

Fast, Cheap and Out of Control: Low-budget technology programs for the non-experts

#### **Free Software**

**Comic Life** (free download of 30-day trial)

http://plasq.com/comiclife

Users can import their own drawings, photos and images into Comic Life and format them into panelized comics, complete with comics-style conventions such as speech and thought bubbles.

### **SAM Animation** (free download)

http://www.samanimation.com/

Use SAM Animation to create stop-motion animation with a video or still camera connected to a computer. The software allows the user to change the frame rate, to order/sort frames, and sync a soundtrack. SAM Animation was developed by Tufts University Center for Engineering Education and Outreach.

### **Scratch** (free download of full version)

http://scratch.mit.edu

Scratch is a graphically-based programming platform developed by the MIT Media Lab. It can be used to crate animations, games and interactive art using images and sounds that users create or download from external sources. Users can upload their projects to the Scratch website which is also home to a large, active user community and support forums.

# Accessory programs

Art Rage (free download of trial version, unlimited time)

http://artrage.com

Art Rage emulates physical drawing materials and implements. You can 'draw' with oil paints, pencil, crayon and airbrush. The free trial version give you access to many, but not all of the full (for purchase) version.

## Audacity (free download of full version)

http://audacity.sourceforge.net/

Audacity is an open-source sound editing program that can be used to cut, splice, record and mix audio tracks. It's also great for converting sound files from one file format to another.

#### Picasa (free download)

http://picasa.google.com

Picasa is Google's free photo organizer/sharing platform. Picasa has some basic photo-editing functions.





## **Supplies for Workshops**

### Comic Life

- computers
- still cameras

### **Light Painting**

- still camera with a setting for long exposures (~15 seconds)
- handheld, bright, focused light sources such as LED penlights, headlamps or bike head/ taillights
- colored cellophane to make colorful lights
- tripods
- computer for looking at pictures
- color printer, if you plan to print

#### Scratch

- computers with or without an Internet connection
- can use Art Rage and Audacity to create and edit images and sounds which can then be imported into Scratch
- microphones
- Pico Boards (optional, \$\$) can be used to create game controllers
- WeDos (optional, \$\$) can be used to create game controllers, do basic robotics
- USB drawing tablets (optional, \$\$)

#### Stop motion animation

- computer with SAM Animation installed
- a video camera, still camera or webcam
- toys, Lego minifigs, cardboard, paper, clay, junk (to animate)



### Resources

- ScratchEd is a online community for educators using Scratch. Lots of ideas and workshop outlines can be found there
  - http://scratched.media.mit.edu
- Dan Hawk has a nice tutorial on how to use Scratch https://mywebspace.wisc.edu/dhawk/scratch/
- Scratch overview, lesson plans and videos on RedWare's website <a href="http://scratch.redware.com/">http://scratch.redware.com/</a>
- Clearinghouse for information on 21<sup>st</sup> century skills <a href="http://www.21stcenturyskills.org/route21/">http://www.21stcenturyskills.org/route21/</a>
- The Search Institute's Developmental Assets for different age cohorts <a href="http://www.search-institute.org/developmental-assets">http://www.search-institute.org/developmental-assets</a>

## **Workshop Tips**

- What is your goal (as an instructor) for the workshop?
- Set a goal for the workshop (what you're going to make today.) The participants probably won't make that project, but it gives them a place to start.
- Think about how to set the room up in a way that will promote collaboration
- Recruit volunteers—more helpers means more questions answered more quickly
- Give explicit permission to explore on their own and share with/ask/help others.
- Give information when it's needed, rather than frontloading
- Model problem solving process (like searching forums for answers, or breaking code blocks apart to debug)

For the most up-to-date version of these handouts, please visit Hennepin County Library's Extranet and look under Media Mashup: <a href="http://www.hclib.org/extranet">http://www.hclib.org/extranet</a>

