SCRATCH PROGRAMMING

What is it?

What is Scratch?

♠ Scratch is a block-based, visual programming language.

♠ You can make games, stories, or even some kind of interactive mix that gives the players/readers choices on what to do!

♠ You have little images called sprites, that you can program to move around or change colors. You can also add sound effects and backgrounds if you want!

♠ Each sprite had a different set of code, and you get to program them and decide how they interacts with their surroundings and each other.

♠ You can adjust your sprites size, make them appear upside-down or at an angle, and even make your own sprite if you choose.

How it works

♠ Think of the way you stack legos; Scratch uses a similar method.

♠ Each block contains a little piece of code, or instruction, that you are putting together and arranging to create a program

♠ This is an example of Scratch being used to program a Sphero Bolt bot. The Bolt version has a 8x8 LED matrix screen, and can be programmed to show different designs and colors.

♠ As you can see, first the light display changes, then it goes forward, the light changes, it's programmed to say words, it goes backwards, and the light display changes, then it stops and the lights change again.
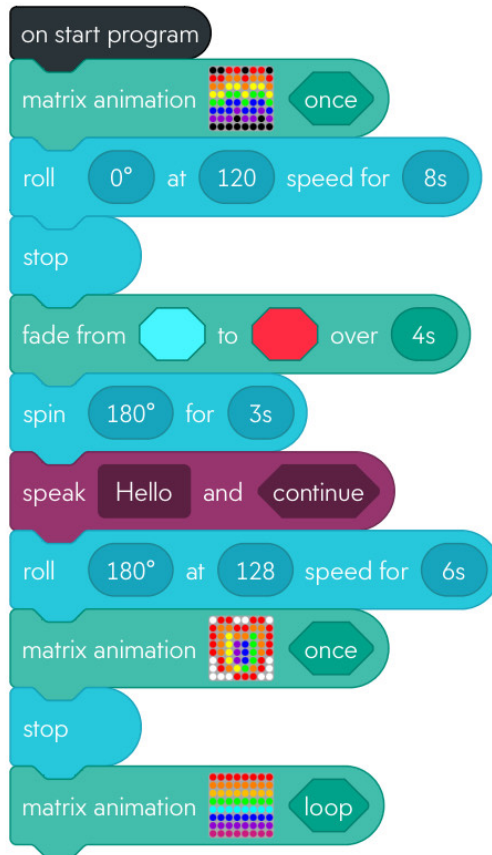
♠ Scratch is used as more than just a basic programming tool to teach children. It can be fun! Not everything has to be just sitting at a desk in front of a screen.

♠ Sphero bots can be programmed to move in any direction (other than up, no defying gravity yet) at accelerated speeds, and can even be oriented so you can drive it. There are also games that you can play with it on the Sphero Play app.

♠ Scratch is also used to program Ozo bots. Ozo bots are smaller, but just as interesting. They can be programmed to follow lines you draw on paper, and flash different colors depending on the line; or they can be programmed to go through mazes or spin in circles.

♠ Sphero bots are faster and have more some more programming options, whereas Ozo bots are smaller, easier to carry with you to program, and often used in classes, although they're just as much fun

What is today's project?

Today we'll be working on something called Animate a Name. What you'll be doing, is you'll be going into Scratch.mit.edu and adding sprites that spell out your name. It doesn't have to be your name if you don't want. It could be your initials, or even just a word!

Once you pick your letters, you can begin to program them. It's absolutely okay if you don't finish your programs in this session, just have fun with it. You can program them to do whatever you want. Experiment!

I'll do my best to answer any questions you have and help if you need it.

Go program! (Or ask questions, whatever you want to do)