

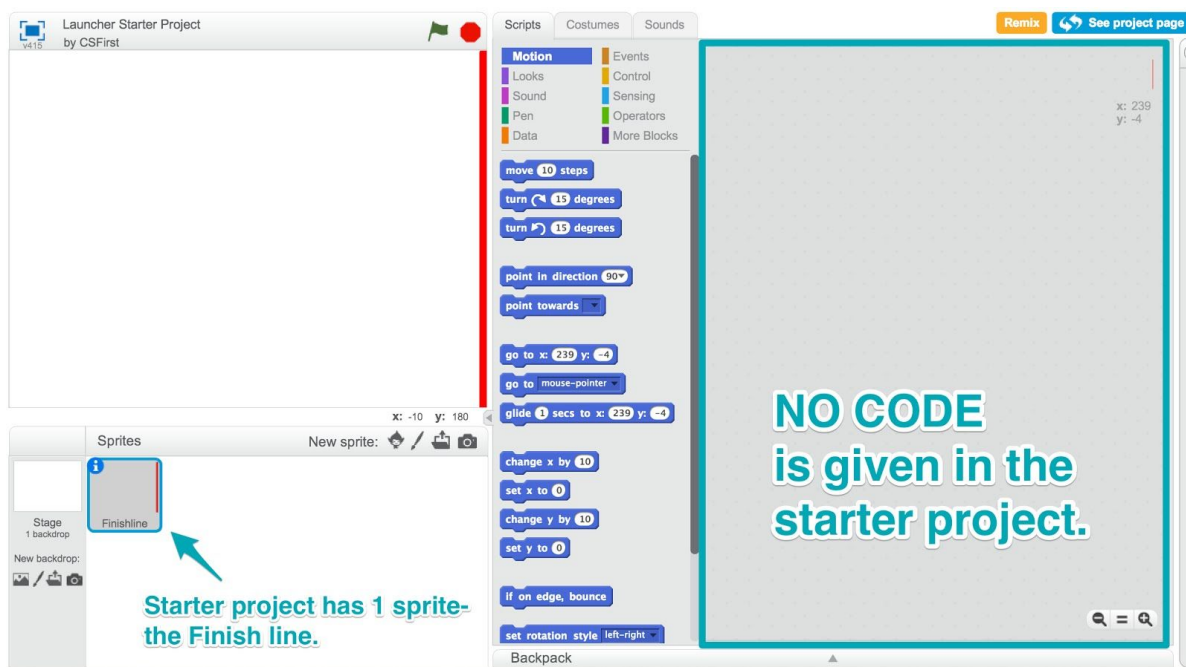
Activity 6: Launcher Game

Video 1: Launcher Games and Randomness

In this video, club members will:

1. Open the starter project on the CS First Page.
2. Remix the project and sign in to Scratch.
3. Add a sprite and shrink it.

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

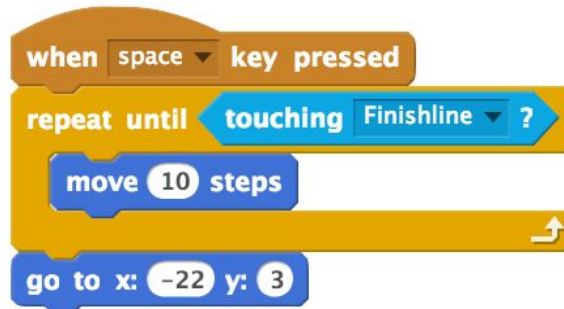


Video 2: Launch a Sprite

In this video, club members will:

1. Move the sprite forward when the spacebar is pressed.
2. Use a “repeat until” and a “touching finish line” block to repeat moving forward until the sprite reaches the finish line.
3. Set the starting position using a “go-to” block.

Costume for the
Player sprite:



Video 3: Turn the Sprite Left and Right

In this video, club members will:

1. Create arrow key press events.
2. Program the arrow keys to turn the sprite right and left.
3. Use a “repeat-until” block, a “key-press sensing” block, and a “not” block to keep turning the sprite until the arrow keys are no longer being pressed.

Costume for the
Player sprite:



Video 4: Spawning Enemies

In this video, club members will use:

1. Add an enemy sprite.
2. Create a clone of the enemy when the flag is clicked.
3. Add a “when I start as a clone” event (found in control) to the code you already created for bouncing the sprite.
4. Add a “hide” block to the end of the flag event.
5. Add a “show” block to the beginning of the “when I start as a clone” event.

Costume for the
Enemy sprite:



Video 5: Keeping Score

In this video, club members will use:

1. Create a “score” variable for the player sprite.
2. Make the score go up by 1 when the sprite touches the finish line.
3. Create enemy clones and program the sprite so it stops moving if it touches an enemy.
4. Make the game harder by having it create an enemy clone every time a point is scored.

Costume for the
Player sprite:



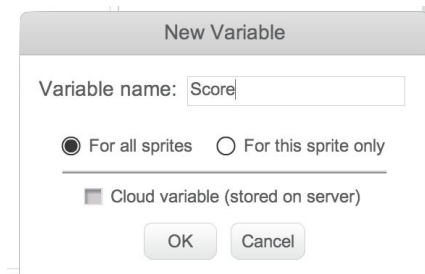
Click “Data” menu.

Data

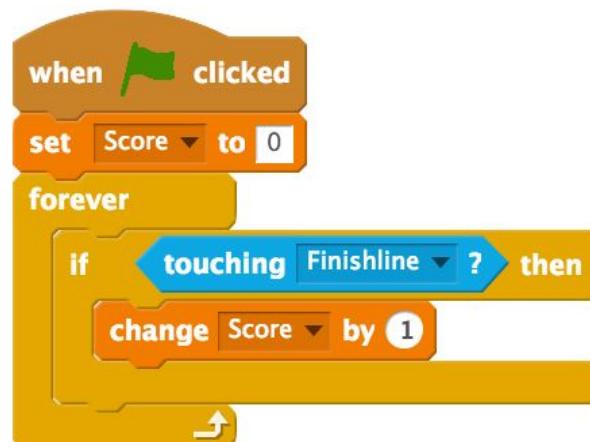
Click “Make a
Variable.”

Make a Variable

Name the variable and
click “OK.”



Add this code.

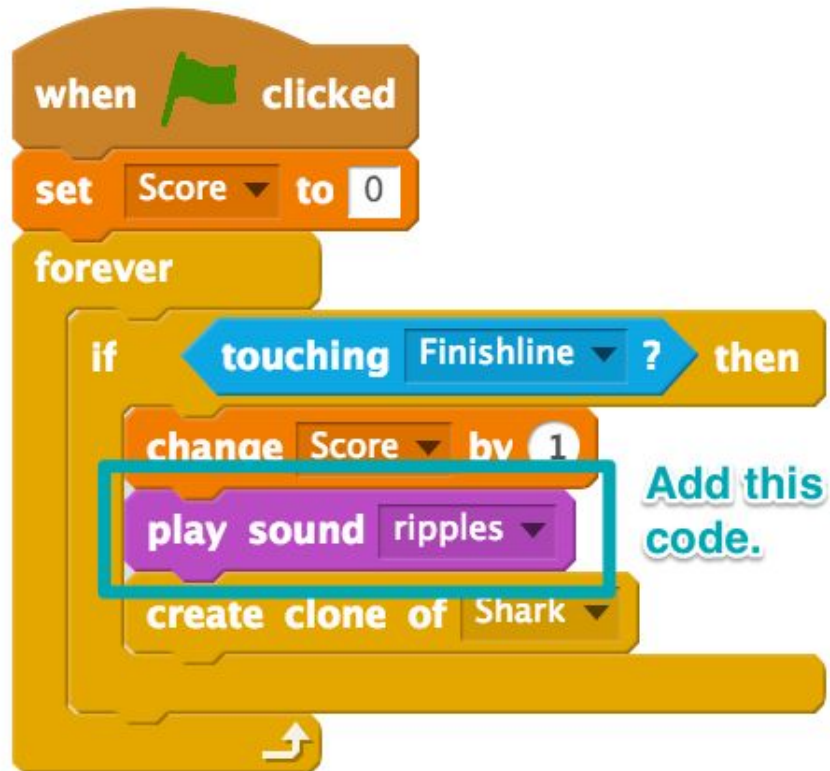


Add-On: Finish Line Cheer

In this video, club members will use:

1. Add a sound that will play when a player touches the finish line.
2. Add a “play sound” Block.

Costume for the
Player sprite:



Add-On: Play with a Friend Option 1

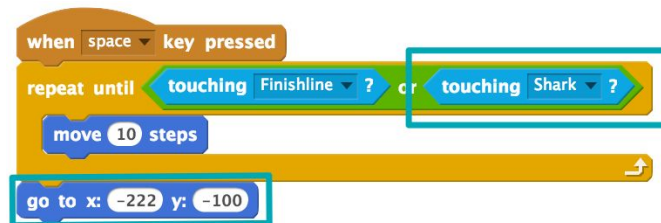
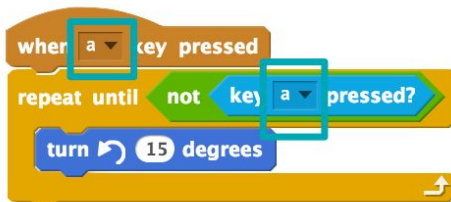
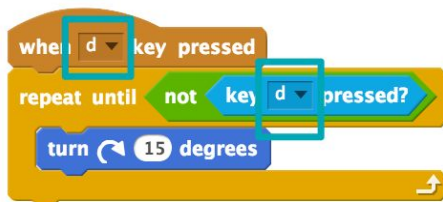
In this video, club members will use:

1. Copy the player 1 sprite.
2. Change player 2's appearance.
3. Change player 2's key press events.
4. Change the starting position of player 2.
5. Create a score for player 2.
6. Program player 2's score to start at 0.

Costume for the
Player sprite:



NOTE: Make sure students change the boxed values when they duplicate the code for their sprite.

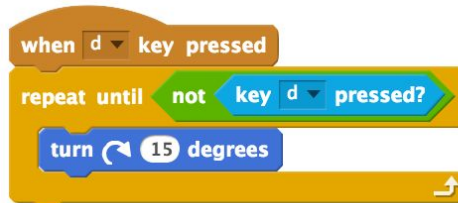
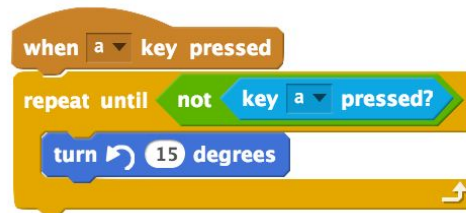
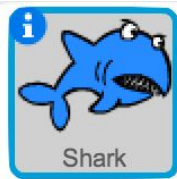


Add-On: Play with a Friend Option 2

In this video, club members will:

1. Add a key pressed event to your enemy sprite's script area.
2. Make your enemy sprite turn left.
3. Duplicate your code stack to program the enemy sprite to turn right.

Costume for the enemy sprite:

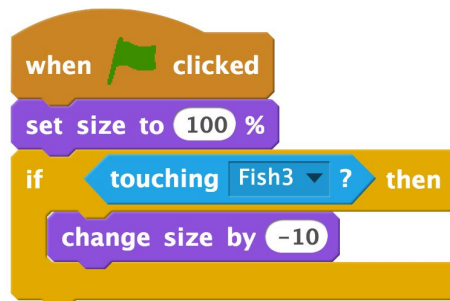


Add-On: Shrinking Finish Line

In this video, club members will:

1. Add "change size" blocks and "set size" blocks to your program.
2. Make your finish line shrink using negative numbers.
3. Reset the size of your finish line.

Costume for the Finish line sprite:

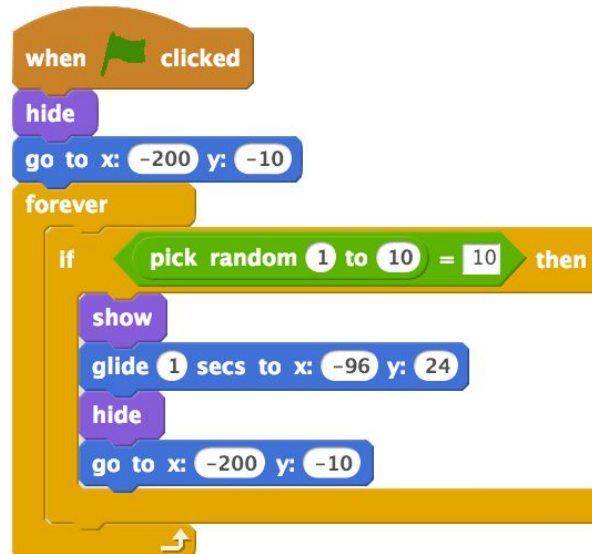


Add-On: Bonus Points!

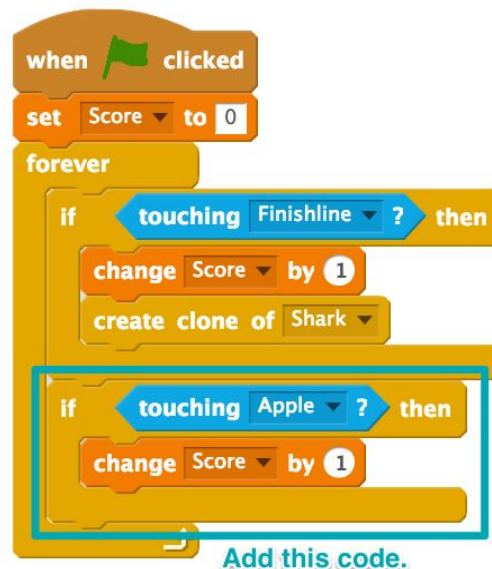
In this video, club members will:

1. Create a bonus sprite and make it appear randomly.
2. Reset the bonus sprite's location to its starting position.
3. Allow a player to earn points by touching the bonus sprite.

Add a new
bonus sprite:



Costume for the
player sprite:



Add-On: Changing Level Design

In this video, club members will:

1. Add more backdrops to the project.
2. Add backdrop code to the player 1 sprite, and make the background switch forever.

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:

