



A workshop that combines art and technology, to create 'ubiquitous computing'.

## Basic Stamps

Basic Stamps are **microcontrollers** (a kind of miniature computer that can store data, sense the environment, move motors, and send out sounds and lights). They are so tiny that they can fit into any larger object in order to make it become **interactive** and **ubiquitous** (you can leave the tiny computers anywhere). For many years, microcontrollers have been built into all kinds of every-day products (clock radios, microwave ovens, car engines....). If it has buttons and a digital display, chances are it also has a microcontroller brain.

What makes basic stamps **special** is that they can be programmed by anyone (not just big companies), and so **you** can use them to make your own stuff (which in this workshop will be 'art stuff'). The way they work is basically like this:

1. You **program** the instructions for the Basic Stamp in a computer (using the PBasic program).
2. You **transfer** the instructions to the Basic Stamp through a cable.
3. You unplug the cable and put the tiny Basic Stamp into your art object and let it **run**: all it needs is a small 9-volt battery.

**Basic Stamps** can be programmed over and over again, to do different things. Basic Stamps come in two versions: 1 and 2. Version 1 is super-tiny, and fast enough to do what you need, and can do 8 different things. Version 2 is larger, but also faster and can do up to 32 things (it comes in several 'flavors').

## Electricity

Electricity is another thing that you'll need, in order to work with Basic Stamps. All you'll need are small batteries of weak electric power, like the Lithium cr2020, which transmits 3 volts, to the 9-volt battery that everyone knows (looks like a little box). We need electricity in order to send signals from a microprocessor, so you need to know how much electricity you need, and how to make it go where you want.

## Art

It's not enough to just learn about Basic Stamps. You need to learn how to make art pieces that can hold or show off your programmed Basic Stamps. So, in this workshop, you will also learn about different ways to make 'Technology Art'. This includes silk-screening, scanning, projections, and digital design (images, video, and audio): Technology Art is anything that uses technology to make art. For example, in one exercise, we will learn about 'image transfers' (through carbon paper and then silk-screening). Image transfers make it possible to transfer your drawings to solid surfaces like fabric, or wood or metal. And, with image transfers, it's also possible to make many copies of the same design.

## Eden Gardens

At La Academia, it is very important to discover the local community of Eden Gardens. Because of this, your art images and shapes should always be about something in Eden Gardens (maybe something in the park, or in a nearby restaurant, or maybe something about the people who live in Eden Gardens). For example, in one exercise we will look at the family tree that is on the wall right outside the Learning Center. Have you seen a family tree before? What are the names in some of the leaves? Does it matter if names are further up the tree or down towards the ground?