

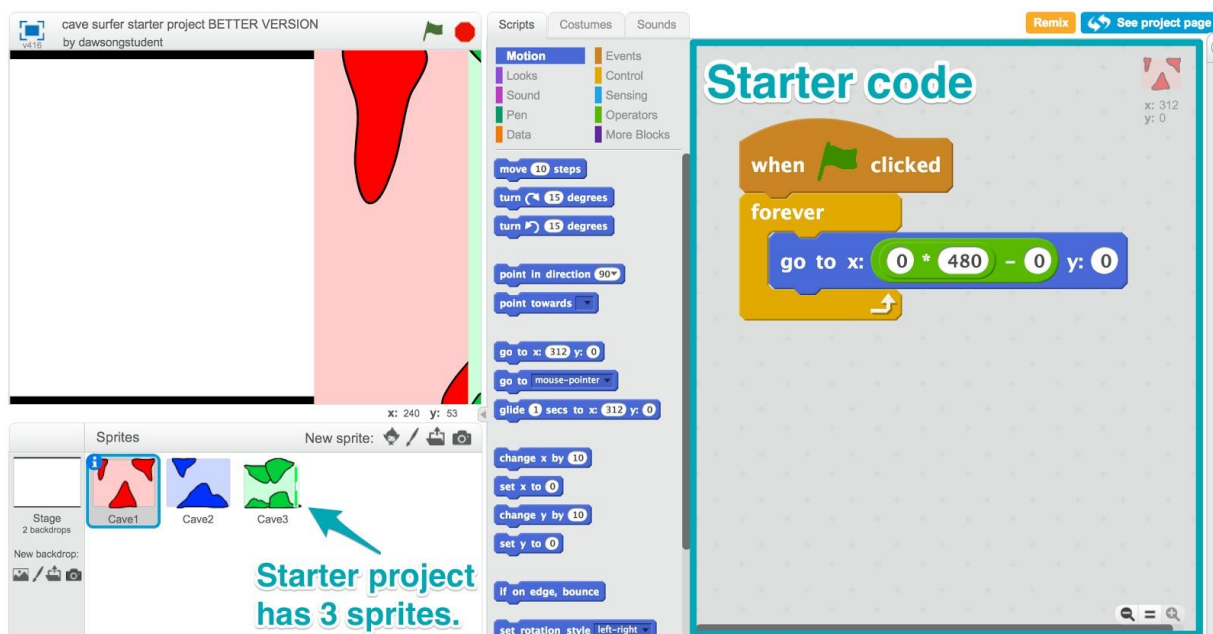
Activity 8: Cave Surfing Game

Video 1: Side Scrolling Games and If-Else Statements

In this video, club members will:

1. Open the starter project on the CS First page.
2. Remix the project.
3. Sign in to Scratch.

NOTE: Club members will not code any parts of this project until after they watch the second video.



Video 2: Create a Scrolling Backdrop

In this video, club members will:

1. Make the player sprite move across the screen.
2. Make the sprite keep moving across the screen.
3. Reset the sprite's position at the start of each game.

Costume for the
player sprite:

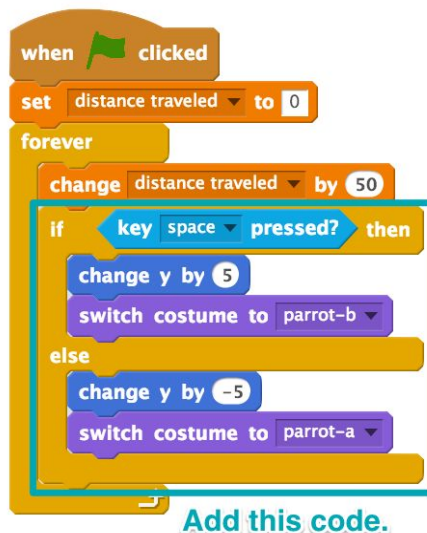


Video 3: Making the Parrot Rise and Fall

In this video, club members will:

1. Add an if-else statement and a "space key pressed" block.
2. Program the "if" condition to move y by 5 and the "else" condition to move y by -5.
3. Add costume changes to make the sprite look more realistic as it flies up and down.

Costume for the
player sprite:



Add this code.

Video 4: Winning and Losing at Cave Surfing

In this video, club members will:

1. Program winning and losing conditions by adding “if,” “touching color,” and “stop all” blocks.
2. Add features to the winning and losing conditions to make gameplay more exciting.

NOTE: Club members can create their own winning and losing conditions. Below is an example:

Costume for the
player sprite:



Add this code.

Add-On: Make Your Own Music

In this video, club members will:

1. Use the “play drum” blocks to add a drum beat.
2. Use the “play note” blocks to add background music.

NOTE: Club members can use multiple and varied beats and notes. Two examples are below:

Costume for the
player sprite:

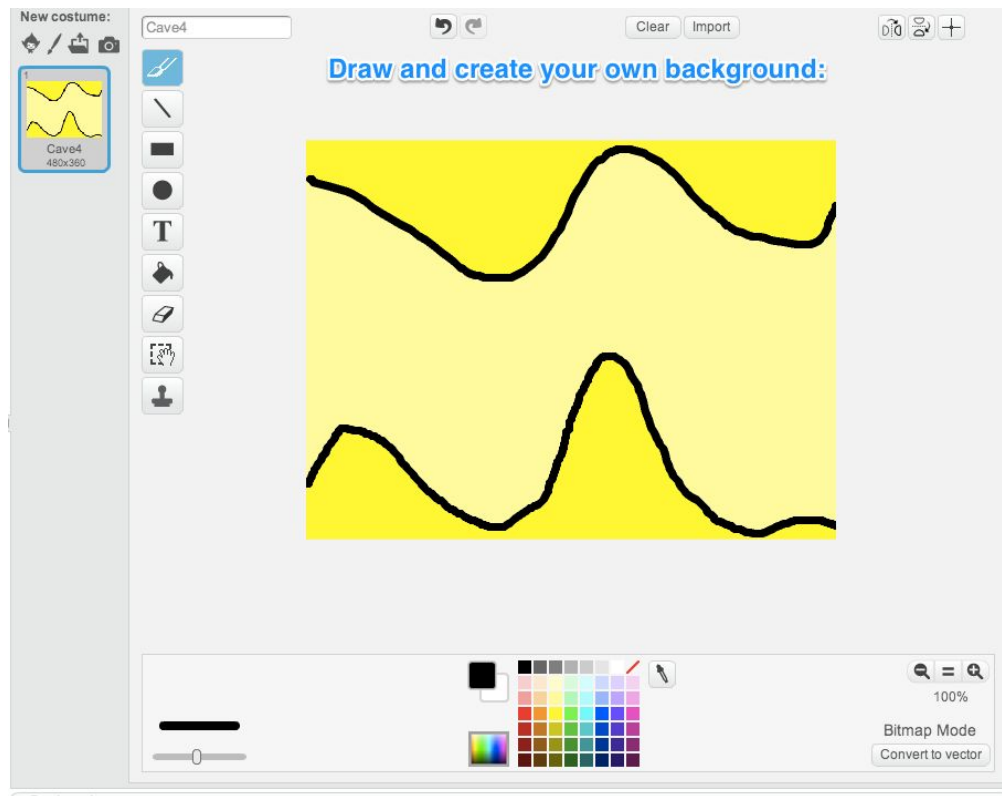


Add-On: Add Another Cave Section

In this video, club members will:

1. Design a new cave sprite with black edges.
2. Copy the code from another cave.
3. Adjust the number to match the cave order.

NOTE: Club members must copy their code from one cave sprite to another for this to work. They also must change the code for the finish line cave to make it the last one.

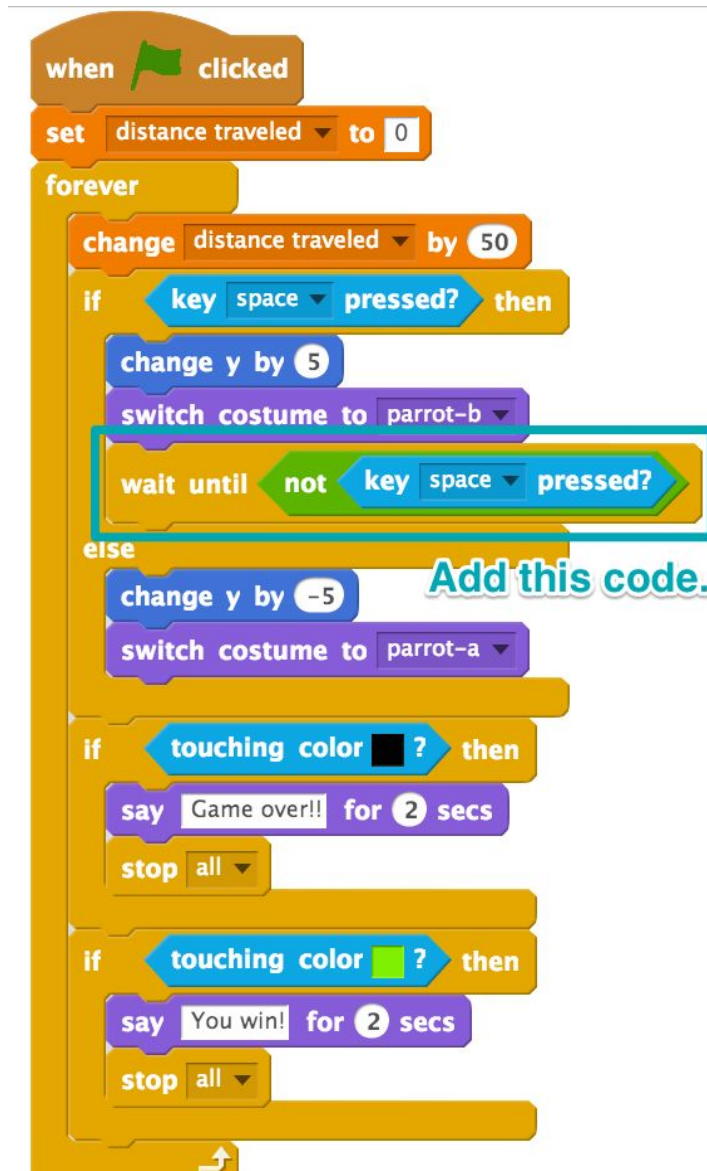


Add-On: Make the Game Harder

In this video, club members will:

1. Add blocks that tell the computer to wait until the spacebar is no longer being pressed to let the sprite move up more .
2. Change the difficulty level.

Costume for the
player sprite:



Add-On: Dangerous Cave Walls

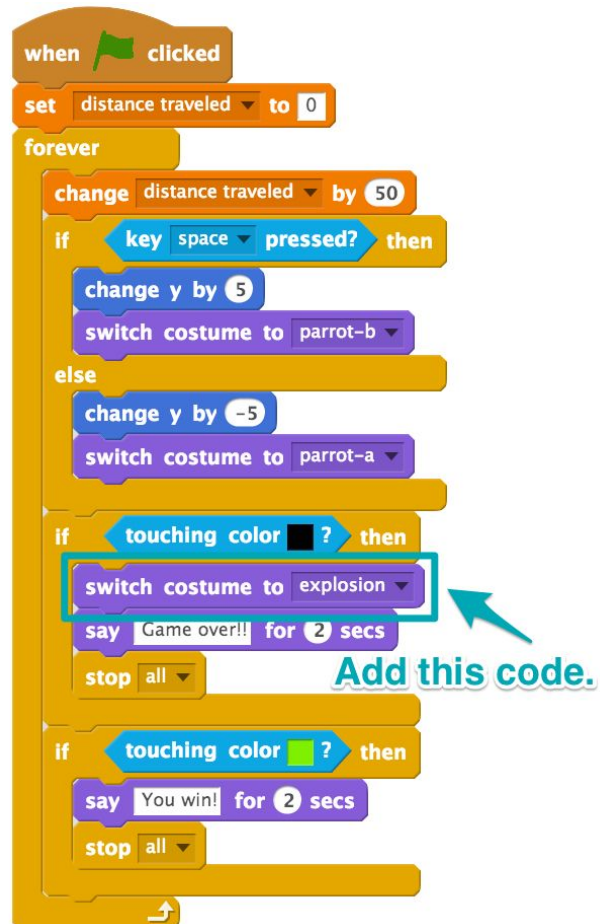
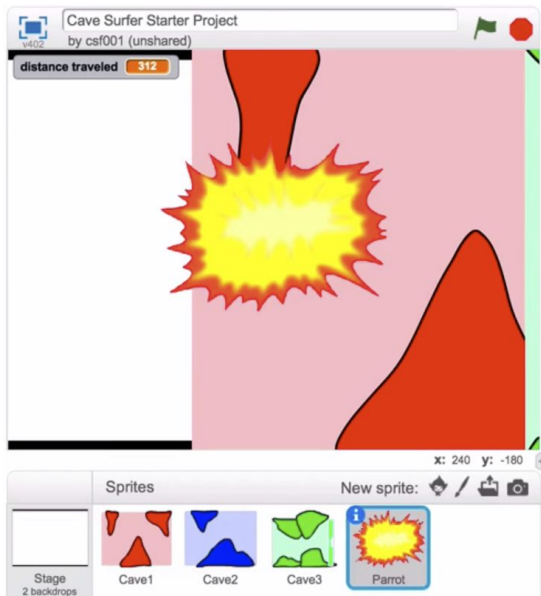
In this video, club members will:

1. Download the “explosion” image, and add it as a costume.
2. Make the player sprite explode when it touches the walls of the cave.

Costume for the
player sprite:



Example:

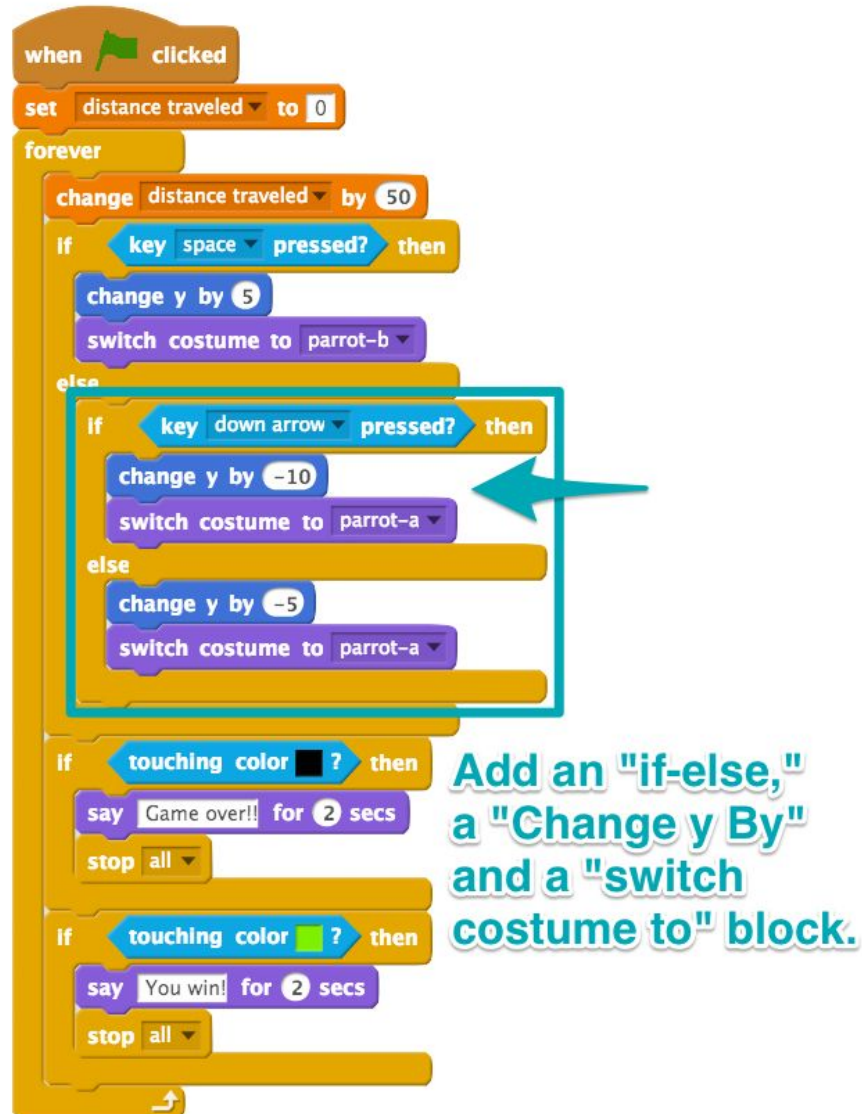


Add-On: Dive

In this video, club members will:

1. Use another "if-else" block to make the sprite move down even if the other keys are not pressed.
2. Create a keypress event to make the sprite dive, or move down faster than it falls.

Costume for the
player sprite:



Add-On: Add Another Level

In this video, club members will:

1. Remove the “stop all” and change the “you win!”
2. Reset the variable by changing “distance traveled” back to 0.
3. Make a new variable called “Level.”
4. Make “Level” correspond to the speed of the sprite.
5. Use the “Set Level to” block to reset the game.
6. Add a “Change Level by 1” block to the winning condition.

NOTE: Final code for club members should look very similar to what is below. Values may vary in the different blocks.

Costume for the
player sprite:

