Monday* 5/22/17

Welcome to Computer Science & The Technology Lab

Creative Computing:

Scratch Programming Language

Creating a Computational Prototype: Scratch Project

OBJECTIVE:
Students will create a computational prototype such as an animated dance, name animation, or make music with musical instruments using *Scratch Programming Language.*
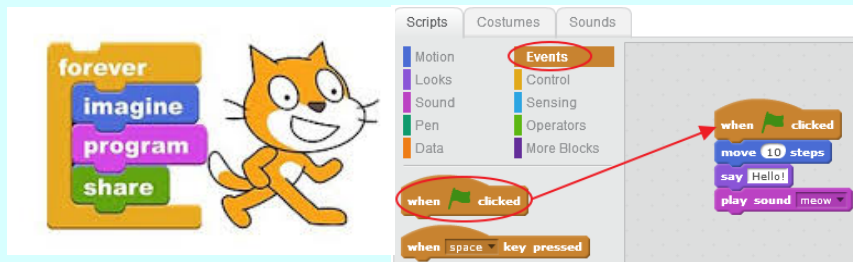
CS Concepts: Algorithms, Programming
CS Practices: Prototype, Communicate

ISTE Standard:
Creativity & Innovation, Critical Thinking,
Problem Solving & Decision Making

Programming Language: Scratch

Scratch Computer Science Coding Platform

1. Students will use <u>sequencing</u> of steps, <u>loops</u> for repetition, and <u>events</u> to create an interactive scratch program with music, sprites and background.

2. Students will apply the programming concept "Events" and "Loops" to create an interactive scratch program of their interest.

Scratch Programming: CS Code Blocks Used

Event Blocks

when 🚩 clicked

when this sprite clicked

Loops:Forever/Repeat Block

forever

repeat 10

Move & Glide Blocks

move 10 steps

glide 1 secs to x: 0 y: 0

Wait Block

wait 1 secs

Next Costume Block

next costume

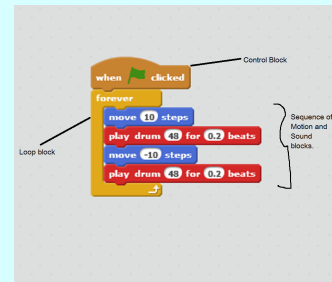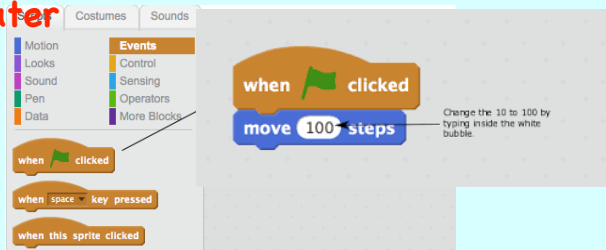## Change Effect Block

change color ▼ effect by 25

Programming Language: Scratch
Computer Science Vocabulary:

1. *Sequence/Algorithms* – the order in which instructions are given to a computer;
the directions written by the programmer.

2. Event – A trigger that a computer recognizes and that
causes it to do something

3. *Loops(Repeat)* –
code that repeats.

Scratch Project Activity Choices

Choose one of the Scratch projects below based on your interest.

1. Log in To Your Scratch Account
2. Click Create
3. Click Tips or ? Question Mark on the Right Hand Side
4. Click Your Project of Choice
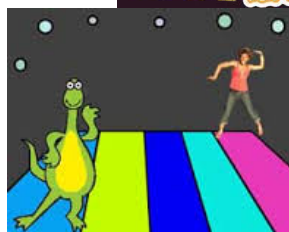
Animate Your Name
(Beginner in Scratch)

Make Music
(Beginner/Intermediate in Scratch)
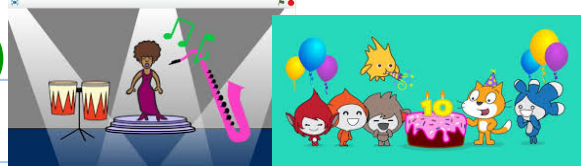
Let's Dance
(Advanced in Scratch)

Dance Party Remix
(Beginner Activity 2 in Google CS First)

Project (Prototype) Assessment:

Exit Ticket, Project Interview, Peer Interview

Project-Based Interview (Identify, Process, Analysis)

- Identify an example of "Event" blocks in your project? What does it do?
- How did you modify/change or improve your remixed project?
- Describe how you made changes with your code and tested it to see if it worked?

Exit Ticket Prompt...

- Today I learned...
- Today I experienced....
- Today I felt.......

Project - Prototype Peer Interview: Choose 1 of the peer review questions to interview a classmate about their project

1. What's your favorite part of your program/game/project so far?
2. What is your project about? What did you create?
3. How did you use loops in your project?
4. What would you like to add-on to your project?

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Scratch Programming Language

Creating a Computational Prototype: Scratch Project

What are the different ways you interact with computers?
How many of those ways involve being creative with computers?
How would you describe Scratch to a friend?
What is Computer Science?