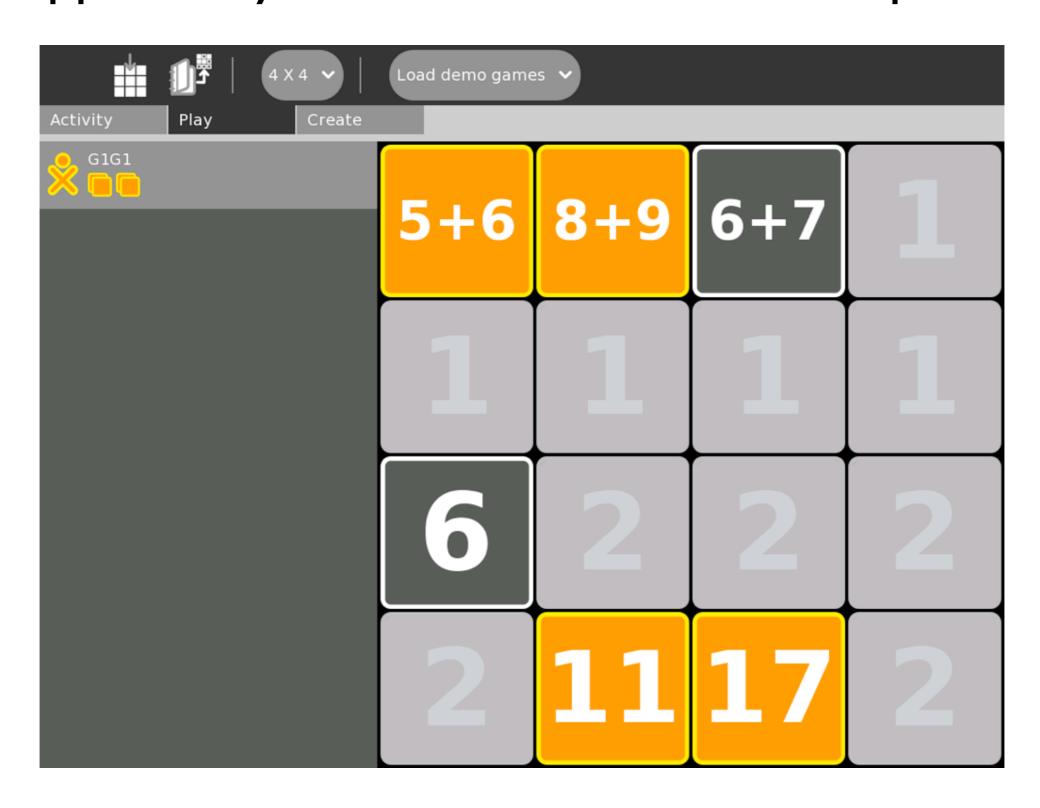
There is also a guide to exploring Sugar.

Try Some of the Activities

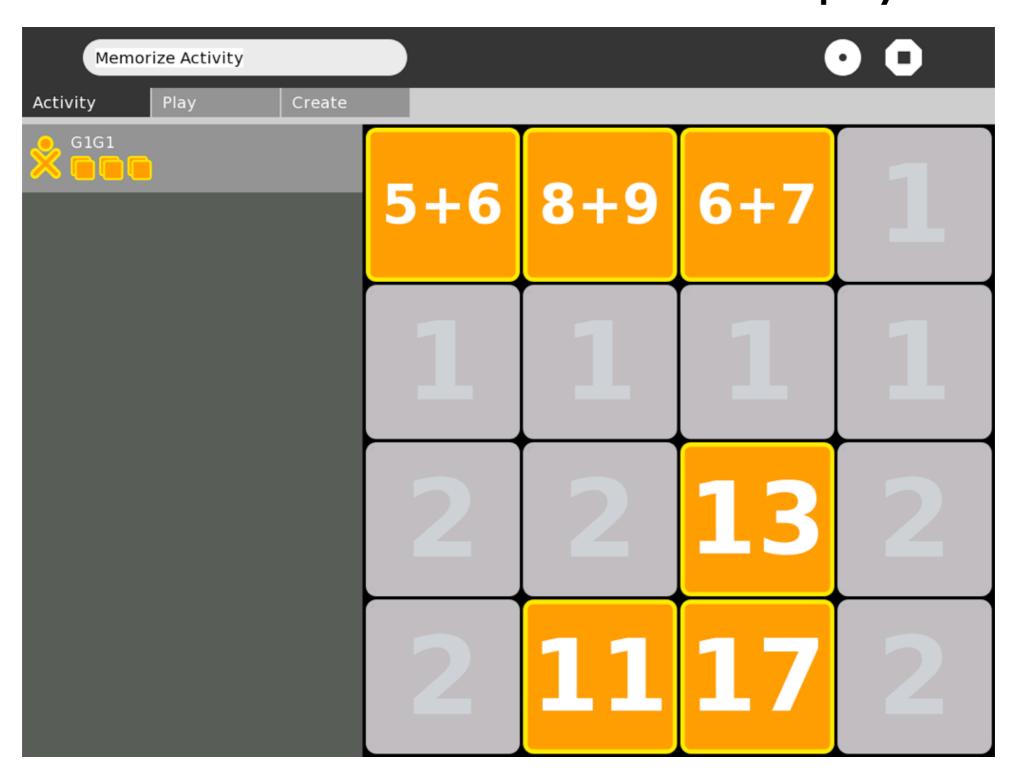
Memorize: a game for matching facts on any subject. Can use words, sounds, photos or drawings.



Incorrect answers in Memorize are shown in grey and disappear. Player needs to memorize the position.



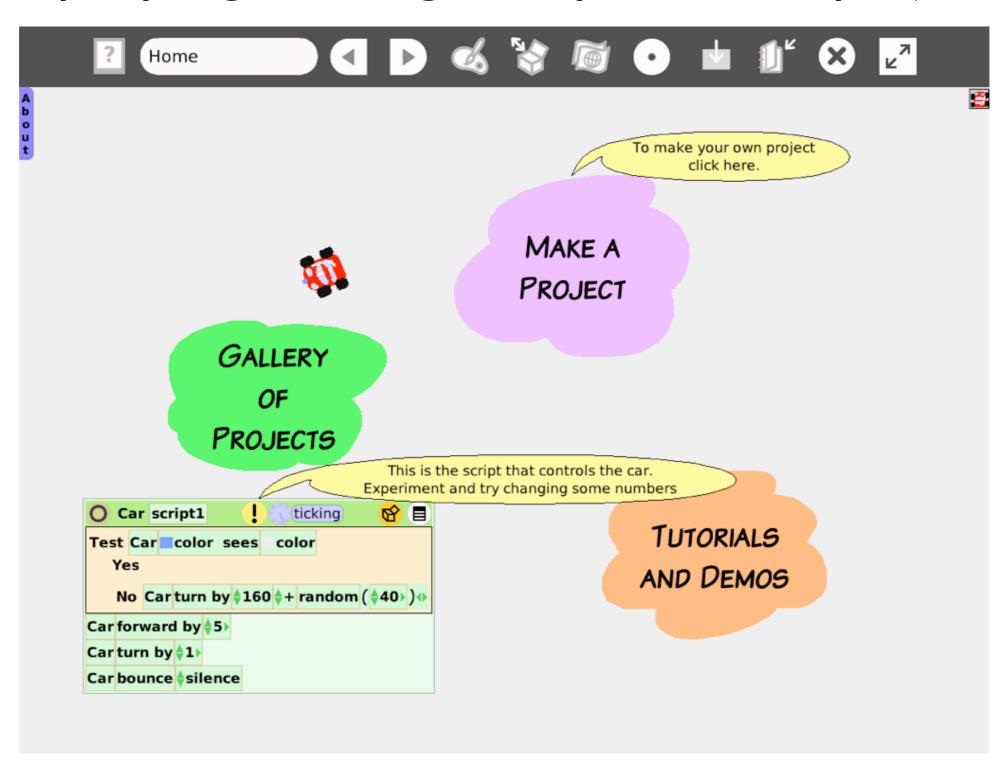
Correct answers in Memorize remain and are shown in the chosen colors of the player.



# Create mode in Memorize allows a player (or teacher) to create games on any subject.



Etoys: a powerful Activity that goes from very simple programming to sophisticated projects.



## Etoys tutorials and demos will help you get started



#### **Tutorials and Demos**



This is a self-repeating demo of what kind of things you can do in Etoys.

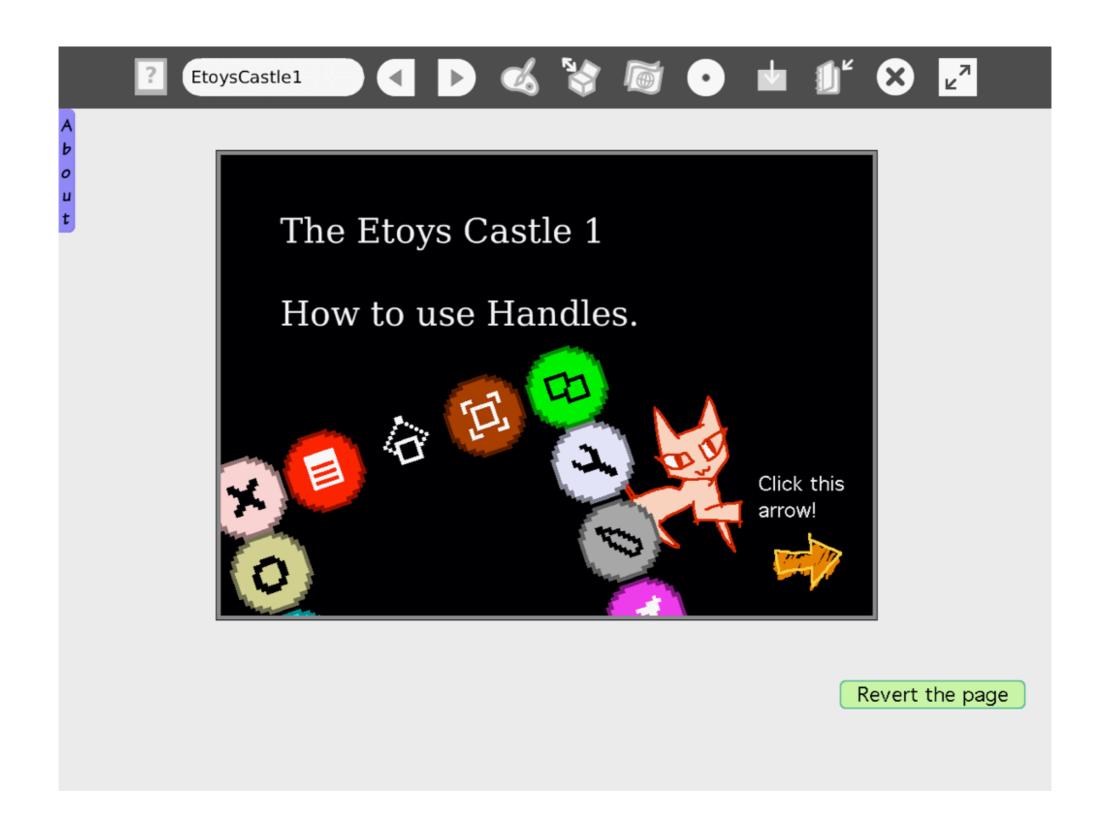
This is the first tutorial in the "Etoys Castle" series. You can learn how to use the "halo of handles".



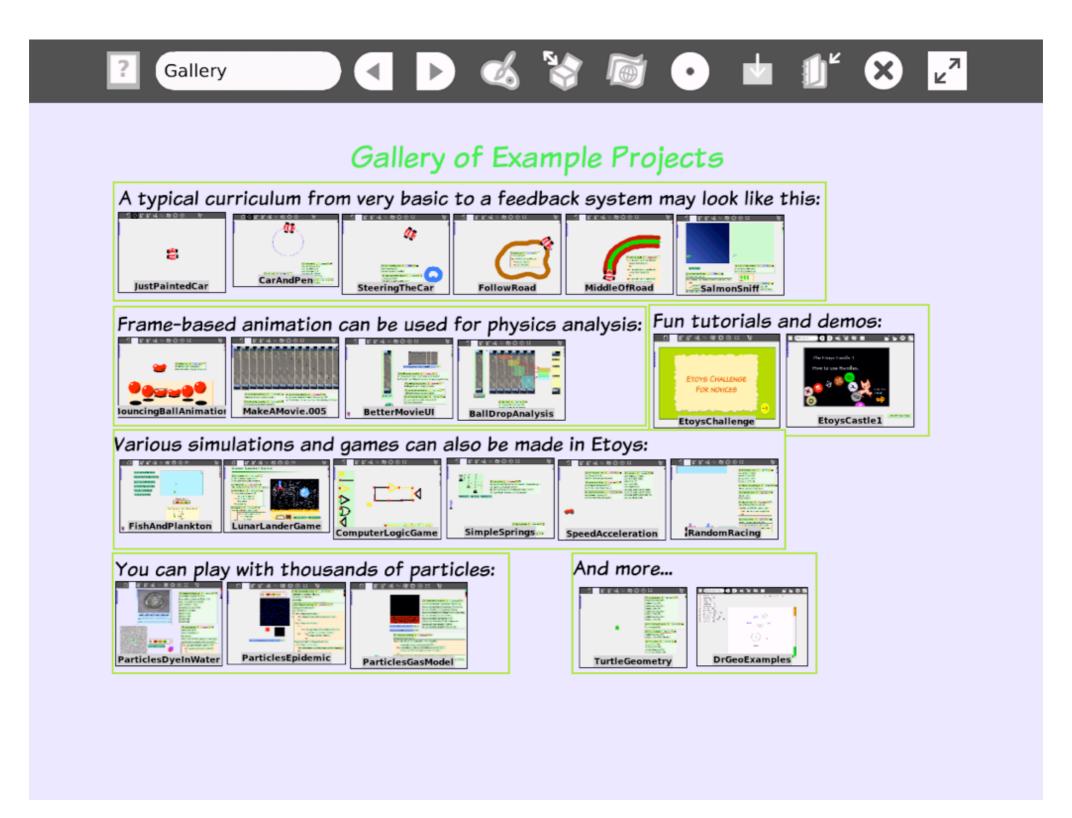


In this "Etoys Challenge" game, you need to solve series of problems with your understanding of tiles.

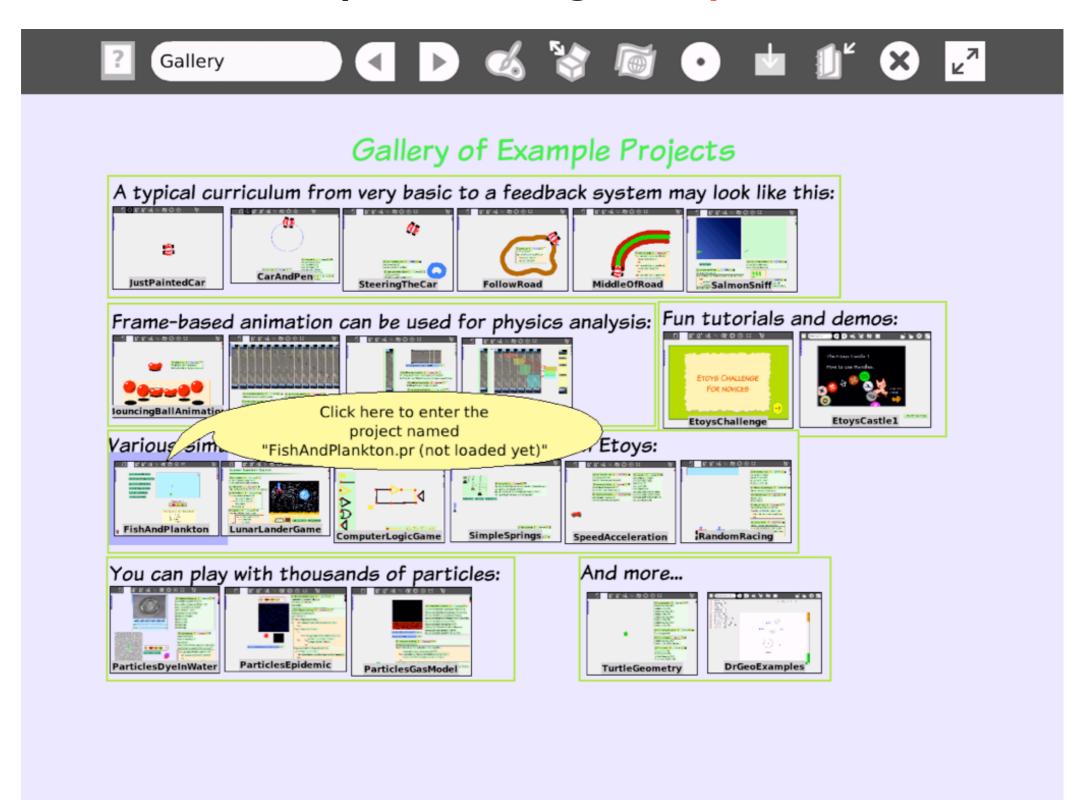
## Etoys tutorials help you learn how things work



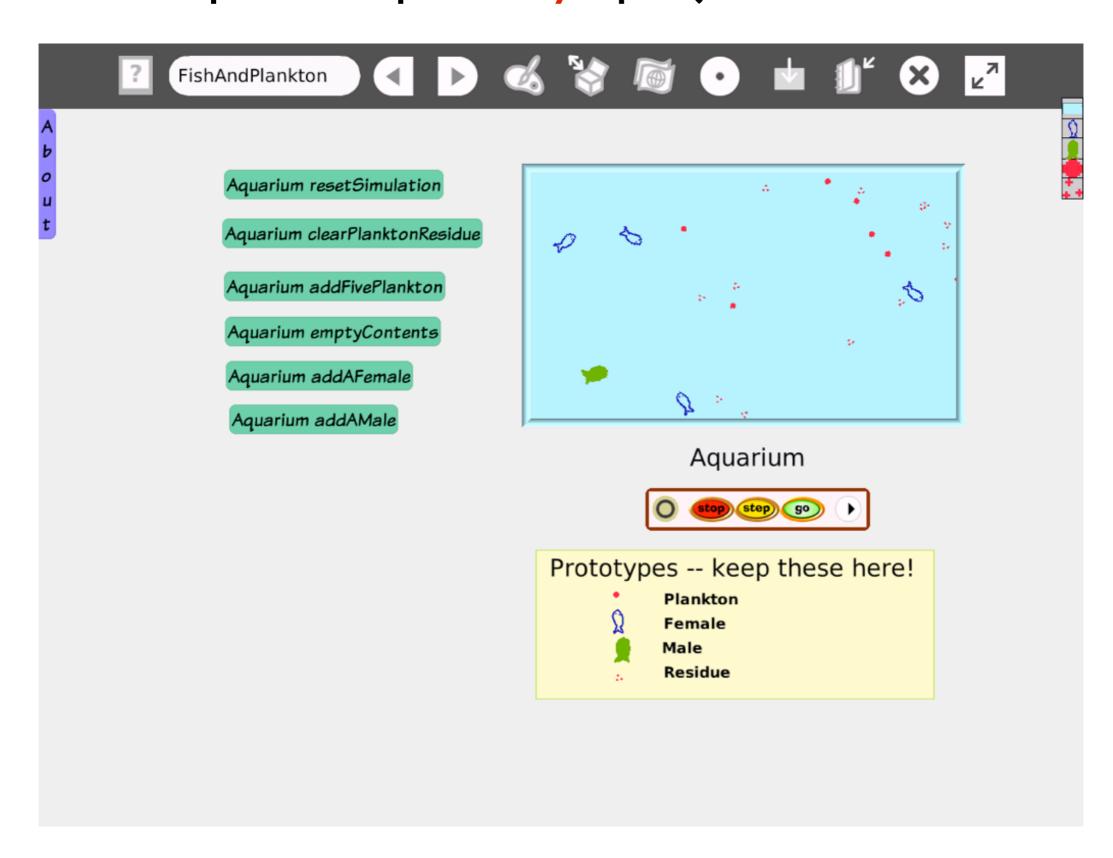
# The Gallery of Example Projects shows a wide range of sophisticated projects created in Etoys.



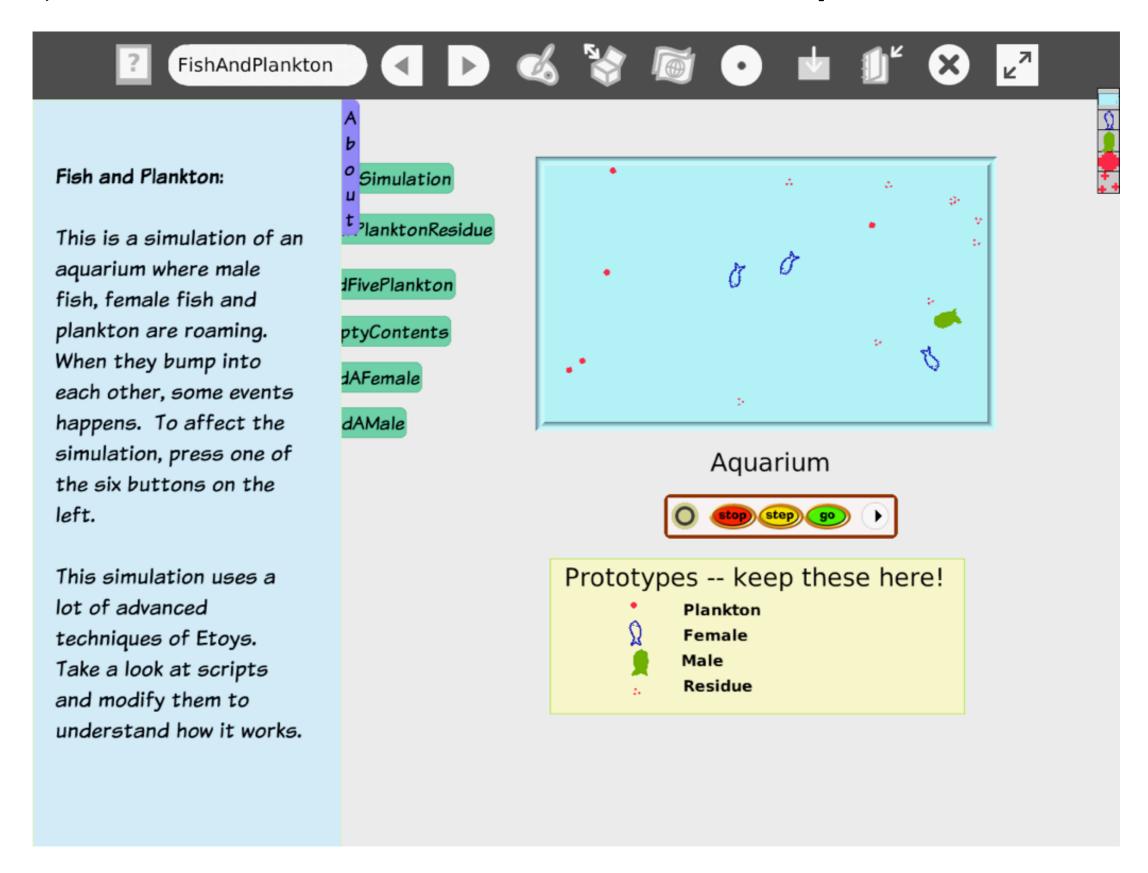
# Helpful hints appear in text balloons to guide you through Etoys.



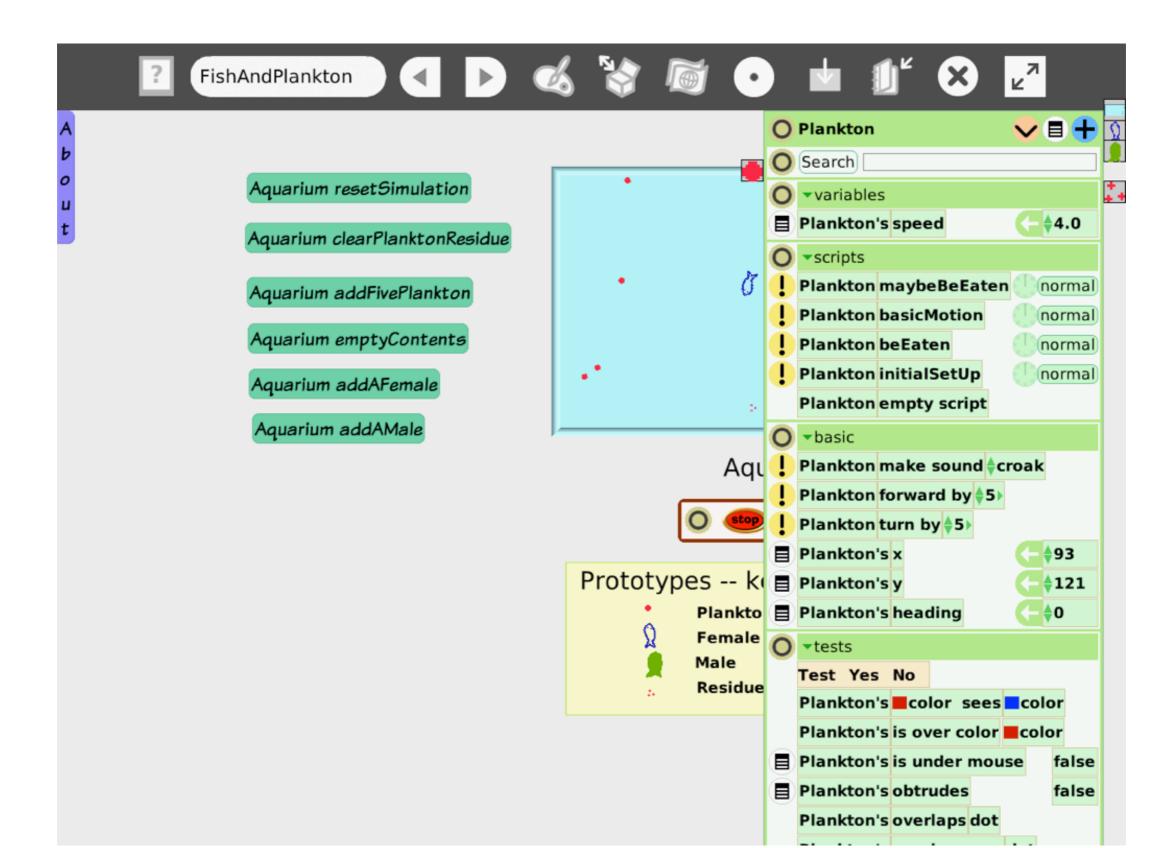
## You can open sample Etoys projects and run them.



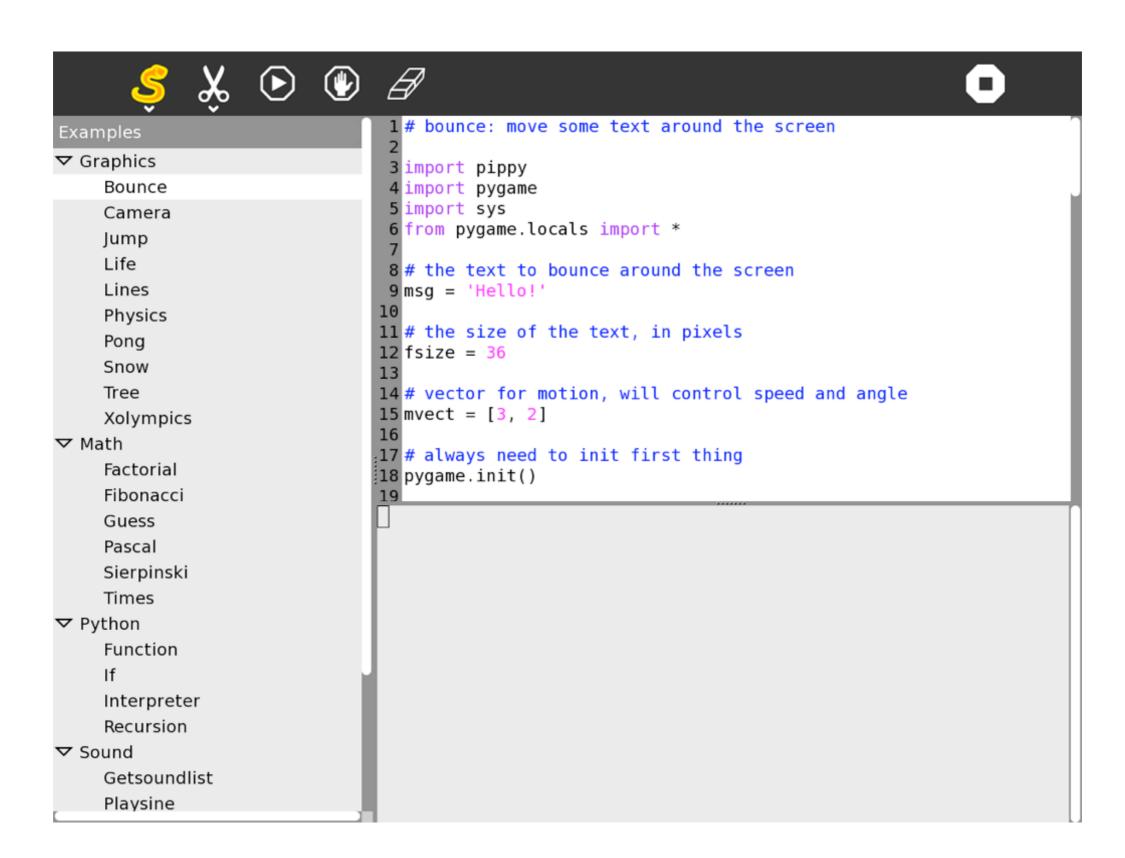
## Projects can include a text box that opens on the side



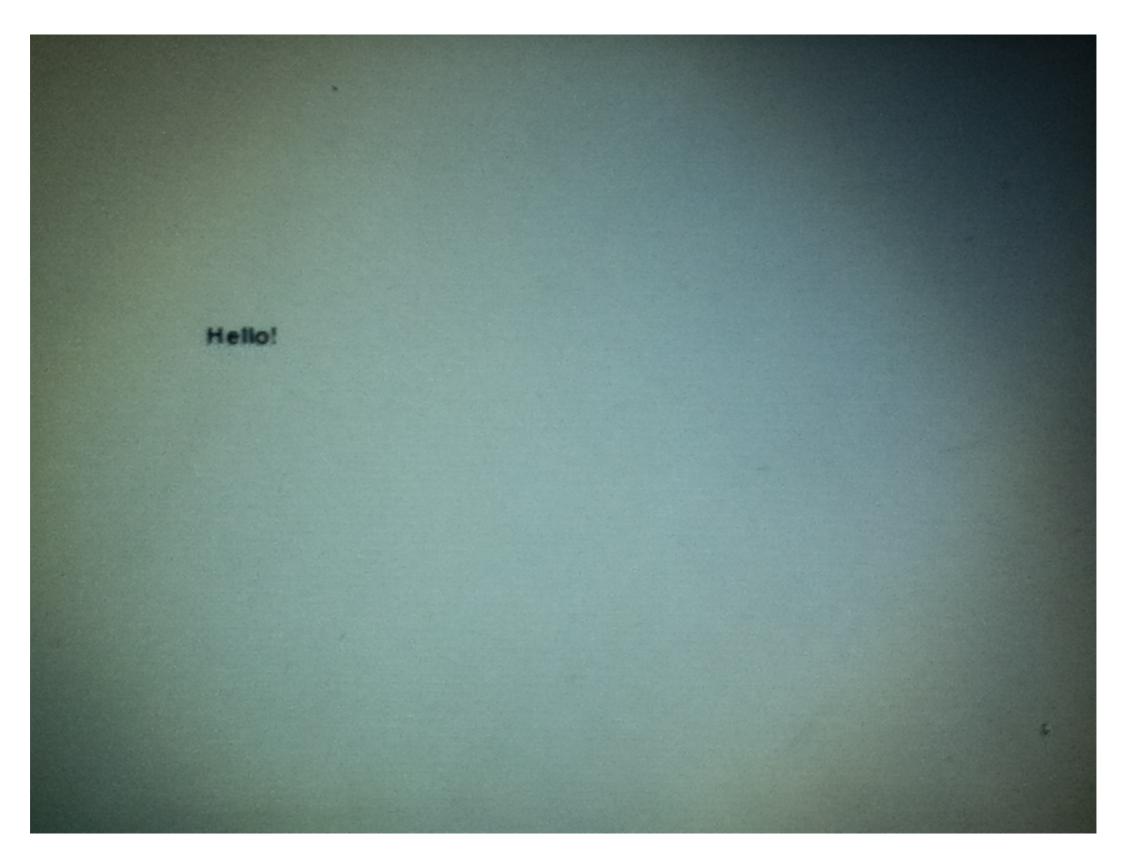
## Etoys also allows you to view and modify the scripts



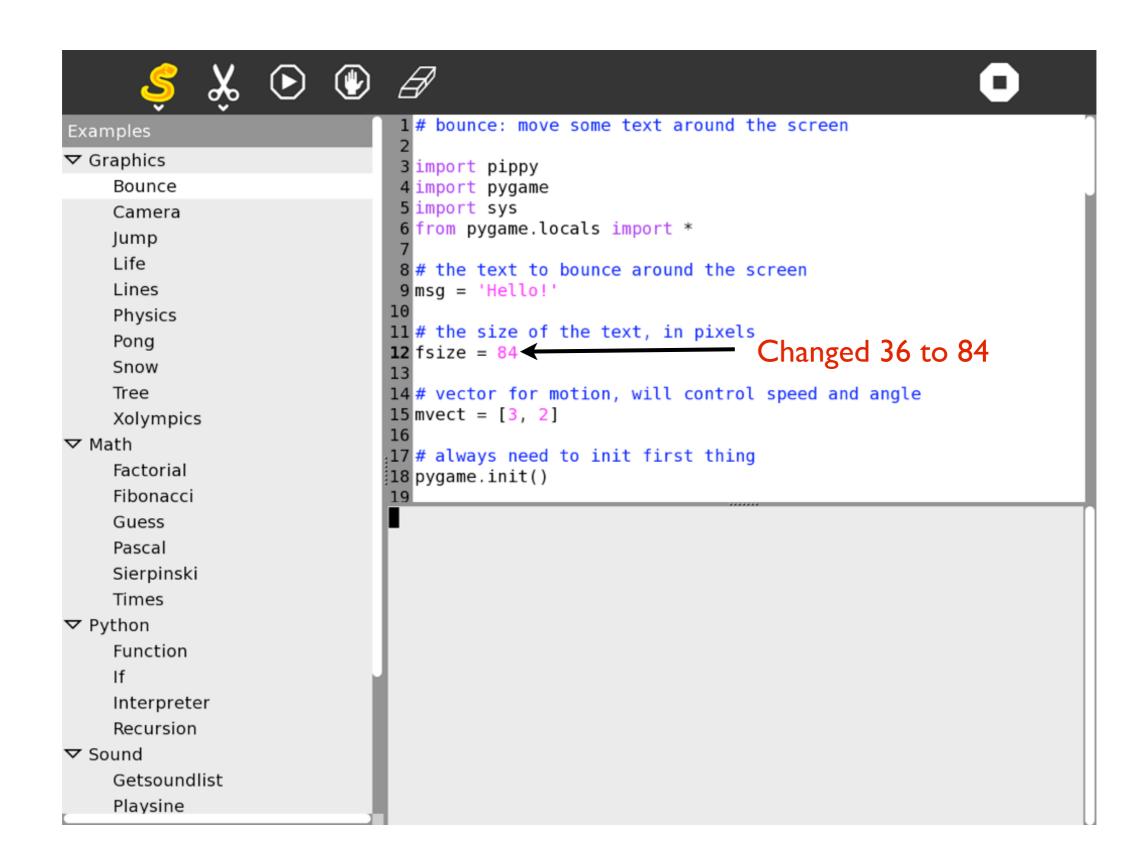
## Pippy is a baby version of Python designed for learners



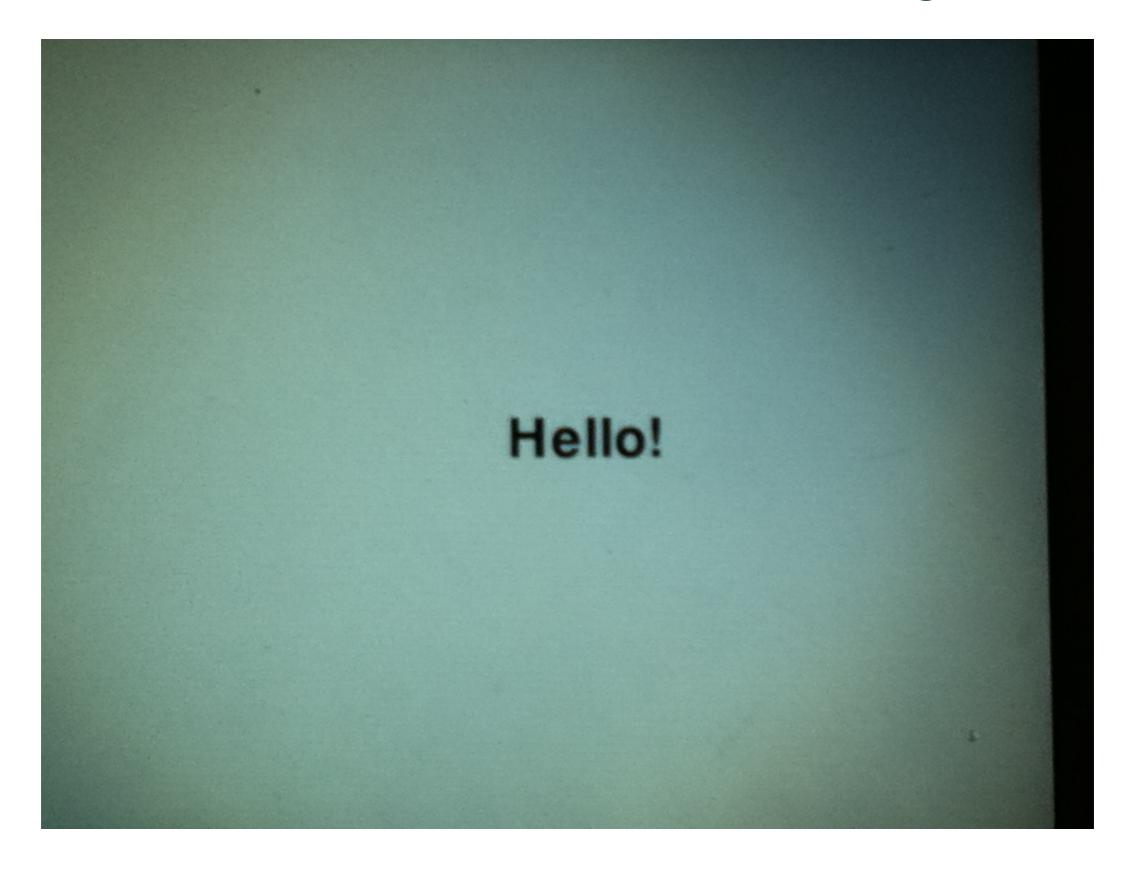
# Run the Pippy program to see what the code does



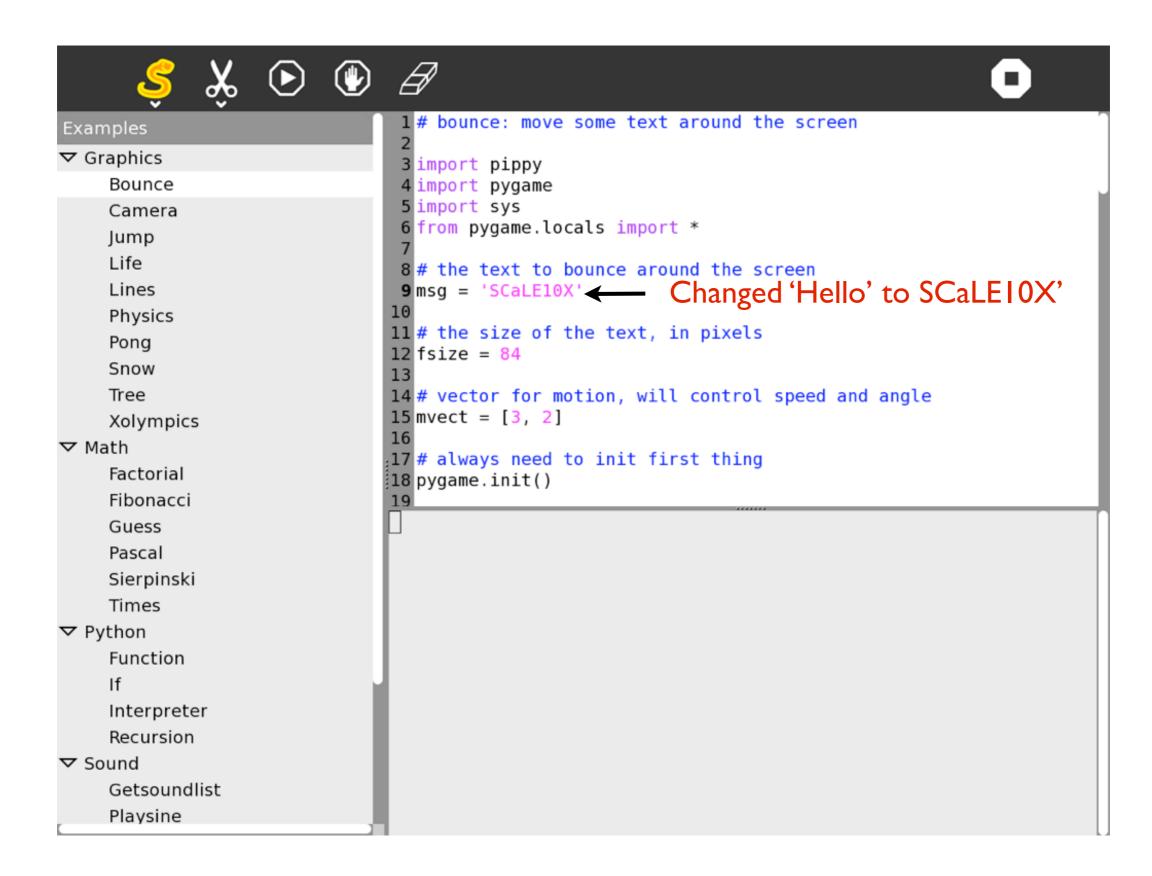
## Experiment with code changes in Pippy



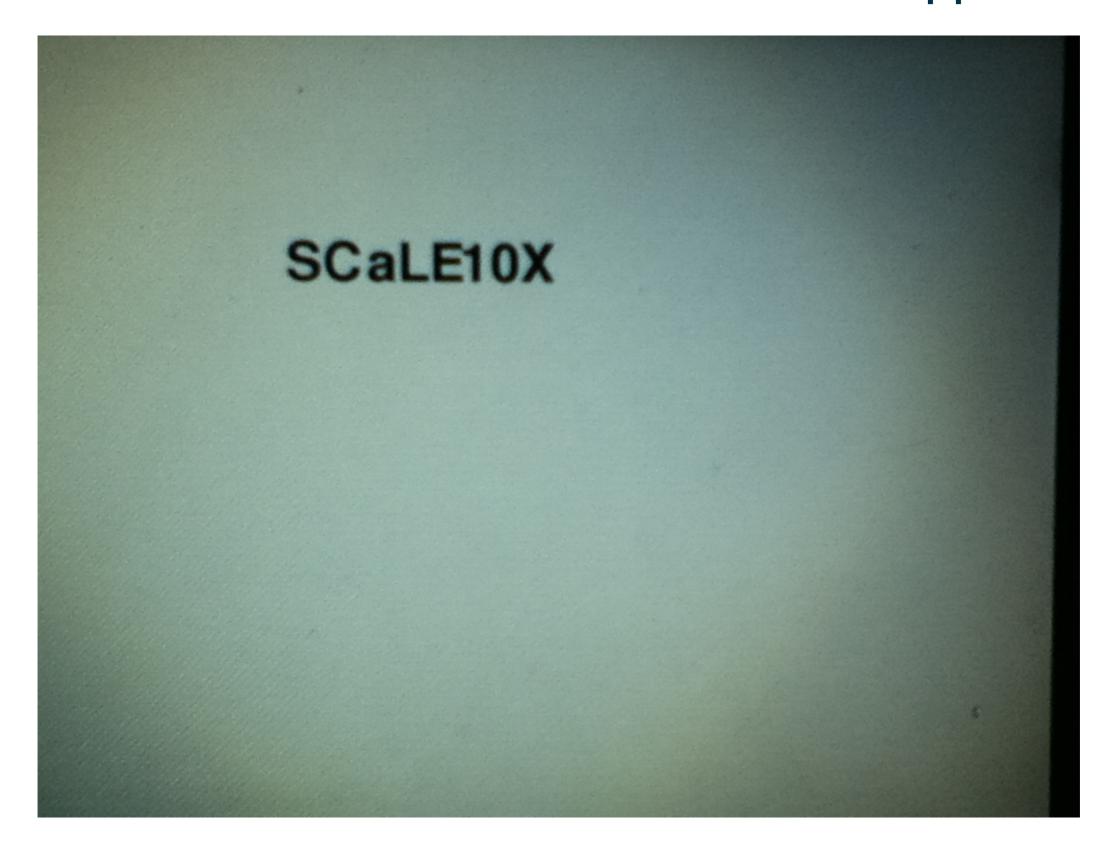
## Run to see the effect of the change



## Try changing the text that will bounce



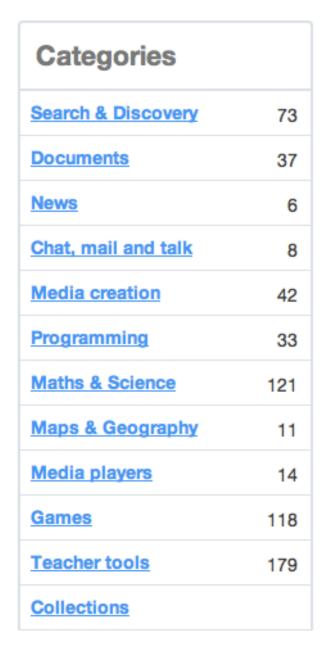
## Run the new version to see what happens

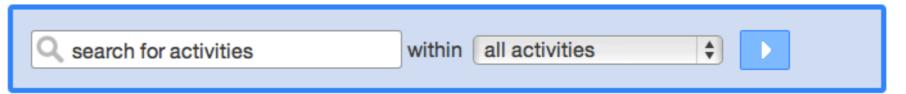


- Try Some of the Activities
- Find out more about the Activities

## Go to the Sugar Labs Activities collection sugarlabs

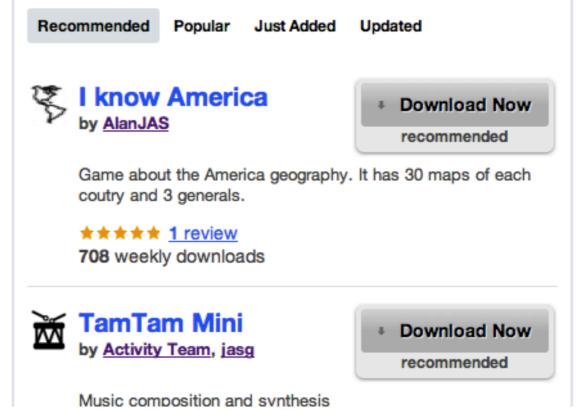
6.638.094 activities downloaded





Advanced

#### **Browse Activities**





#### Collections

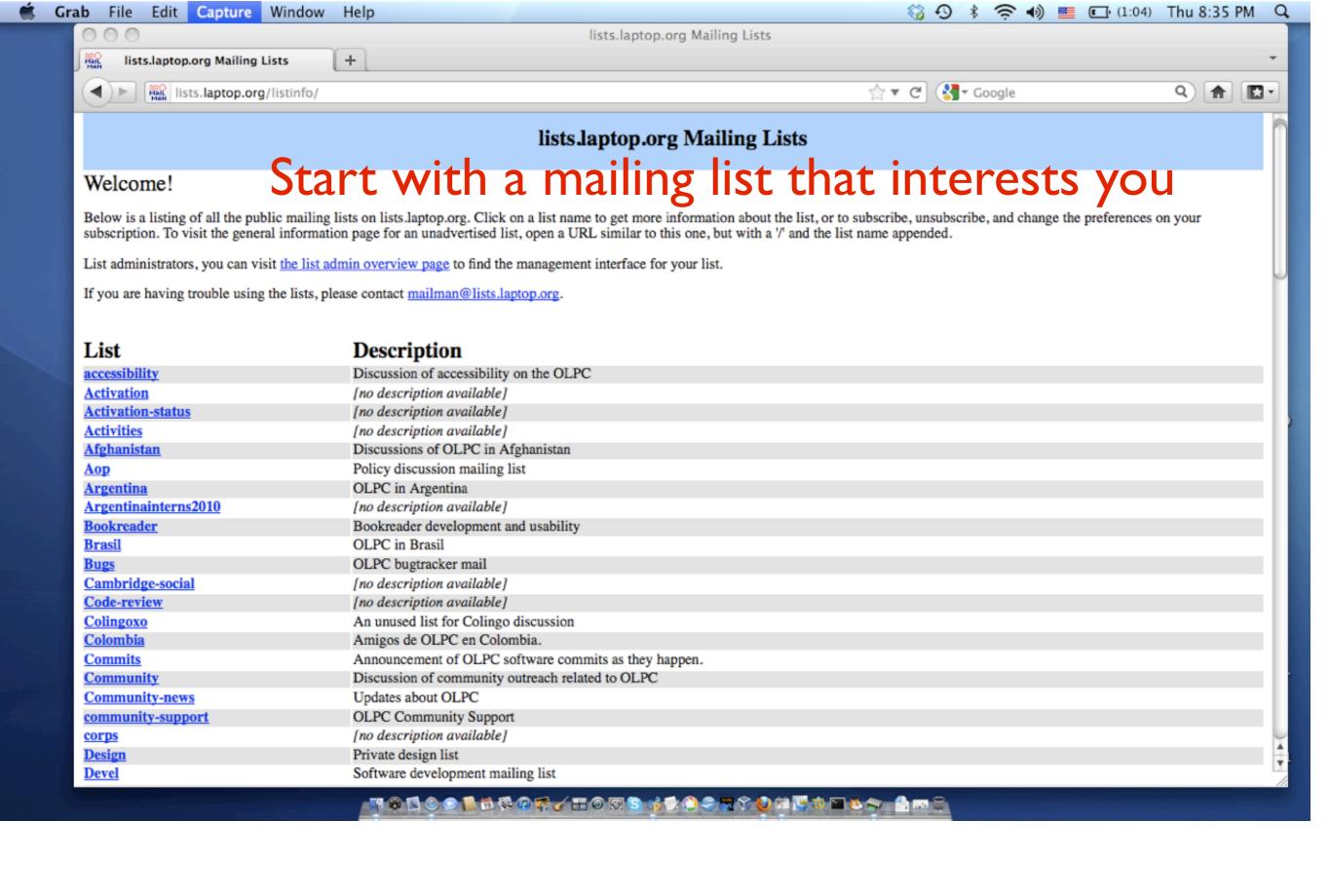
Collections are a way for you to categorize, mix, match and mingle activities. Subscribe to collections created by other users or create your own.

#### **Popular Collections**

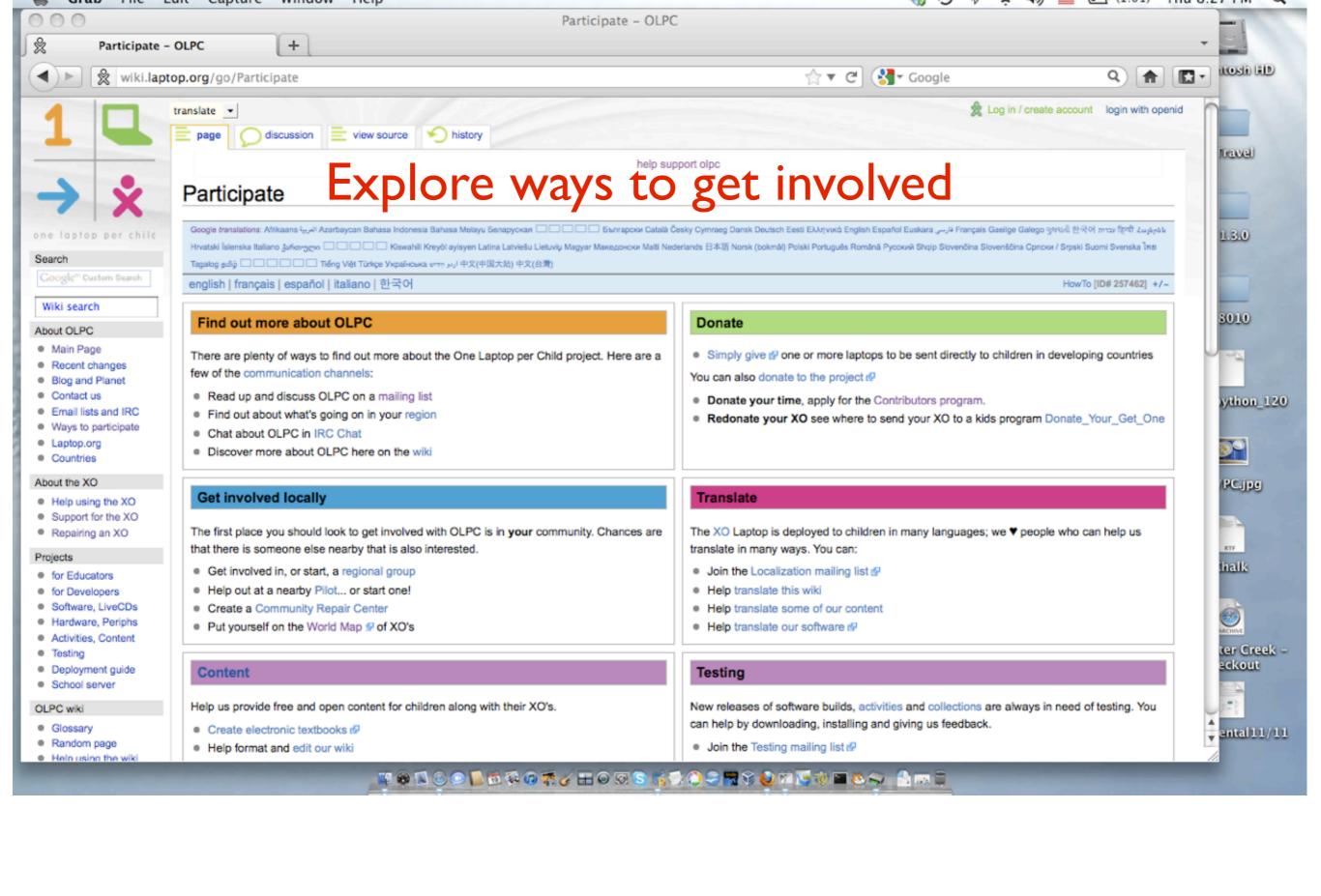


GCompris by alsroot

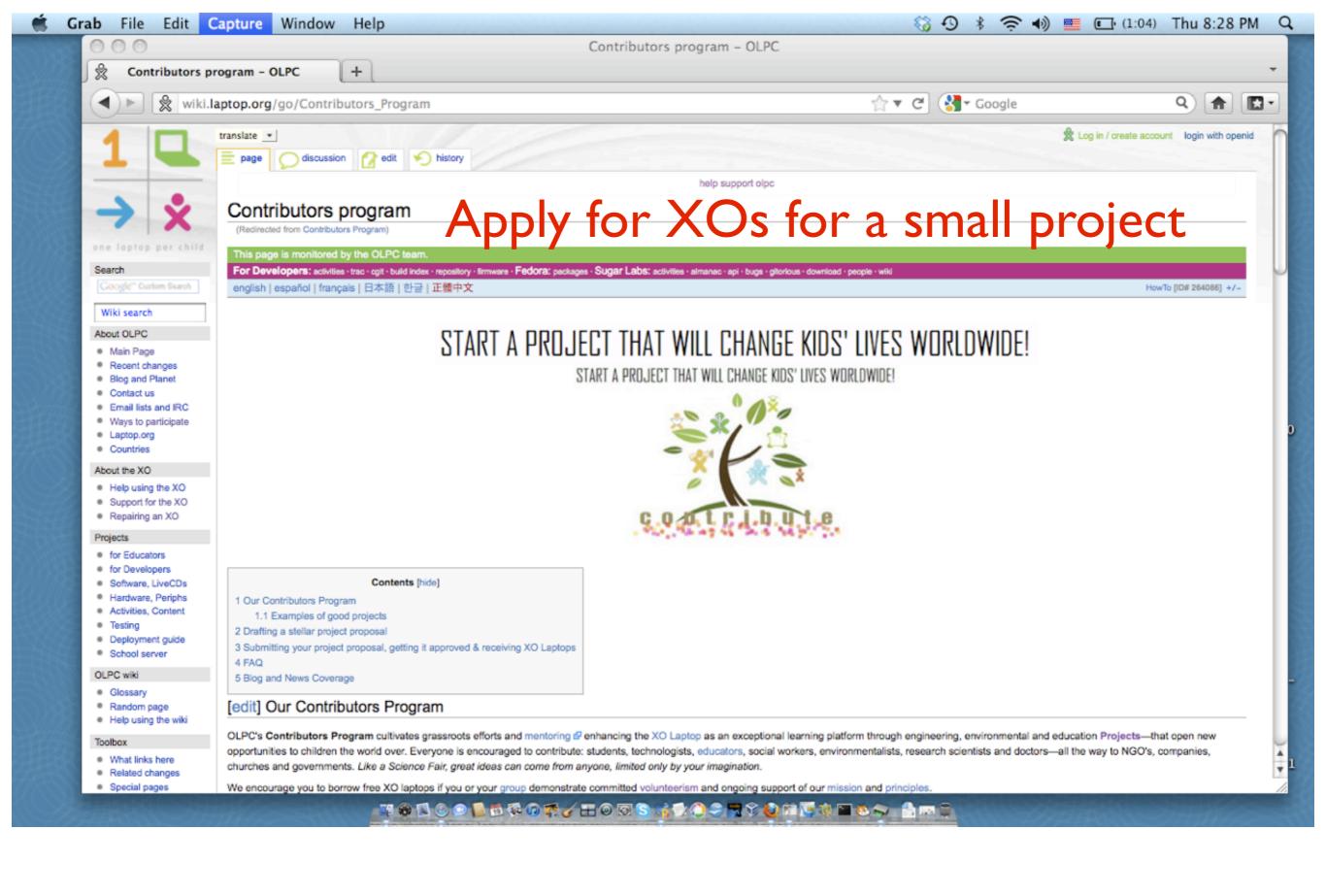
- Try Some of the Activities
- Find out more about the Activities
- Get help from and share with other Sugar users



- Try Some of the Activities
- Find out more about the Activities
- Get help from and share with other Sugar users
- Learn about Participating



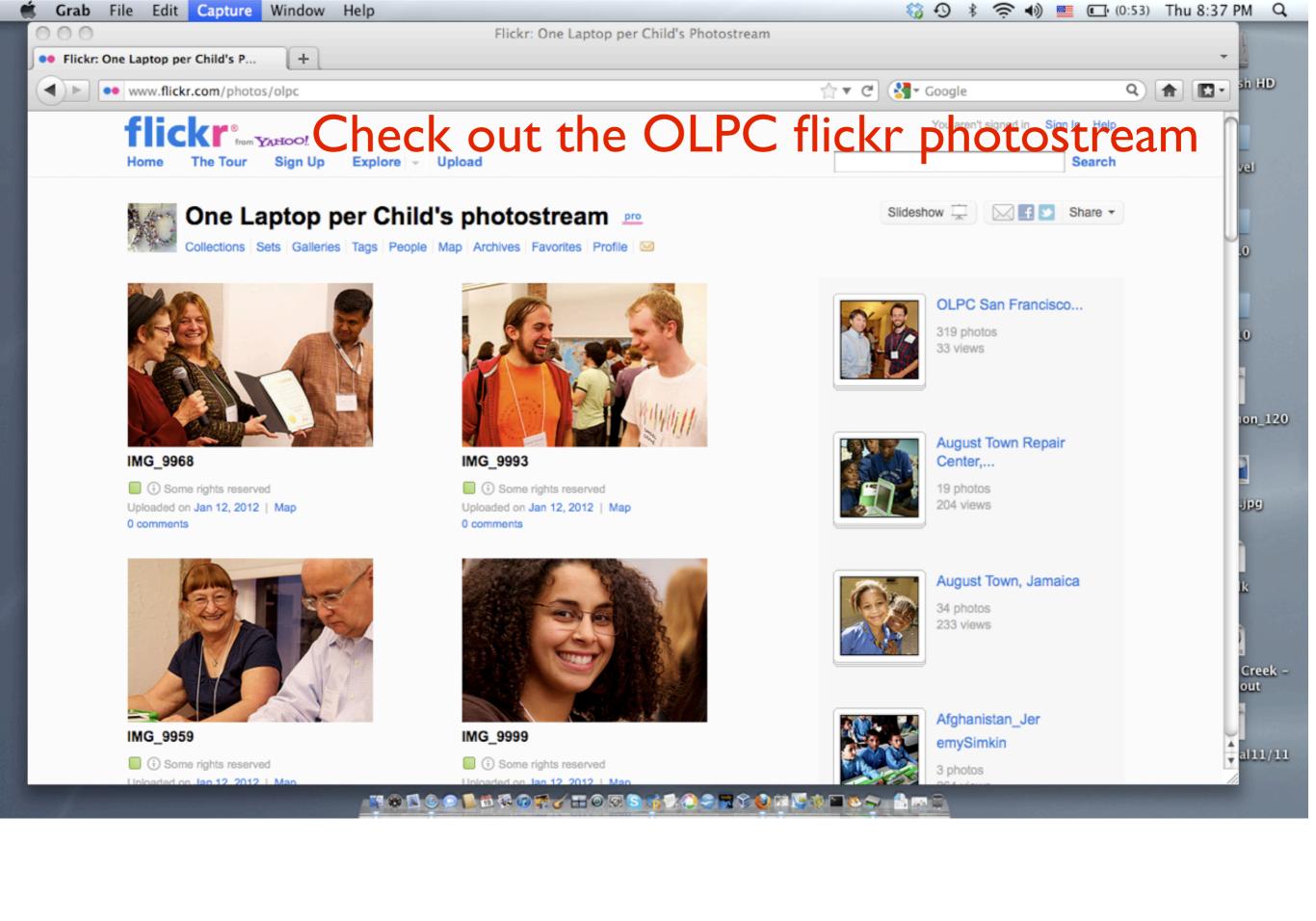
- Try Some of the Activities
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- Learn about Participating
- Apply for an XO via the Contributors Program



- Try Some of the Activities
- Find out more about the Activities
- Get help from and share with other Sugar users
- Learn about Participating
- Apply for an XO via the Contributors Program
- Keep up to date on OLPC and Sugar Labs news









Microsoft Nicholas

using solar energy to power XO up

Comment on World's largest singleschool XO laptop solar power

Negroponte



## **Useful Links**

http://wiki.laptop.org/go/The OLPC Wiki

http://wiki.sugarlabs.org

http://wiki.laptop.org/go/Participate

http://wiki.laptop.org/go/Contributors Program

http://blog.laptop.org/

http://wiki.sugarlabs.org/go/Sugar on a Stick

http://lists.laptop.org/listinfo/

http://www.flickr.com/photos/olpc

http://www.olpcnews.com/

## **End Notes**

- In the live presentation, time was spent looking at some of the Activities in Sugar running in Parallels on a MacBookPro. The Memorize, Etoys, and Pippy Activities were all shown actually working, not as simple screenshots. Parallels allows seamless shifting back and forth between Sugar and OSX without rebooting.
- All of the web pages shown were explored live during the presentation.