

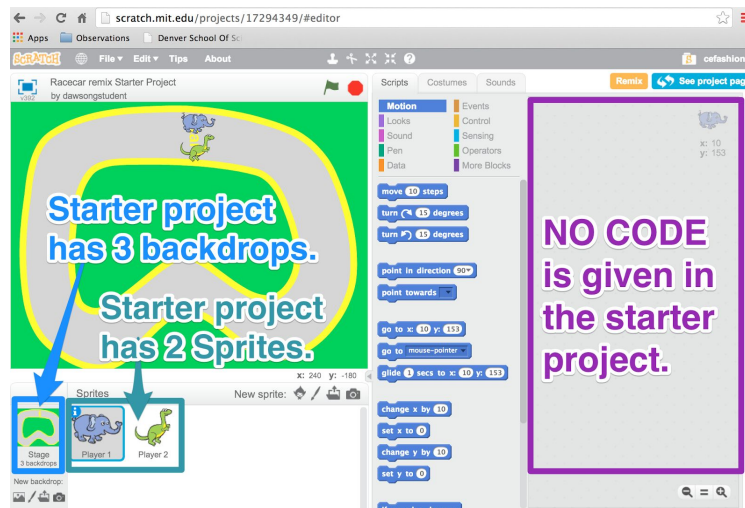
## Activity 2 : Racing Game

### Video 1: Opening the Starter Project

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: Moving the Sprite

In this video, club members will:

1. Select Player 1 sprite, and create an event for the three arrow presses.
2. Add "move 10 steps" and "turn right 15 degrees" blocks to make the sprite move forward and turn right.
3. Figure out how to make the sprite turn left with the left arrow.

Costume for the  
Player 1 sprite:



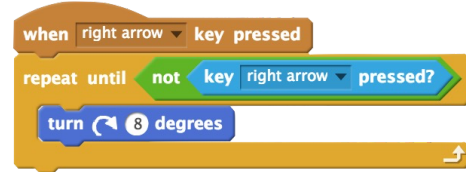
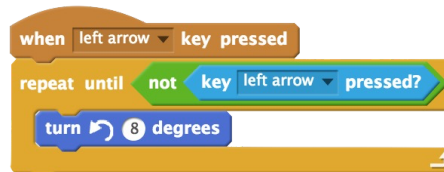
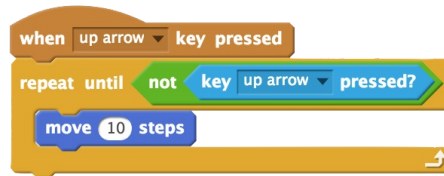
## Video 3: Moving More Smoothly with "Repeat Until"

In this video, club members will:

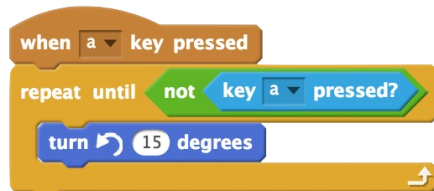
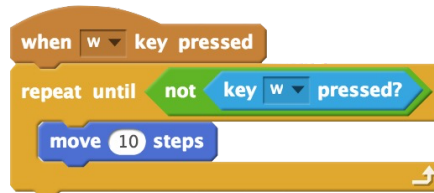
1. Add a "repeat until" block to each event to make the sprite move more smoothly.
2. For each "repeat until" block, use a condition until not pressing the key.
3. Program the Player 2 sprite using the same blocks but different key presses.

**NOTE:** Club members may forget to change the keys that control the Player 2 sprite. The code should look similar, but different key presses should control the code for the Player 2 sprite.

Costume for the  
Player 1 sprite:



Costume for the  
Player 2 sprite:



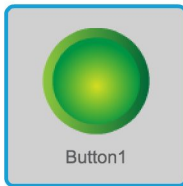
**Add-On: Change Up Your Racetrack**

In this video, club members will:

1. Add a sprite.
2. Change the backdrop using a “switch backdrop to” block and a “when sprite clicked” event.

**NOTE:** Club members can select any sprite to act as a button.

Costume for the  
**Button** sprite:



**when this sprite clicked**

**switch backdrop to** next backdrop ▼



**New button  
sprite added.**

**Add-On: Costume Change Key**

**In this video, club members will:**

1. Select Player 1 sprite, and drag out a “next costume” block into the scripts area.
2. Connect a “when space key pressed” block to the “next costume” block, and change the value to the 1 key.
3. Select Player 2 sprite, and repeat steps 1-2 to make the “2” key change the costumes for Player 2.

**NOTE:** Costumes are preloaded into the starter project, but club members can also choose different costumes from the costume library.

Costume for the  
**Player 1** sprite:



Costume for the  
**Player 2** sprite:



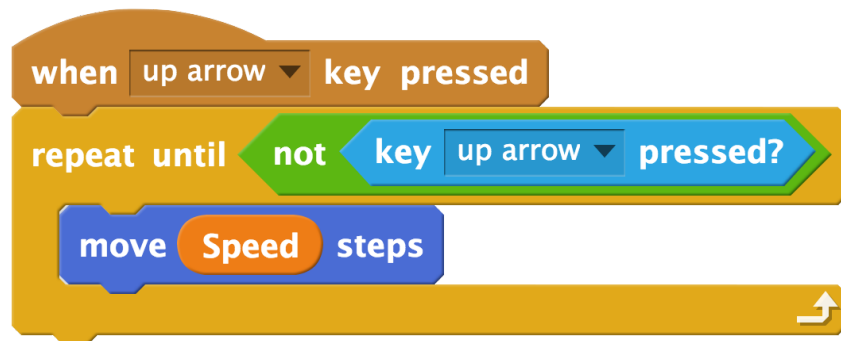
**Add-On: Step on the Gas (Part 1)**

In this video, club members will:

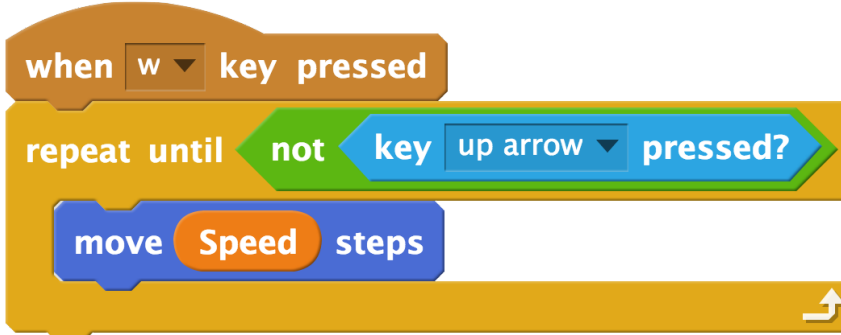
1. Create a variable in the data menu, and name it "speed."
2. Add the speed variable into the "move 10 steps" block.
3. Click the variable indicator on the stage twice until a slider appears.
4. Program the Player 2 sprite with the same steps.

**NOTE:** To get the variable slider bar to appear, club members must double click on the variable display.

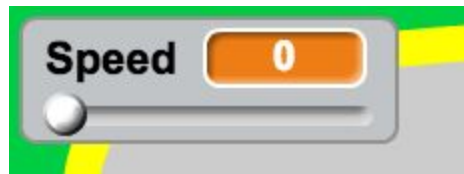
Costume for the  
**Player 1** sprite:



Costume for the  
**Player 2** sprite:



Club members can  
adjust the sliders

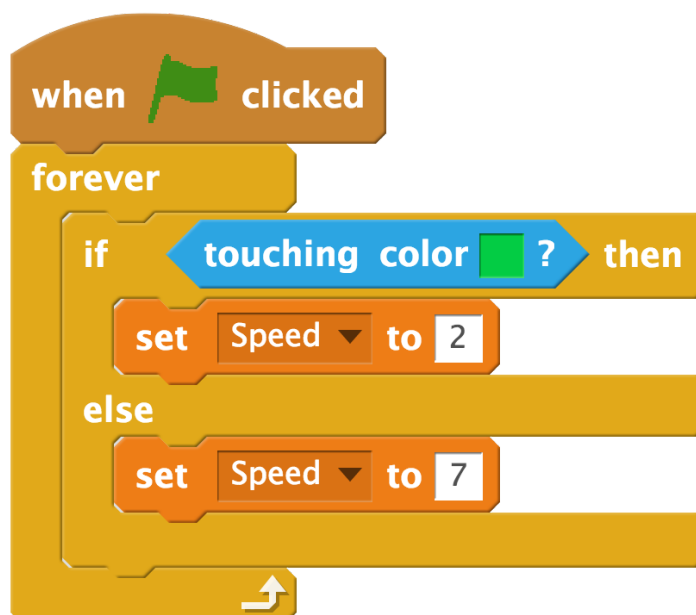


**Add-On: Step on the Gas (Part 2)**

In this video, club members will:

1. Select Player 1 sprite, and drag out a “when flag clicked” event.
2. Add a “forever” block to the “when flag clicked” event.
3. Place an “if-else” statement inside the “forever” block.
4. Program the “if-else” statement to say “if touching color green go slow, else go fast” using the “touching color” block and “set speed to” blocks.
  - a. Create the same code for the Player 2 sprite when it touches the grass.

**NOTE:** Club members must complete the previous add-on (Part 1) before starting this add-on.



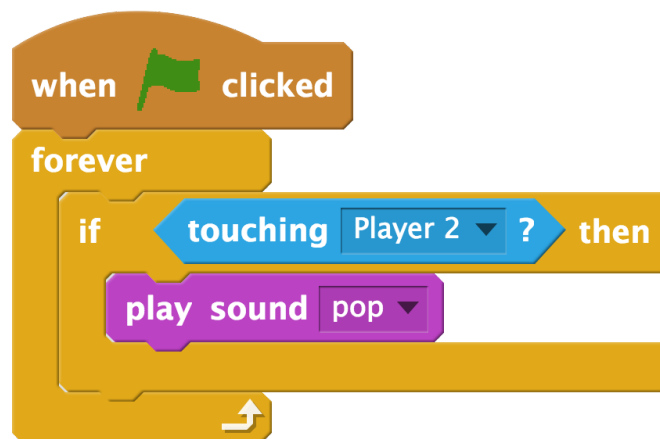
**Add-On: Crash**

**In this video, club members will:**

1. Select Player 1 sprite and drag out a “when flag clicked” event.
2. Add a “forever” block to the “when flag clicked” event.
3. Place an if statement inside the “forever” block.
4. Program the “If-Then” statement to say “if touching player 2, then play a sound.”

**NOTE:** Club members can choose any sound from the sound library to play when the sprites touch. They must select the sprite they are adding the code to (Player 1), and add the sound to that sprite.

Costume for the  
**Player 1** sprite:



## Add-On: Race Fans

In this video, club members will:

1. Code a new sprite to start the race using the “when flag clicked” and “say” blocks.
2. Add a sound from the library, and play it using a “play sound” block.
3. Add race fans to their project, and code them to cheer using “when flag clicked,” “say,” and “wait” blocks.

**NOTE:** Club members can choose any sound from the sound library.

Costume for a  
new sprite:



## Add-On: Color Trail

In this video, club members will:

1. Create a clone when the player sprite moves forward using a “create clone of myself” block.
2. Make the clone repeat changing colors, then delete itself using “change effect,” “delete this clone,” and “repeat” blocks.
3. Tinker with the effect to make it your own by adding more “change effect” blocks and modifying the values.
4. Add the same effect, or a completely different one, to the second player sprite.

Add code to either  
player sprite:

