



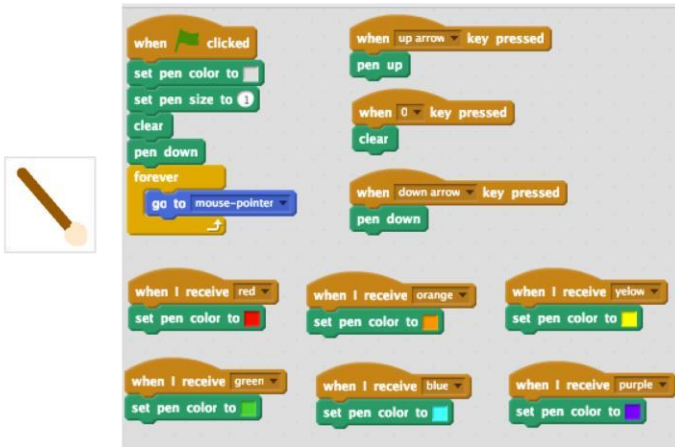
Global Video Game Designers

Grades 3 -5

Student Workbook

Student Name: _____

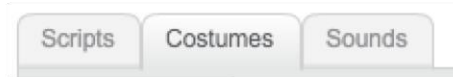
1. Create this sprite and combine the following blocks.....



2. Create this sprite and combine the following blocks.....



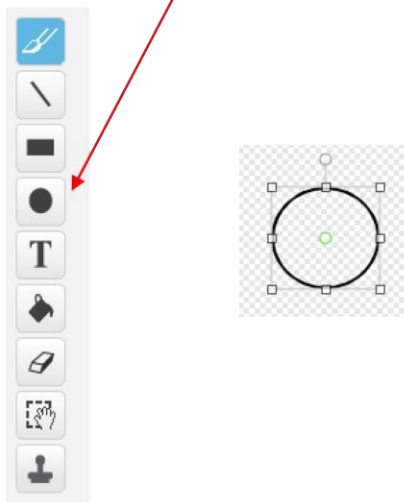
3. Click "Costumes" at the top of your screen



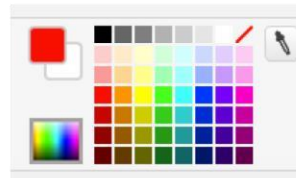
5. Click on the "Fill with Color" button



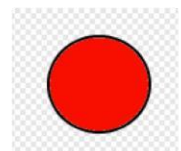
4. Click on the black circle and draw a circle with your mouse



6. Click on the color red



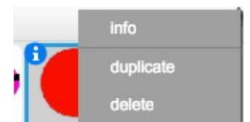
7. Click inside the circle to fill it red



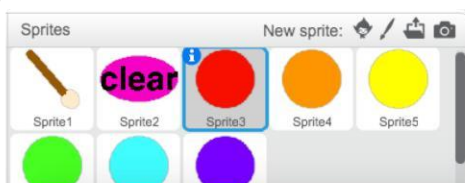
8. Click "Sprites" at the top of your screen and combine the following blocks



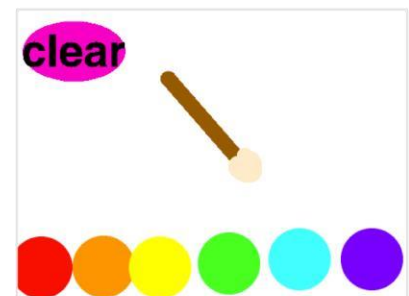
9. To create another costume, click on the red sprite. Then right click and choose "duplicate"



10. Complete steps 5-8 for orange, yellow, green, blue and purple



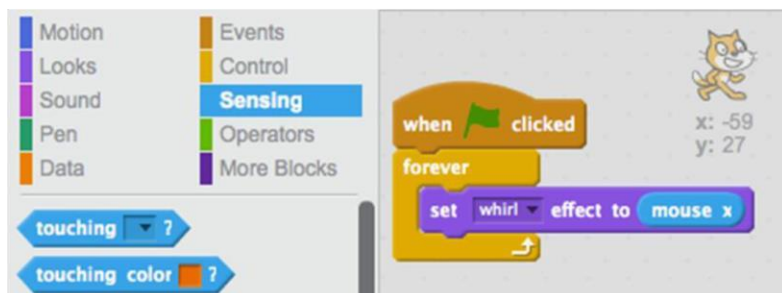
11. Your screen should look like this



1. First build these blocks of code inside of the cat.
2. Choose whirl in the dropdown menu



3. Go to the Sensing tab and insert Mouse X or Mouse Y.

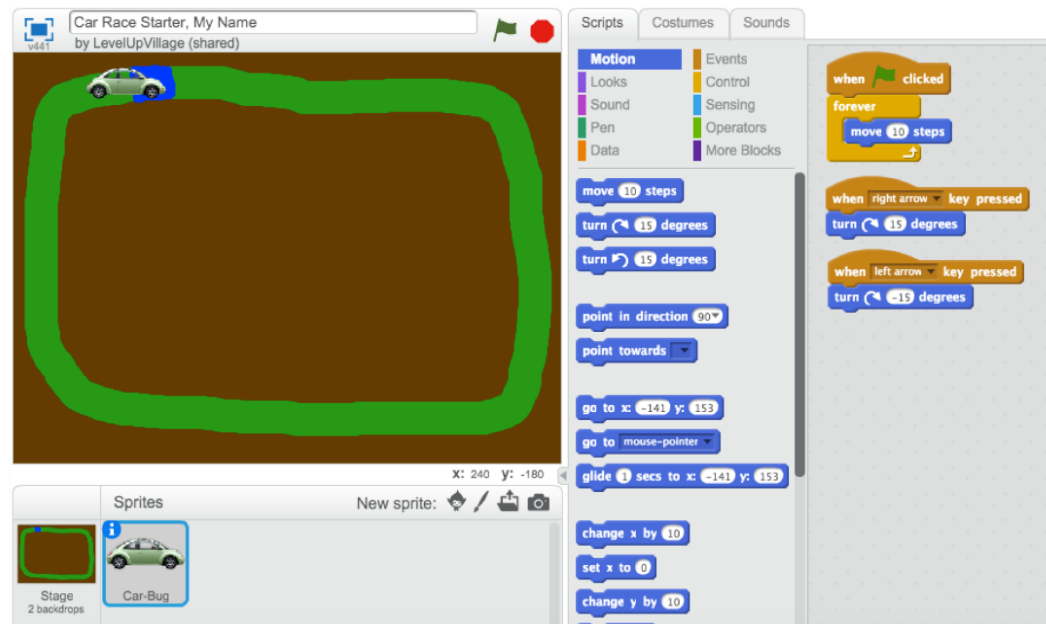


4. Move your mouse around and see what happens

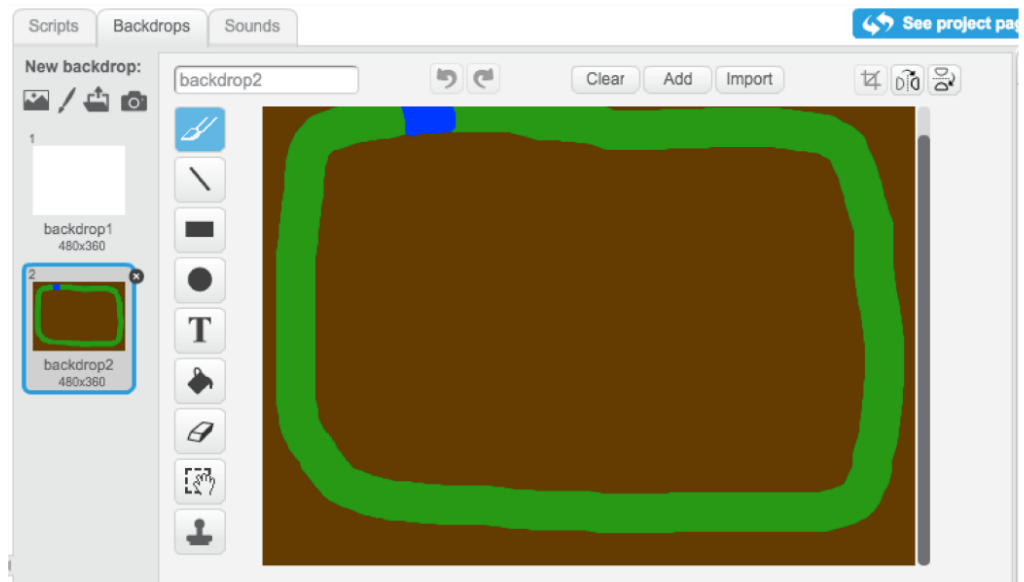
5. Now play with different effects and see what happens



1. This is what your project will look like in the end.



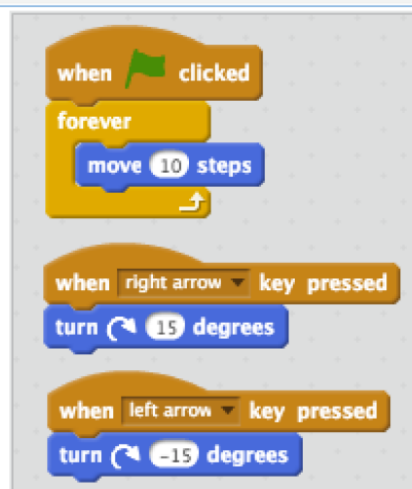
2. Design your own backdrop for the racetrack



3. Create your own sprite

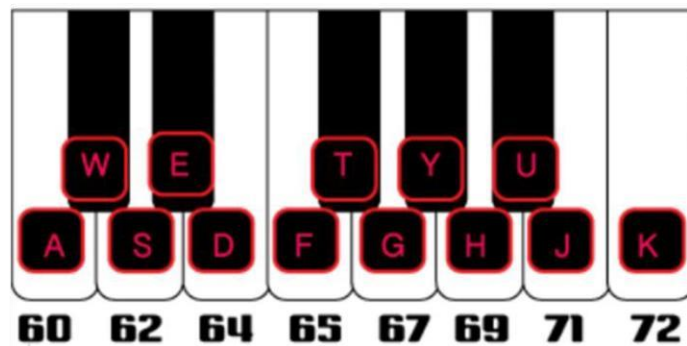


4. Combine the following blocks

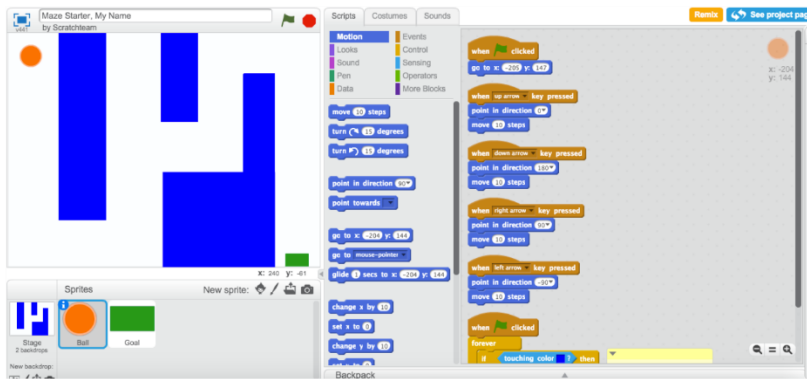


5. How can you make the car go slower? Hint: Think about how fast you are having the car

1. Now we are going to turn our keyboard into a piano. You don't need any Sprites or Backdrops.
2. Build the code you see on this page.
3. There are two ways to do this faster by copying blocks of code. The first is to right click the code and then choose 'Duplicate'. The second is to use the Stamp tool.



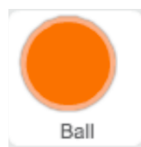
1. This is what your project will look like in the end



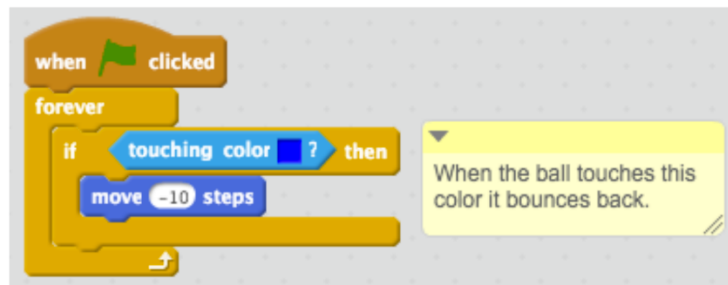
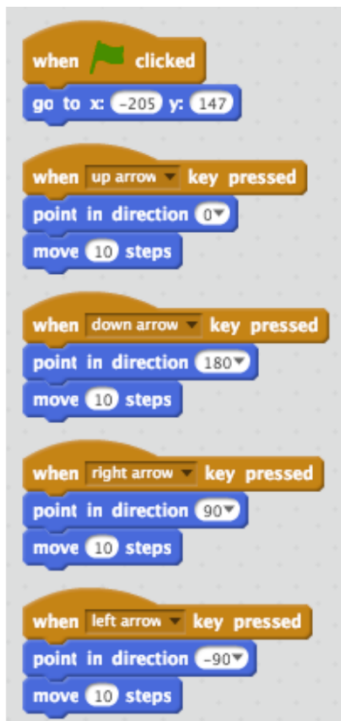
2. Build a backdrop, similar to this one



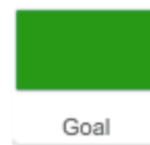
3. Add this sprite, or sprite of your choice



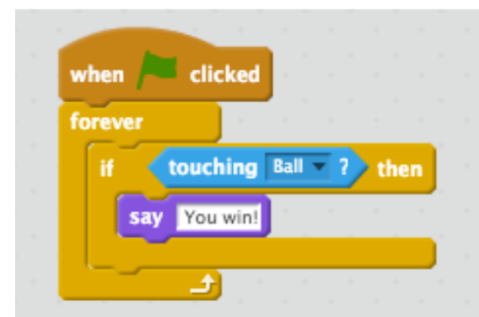
4. Combine the following blocks for the ball...



5. Add this sprite, or sprite of your choice



4. Combine the following blocks for the goal...



1. Create the following sprite and combine the blocks



```

when green flag clicked
  set pen size to 4
  set pen color to red
  pen down
  set volume to 1e+22 %
  forever loop
    change pen color by 10
    play sound pop
    move pick random 20 to 40 steps
    turn left pick random 15 to 40 degrees
    turn right pick random 15 to 40 degrees
    if on edge, bounce
    if key space pressed? then
      say my name is jeff for 2 secs
    if key 1 pressed? then
      say Troll for 2 secs
    if key up arrow pressed? then
      point in direction 0
  
```

```

when green flag clicked
  clear
  move 10 steps
  if key right arrow pressed? then
    point in direction 90
    move 10 steps
  if key down arrow pressed? then
    point in direction 180
    move 10 steps
  if key left arrow pressed? then
    point in direction -90
    move 10 steps
  
```

2. Create this costume



3. Make this sprite from the costume you just made

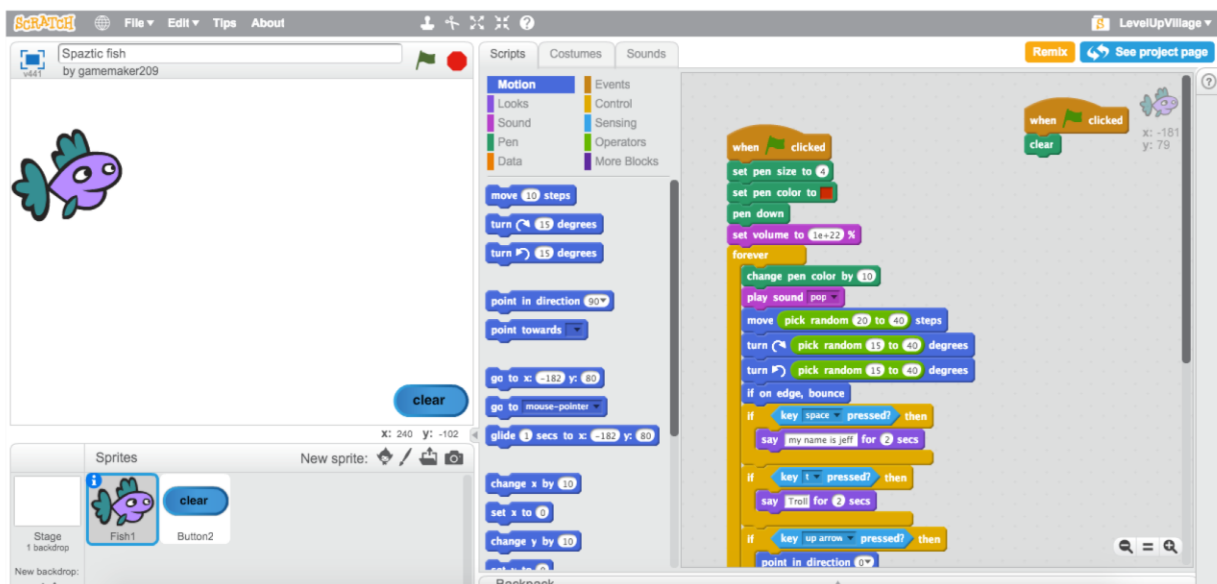


4. Combine the following blocks

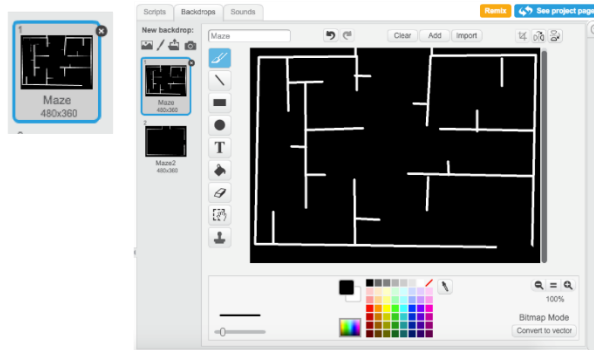
```

when this sprite clicked
  clear
  
```

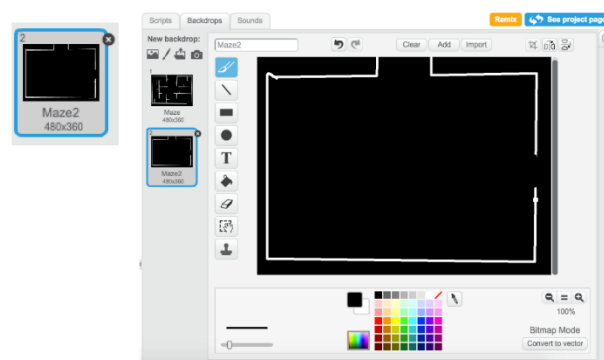
5. This is what your screen will look like in the end



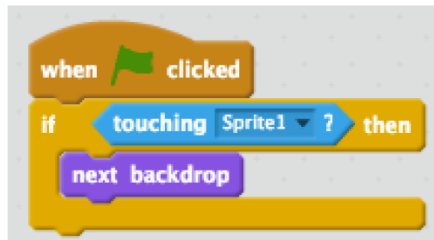
1. Make the following backdrop. It should look like this



2. Make another backdrop. It should look like this



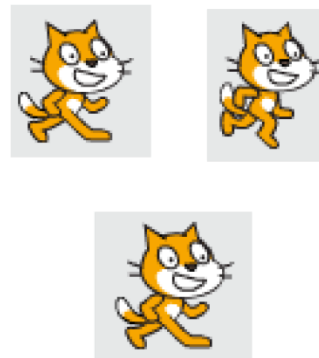
3. Code these blocks for the backdrop



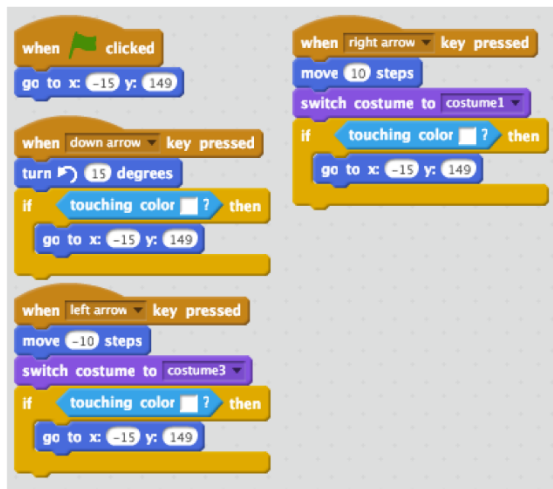
4. Choose a walking sprite



6. There should be three costumes



5. Combine the following blocks



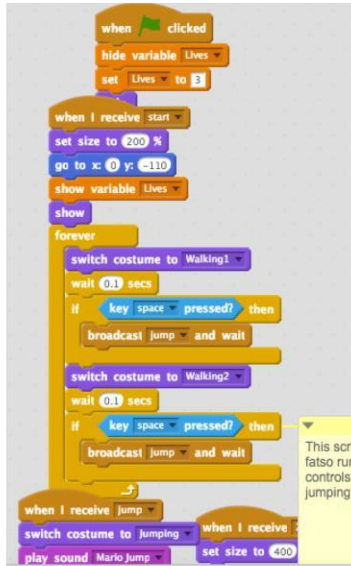
1. Make these three backdrops and name them background1, reiyvgtow and reiyvgtow1



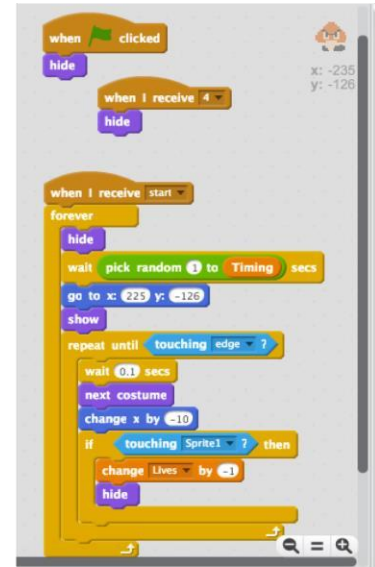
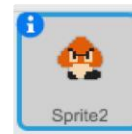
2. Make these three costumes and name them Jumping, Walking1 and Walking2



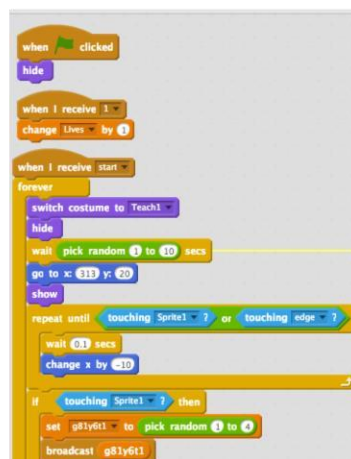
3. Make a Mario sprite, called "Sprite1" and combine the following blocks



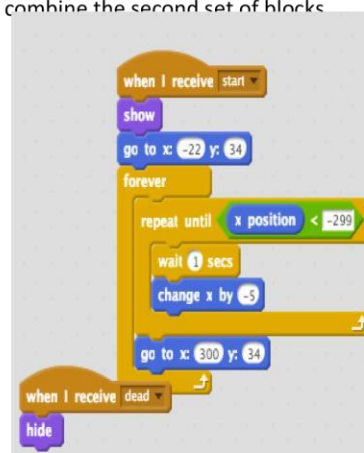
4. Make a mushroom sprite, called "Sprite2" and combine the following blocks



5. Make a Mario sprite, called "Sprite6" and combine the following blocks



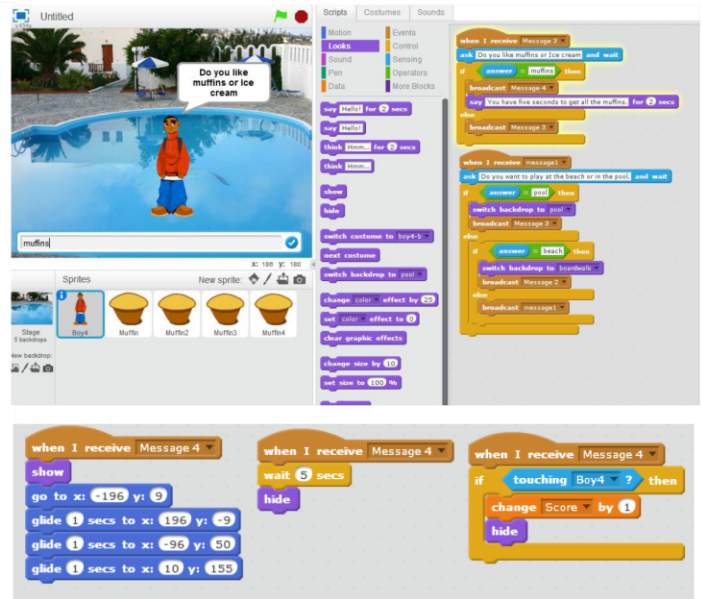
6. Make a Mario sprite, called "Sprite7" and combine the first set of blocks. Then make "Sprite10" and combine the second set of blocks





Now you are going to build a game that depends on your partner's choices. Each time your partner chooses something, a new part of the game appears. Here are some examples:

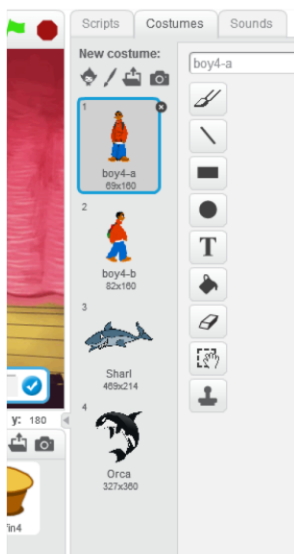
1. In the example on the right, when I ask my partner what food he likes better, the food he chooses then appears, and a message appears telling him to try to get as much as he can before it all disappears.
2. The code for the muffin is also on the right.



In the game you build, use the Ask, Broadcast and “When I Receive” blocks to build a game that goes, in order:

1. Question
2. Task + Task (One for each possible answer to the question.)
3. Question
4. Task + Task

Hint: You can use the Costumes menu to change your Sprite's appearance. In this example, the Sprite turns into the animal the player

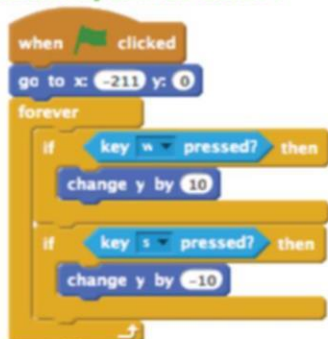


- Have a question where if the wrong answer is given a swarm of enemies attack.
- Build a quiz or puzzle game where your Sprite must move other objects to certain places. (**Hint—Use the Sensing and Motion blocks**).
- Build levels where your Sprite must work with others, or figure out how to play that level without receiving instructions.
- Don't forget, if you give two answers, like the beach/pool example, you have to code a task at each one.
- Use the Pen block to code a trap that keeps growing and that the player must escape.
- **Hint:** You can link screens from different paths, so if a player chooses to go to the beach, you could code another question that might lead them to the pool, or any other scene you are using.



1. Build the following blocks for Player 1 and Player 2

Here is the code for Player 1 (P1)'s paddle/controller:

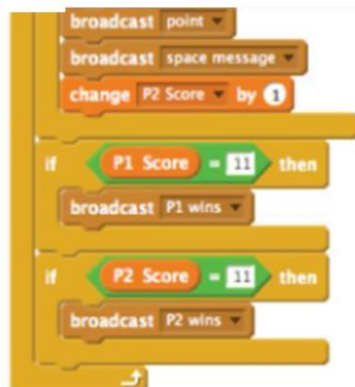


Here is the code for Player 2 (P2)'s paddle/controller:

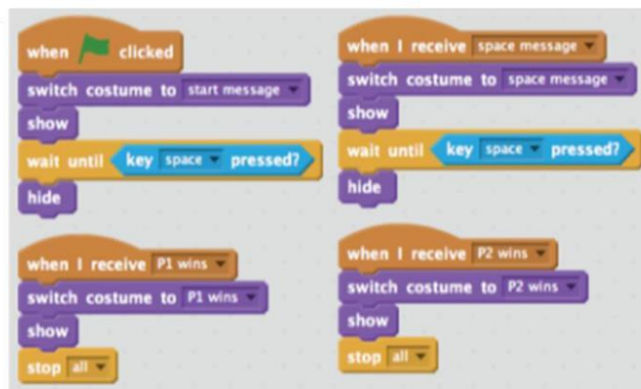


3. Make two variable, P1 Score and P2 Score

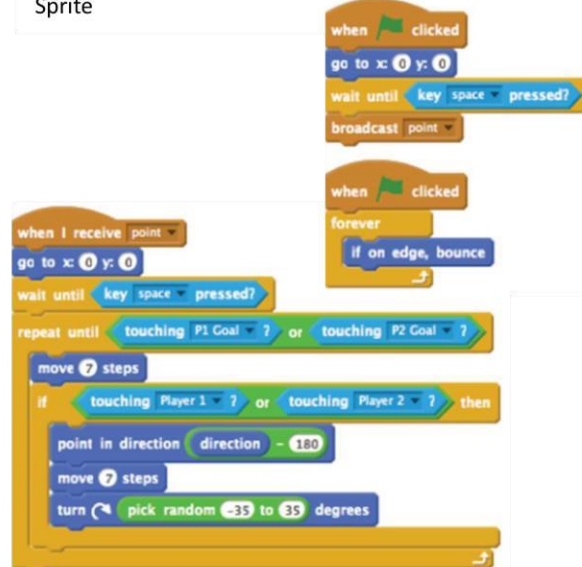
4. Build the following blocks



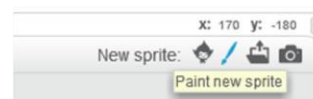
6. Build the following blocks



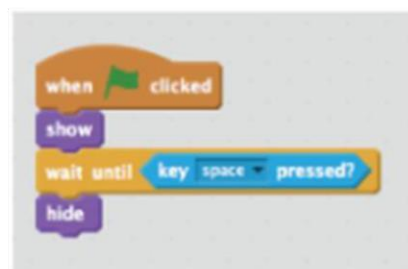
2. Build the following blocks for the Ball Sprite

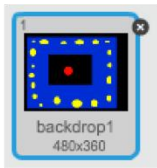


5. Use Paint New Sprites option to create a Title Sprite and Instructions Sprite. See the picture below for how they should look.



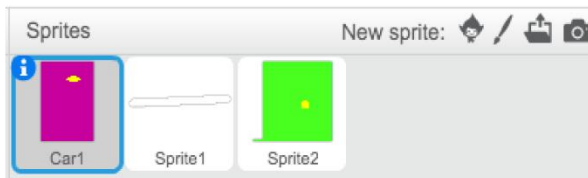
Continued...



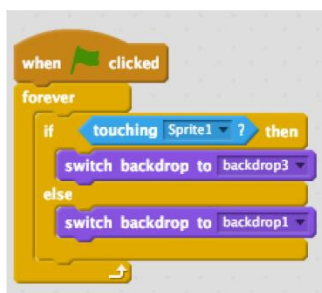
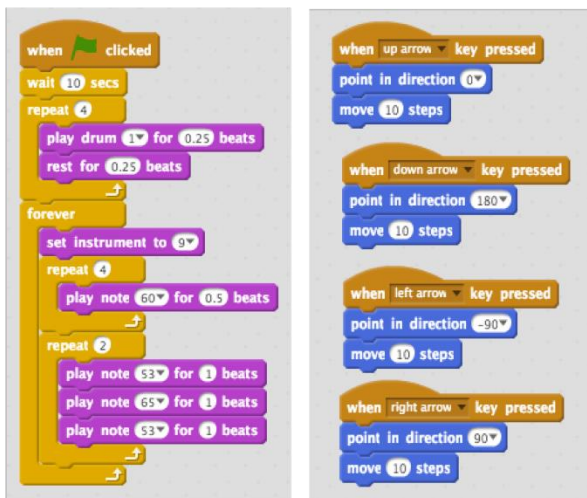


1. Create a backdrop that will be your racetrack. Design it however you would like, but make sure your cars will know where to drive

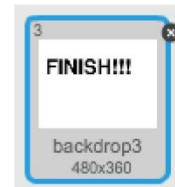
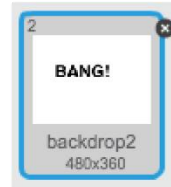
3. Create three sprites: Player One, Player Two, and the finish line



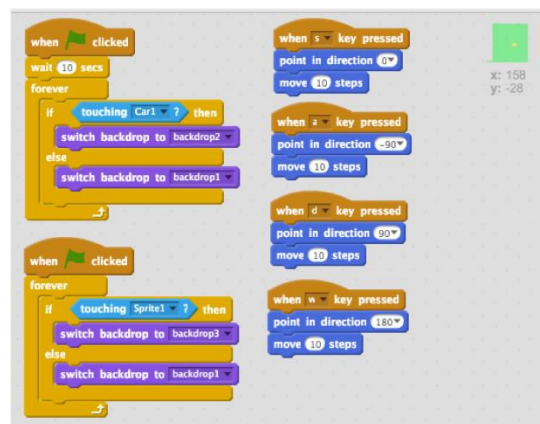
4. For Player One, combine the following blocks



2. Create a second backdrop to appear when the two players crash and a third backdrop to appear when one player has finished



5. For Player Two, combine the following blocks



6. For the Finish Line, combine the following blocks



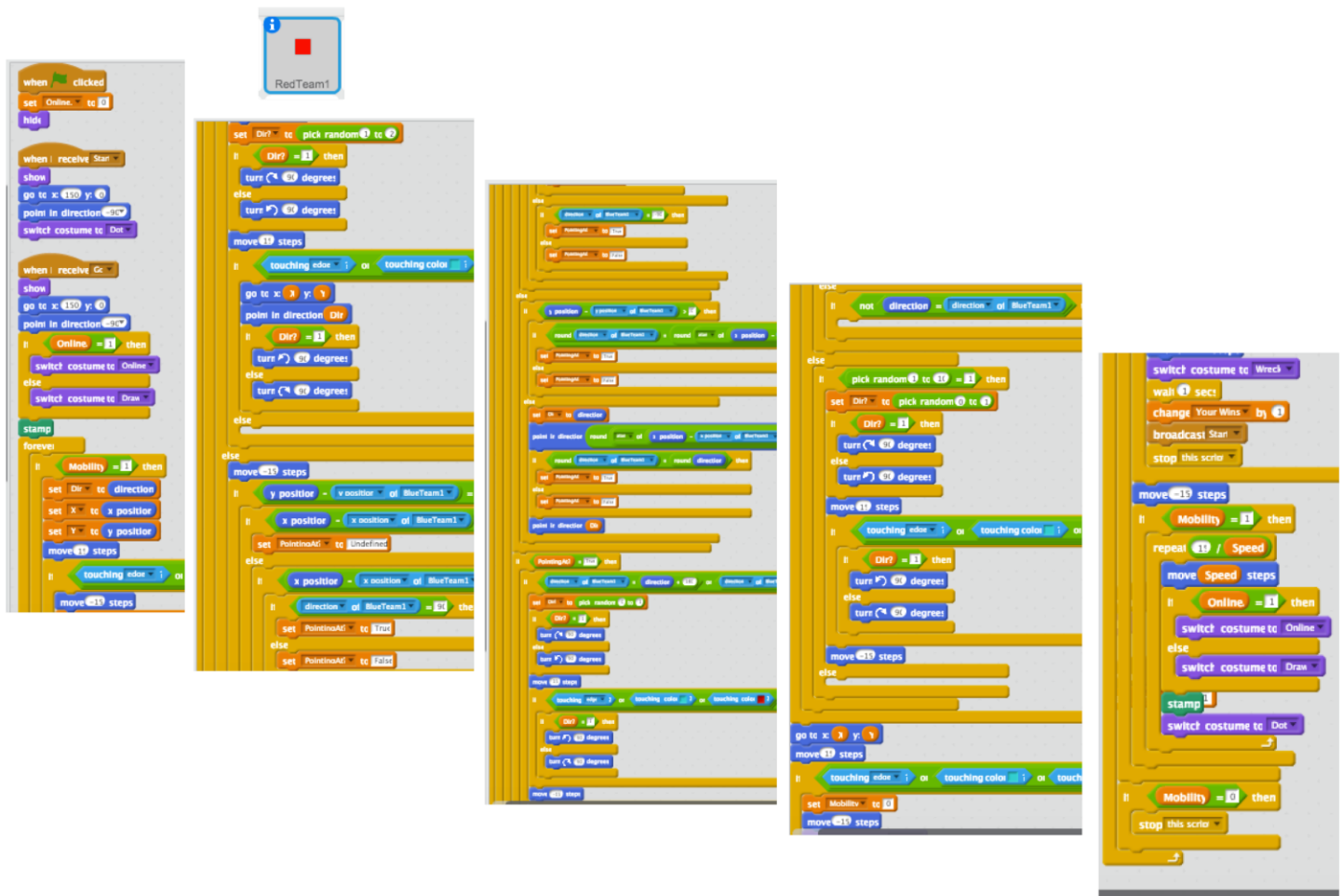
1. Click on the “Blue Team” sprite and combine the following blocks



The screenshot shows the Blue Team1 sprite and its corresponding code blocks. The code is organized into several sections:

- When clicked:** Set Online to 0, hide.
- When receive Star:** clear, show, go to x: 150 y: 0, point in direction 90, switch costume to Dot.
- When receive Gc:** set Mobility to 1, set ThisWay to 0, forever loop:
 - If Mobility = 1 then:
 - If key right arrow pressed? then:
 - If not direction = 90 then: set ThisWay to 0.
 - If key left arrow pressed? then:
 - If not direction = 270 then: set ThisWay to 180.
 - If key up arrow pressed? then:
 - If not direction = 0 then: set ThisWay to 0.
 - If key down arrow pressed? then:
 - If not direction = 180 then: set ThisWay to 180.
- When receive Gc (continued):** set Mobility to 1, set ThisWay to 0, show, go to x: 150 y: 0, point in direction 90, if Online = 1 then: switch costume to Online, else: switch costume to Draw, stamp, switch costume to Dot.
- When receive Menu:** hide.

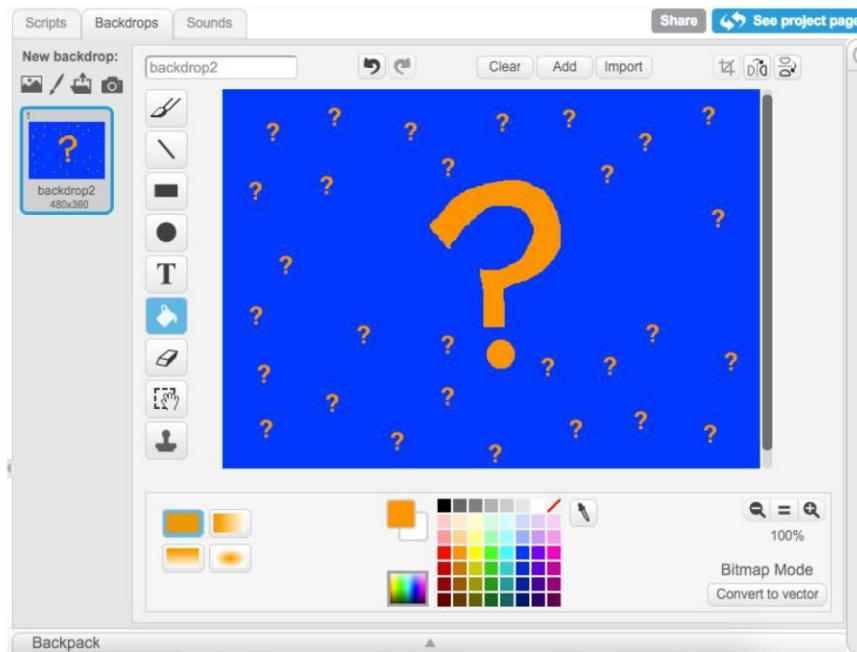
2. Click on the “Red Team” sprite and combine the following blocks



The screenshot shows the Red Team1 sprite and its corresponding code blocks. The code is organized into several sections:

- When clicked:** set Online to 0, hide.
- When receive Star:** show, go to x: 150 y: 0, point in direction 90, switch costume to Dot.
- When receive Gc:** show, go to x: 150 y: 0, point in direction 90, if Online = 1 then: switch costume to Online, else: switch costume to Draw, stamp.
- When receive Gc (continued):** set Dir? to pick random 1 to 4, if Dir? = 1 then: turn 90 degrees, else: turn 270 degrees, move 10 steps, if touching edge or touching color:
 - go to x: x y: y, point in direction Dir?
 - If Dir? = 1 then: turn 90 degrees, else: turn 270 degrees.
- When receive Gc (continued):** else: move 10 steps, if y position > y position of BlueTeam1:
 - set x position to x position of BlueTeam1.
 - set PointInDir? to 0.
 - if x position < x position of BlueTeam1:
 - set PointInDir? to 1.
 - if direction of BlueTeam1 = 90 then:
 - set Dir? to 1.
 - turn 90 degrees.
 - if direction of BlueTeam1 = 270 then:
 - set Dir? to 2.
 - turn 270 degrees.
- When receive Gc (continued):** if x position > x position of BlueTeam1:
 - set PointInDir? to 2.
 - if direction of BlueTeam1 = 0 then:
 - set Dir? to 3.
 - turn 90 degrees.
 - if direction of BlueTeam1 = 180 then:
 - set Dir? to 4.
 - turn 270 degrees.
- When receive Gc (continued):** if touching edge or touching color:
 - if Dir? = 1 then: turn 90 degrees, else: turn 270 degrees.
 - move 10 steps.
- When receive Gc (continued):** if Dir? = 1 then: turn 90 degrees, else: turn 270 degrees, move 10 steps.
- When receive Gc (continued):** if touching edge or touching color:
 - set Mobility to 0, move 10 steps.

1. Make your own backdrop



2. Choose any sprite to be you.



3. Combine the following blocks. Please make it about YOU. Change the questions to ask ones that you have talked about in your videos to your partner.

