

Hello!

I am Mrs. Hurley

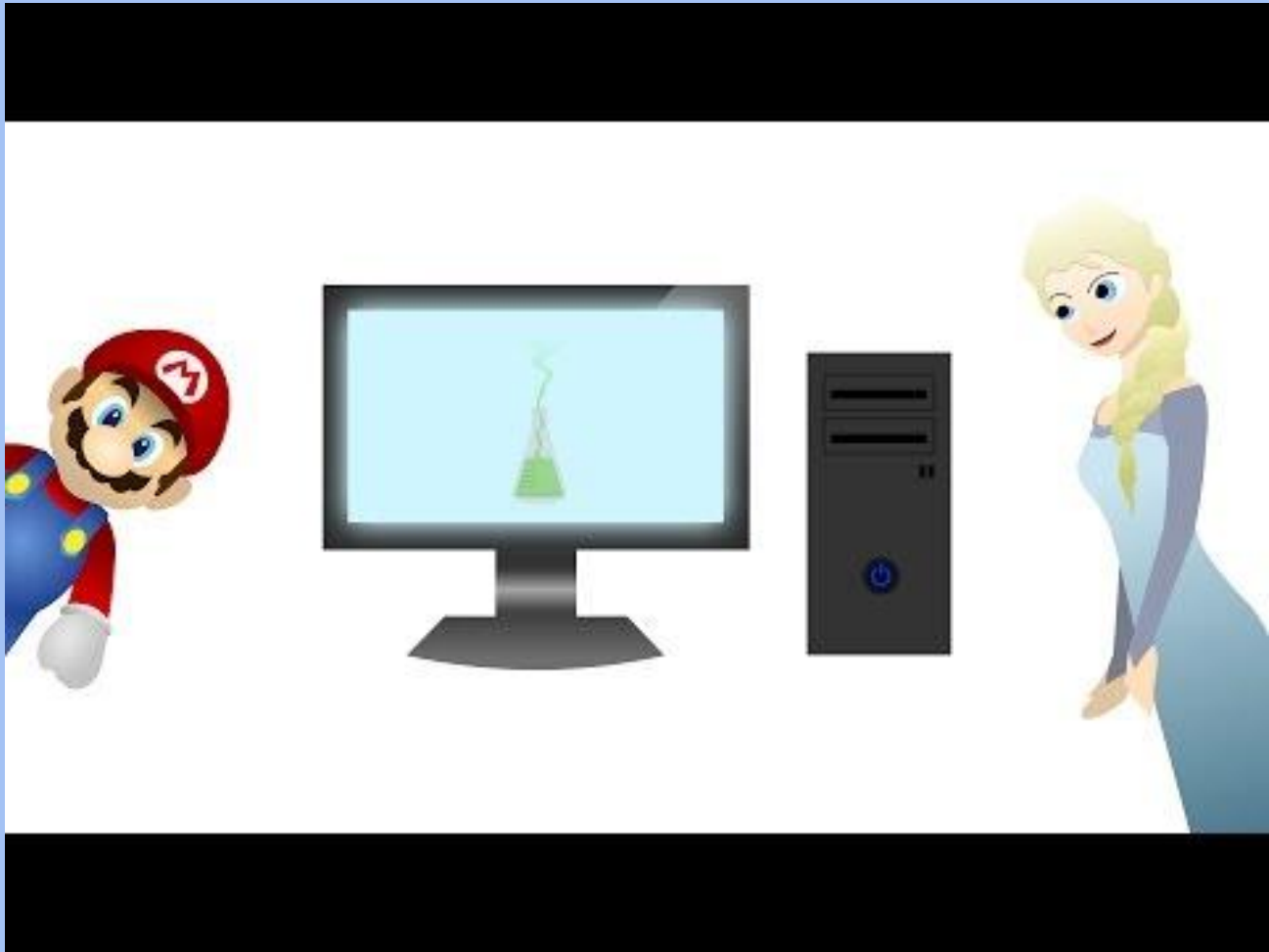
Computer Science Youth Outreach
Coordniator- Sheridan College



1.

What is Computer Science?





2.

What is Coding?





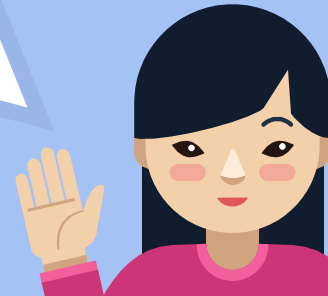
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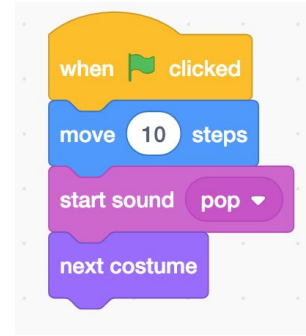
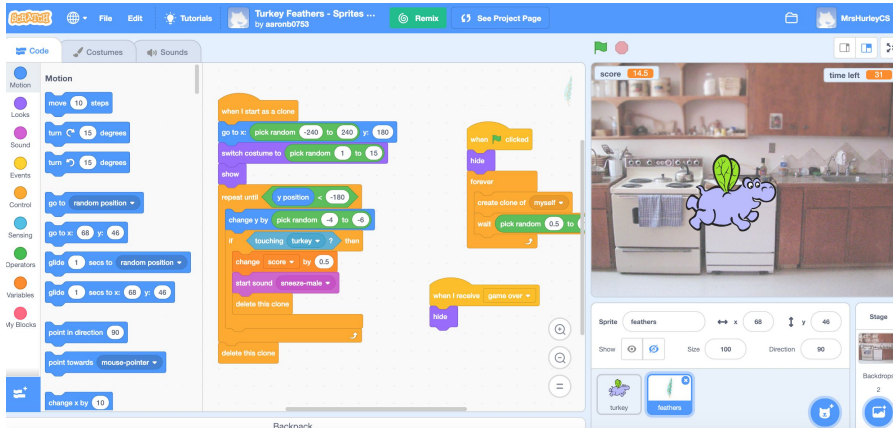
How do we
teach it?



K-2 Coding with Scratch Jr

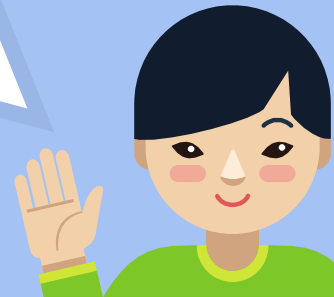
- Learning to code
- Graphical Block Programming
- Creation Based- Stories, games, thought expression





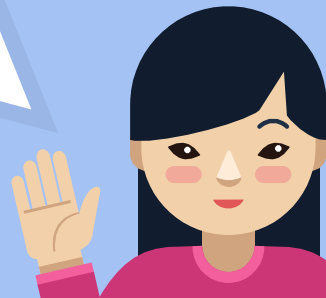
3-5 Coding with Scratch

- Builds on Scratch Jr vocabulary and concepts
- Creation based
- Predetermined Language Element Blocks



Programming End Goal High School or beyond

```
1 var canvas = document.getElementById("drawing");
2 var ctx;
3 ctx = canvas.getContext('2d');
4 drawFlower(400, 400);
5
6 function drawFlower(x, y){
7     for(var i = 1; i <= 10; i++){
8         petals(x, y, i, 6);
9         ctx.fillStyle = 'rgb(230, 200, 0)';
10        ctx.fill();
11    }
12    for(var i = 1; i <= 10; i++){
13        for(var i = 1; i <= 10; i++){
14
15
16
17
18
19
20
21
22
23        for(var i = 1; i <= 10; i++){
24
25
26
27
28        for(var i = 1; i <= 10; i++){
29
30
31
32
33        for(var i = 1; i <= 10; i++){
34
35
36
37
38
39    }
40
41    function petals(x, y, petalNumber, level){
42        ctx.beginPath();
43        var rotation = (petalNumber * 36 + 90 * level)*Math.PI/180;
44        ctx.ellipse(x, y, level * 7, level * 22, rotation, 0, 2 * Math.PI);
45    }
```



Why is learning to code important?

- × Confidence
- × Creative
- × Innovative
- × Growth Mindset
- × 21st Century Skills



21st Century Skills

- Algorithms- Systematic Reasoning, Organization, Sequencing
- Critical Thinking
- Critiquing and Revising
- Debugging- Problem Solving
- Reverse Engineering- “How did they do that?”

