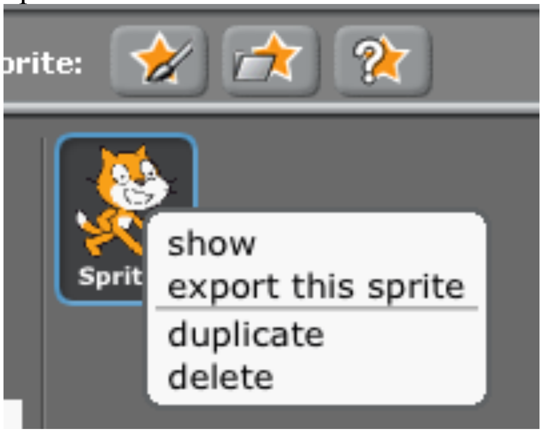
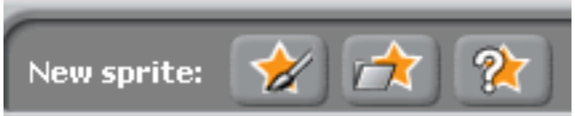
Eat Strawberries Instructions

In this activity, you will create a game in which you will direct a sprite using the arrow keys to find strawberries that are located on the stage. Your sprite will eat each strawberry, make a sound, and say something. Your game will track how many moves it takes for your sprite to each all the strawberries.

1. Start a new Scratch session.
2. Create a sprite that will be eating the strawberries. You can use the cat sprite or you can choose import a different sprite. If you are going to use the cat sprite go to instruction 3. If you want to import a sprite, continue.
    a. Delete cat sprite by right clicking on cat sprite and selecting the delete option.



    b. Import a sprite by clicking on the "Choose a sprite from a file" button. (It is the icon with the folder.)

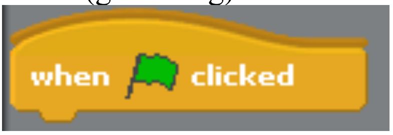


    c. Resize the sprite.
    d. Give the sprite a new name by changing he name in the middle Scratch section.
    e. Verify that the sprite's name has been changed.

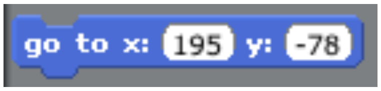
□ Test successful.

3. You will now work with the sprite that you selected. First you will position the sprite to start the game.
    a. Go to the Scripts window in the middle of the Scratch work area.

    b. Drag a "When (green flag) clicked icon into the Scripts window.



c. Drag in the Go to x: <> y:> instruction from Motion and attach it to the when clicked instruction.

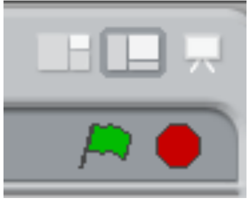


go to x: 195 y: -78

Choose a location at the edge of the stage for your sprite to start the game.

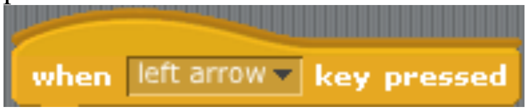
d. Drag in the "point in direction" from Motion and attach it to the "go to x: y:" instruction.

e. Test this script by clicking on the green flag in top right corner. Make sure your sprite goes to the location that you want.



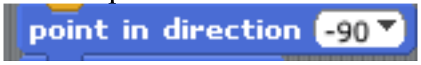
□ Test successful.

4. Create a new instruction block that will move to the left when the left arrow is pressed.
    a. Drag in a "when key pressed" instruction and select "left arrow" from the pulldown.



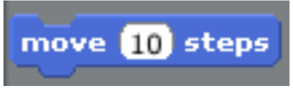
when left arrow key pressed

b. Drag in the "point in direction" instruction from the Motion instructions. Use the pulldown to select the left direction.



point in direction -90

c. Pull in the "move steps" instruction (from the Motion instructions) and keep the value at 10 steps.



move 10 steps

Change the move to 5 steps.

d. Click on the green flag and test that you can move your sprite to the left with the left arrow keys.

□ Test successful.

5. Create instruction blocks to move the sprite right, up, and down using the right, up, and down arrow keys.
    a. Right click on the "when left arrow key pressed" and select "duplicate".
    b. Edit the new instruction block and change the left arrow and select the right arrow in the "when key pressed" instruction.
    c. Change the "point in direction" instruction to the right direction.
    d. Duplicate the instruction block two more times and create up and down key actions.
    e. Verify that all arrow keys move the sprite in the correct direction.

□ Test successful.

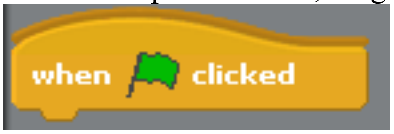
6. Now you will create the strawberries that your sprite will eat.

a. Click on the Paint new sprite icon (the star with paint brush)

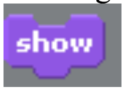
b. Use the “Paint Editor” to create a small round red “strawberry” sprite.

c. In the Scratch sprite window select your new “strawberry” sprite.

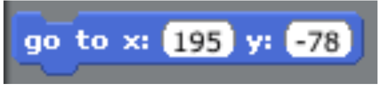
d. In the “Scripts” window, drag in the “when green flag clicked” instruction.



e. Drag in the “show” instruction from the “Looks” group and attach it to the “when green flag clicked” instruction.



f. Use the “go to x: y:” instruction from Motion to locate your strawberry on the stage. You can locate it anywhere you want. (You will make more “strawberry” sprites later.)

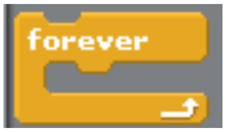


g. Verify that your new sprite is located on the stage.

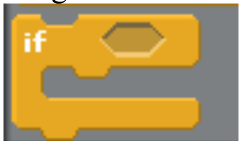
□ Test successful.

7. Now you will create a set of actions that will be executed when your sprite touches the strawberry.

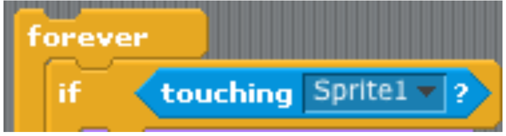
   a. Click on the strawberry sprite and drag in the “forever” instruction from Control.



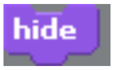
   b. Drag in an “if” statement from Control and insert in “forever”.



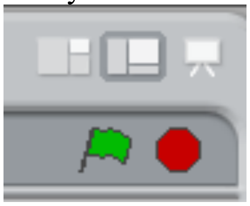
   c. From the Sensing group, drag in the “touching” instruction and place it in the “if” condition. Select your sprite from the “touching” pulldown.



   d. Add “hide” from Looks to the “if” statement.



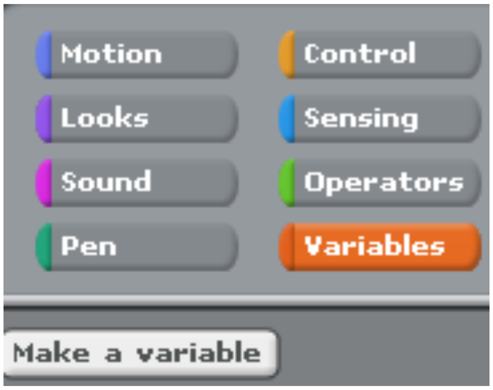
e. Test your instructions by clicking the green flag



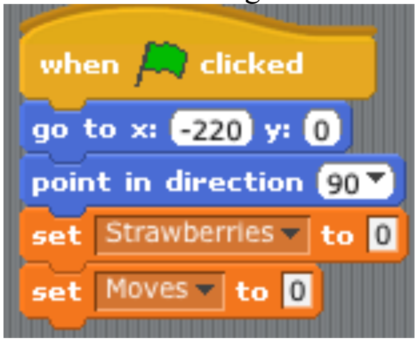
and moving your sprite to the “strawberry”. The “strawberry” should disappear when your sprite touches it.

□ Test successful.

8. Now you will create two variables to track the number of strawberries that your sprite “eats” and the number of moves (number of times you use each arrow key to move the sprite.
   a. Click on your main sprite and work in the “Scripts” section.
   b. Click on Make a variable in Variable and name it Strawberries.



   c. Make a second variable. Click on Make a variable in Variable and name it Moves.
   d. In the “when green flag clicked” block, add “set to 0” (indicating the “strawberries variable) after the “pint in direction instruction. And add “set to 0” indicating Moves under the “set Strawberries to 0” instruction.



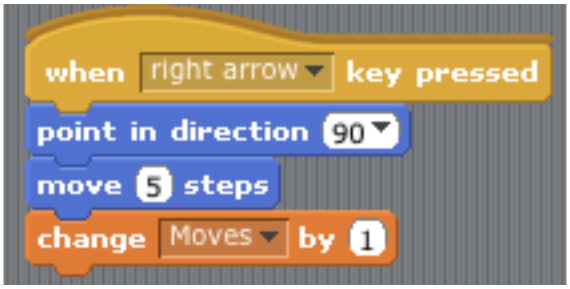
```
when [flag] clicked
go to x: -220 y: 0
point in direction 90
set Strawberries to 0
set Moves to 0
```

The “Strawberries” and “Moves” variables should appear on the stage each with a value of 0.

   e. Now add “Change Moves by 1” to each of your “when key” pressed instructions. (Be sure to add this to the right, left, up, and down instruction blocks.)
   f. Verify that your 2 variables appear on the stage.

□ Test successful.

9. Add the instructions to increment the Moves variable whenever an arrow key is pressed.
    a. Add the “change Moves by 1” instruction at the end of each arrow key instruction.

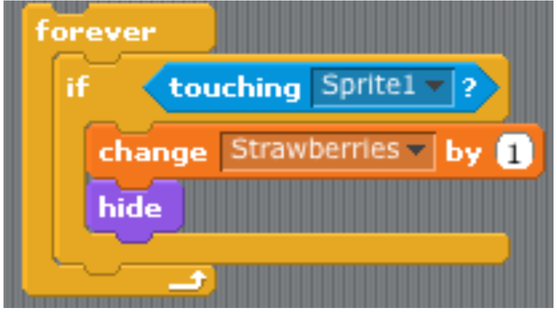


```
when right arrow key pressed
point in direction 90
move 5 steps
change Moves by 1
```

    b. Run the game and verify that the “Moves” variable is incremented each time an arrow key is hit.

□ Test successful.

10. Edit you “strawberry” sprite by clicking on it in the sprite area.
    a. Add a “change by 1” instruction from Variable and insert it into the strawberry sprite’s if statement. Choose the “Strawberry” variable from this instruction’s pulldown.



```
forever
    if touching Sprite1 ?
        change Strawberries by 1
        hide
```

    b. Test this instruction by clicking on the green flag to start and move your sprite to touch your strawberry. The Strawberries variable should change from 0 to 1.

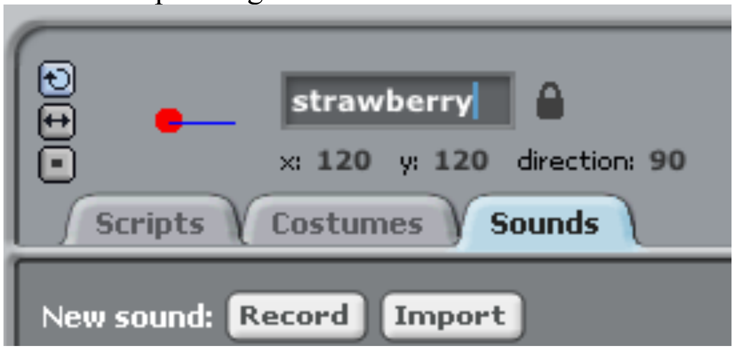
□ Test successful.

11. Now you modify your strawberry sprite’s instructions to display a statement when it is touched by your sprite.
    a. From the Looks instructions, drag in a “think for 1 secs” instruction and place it in the “Strawberry” sprite’s if statement. Type in a statement in the “think” instruction.
    b. Verify that your statement is displayed.

□ Test successful.

12. Add a sound when your sprite eats the strawberry.
    a. Click on Sounds in the Strawberry sprite window.

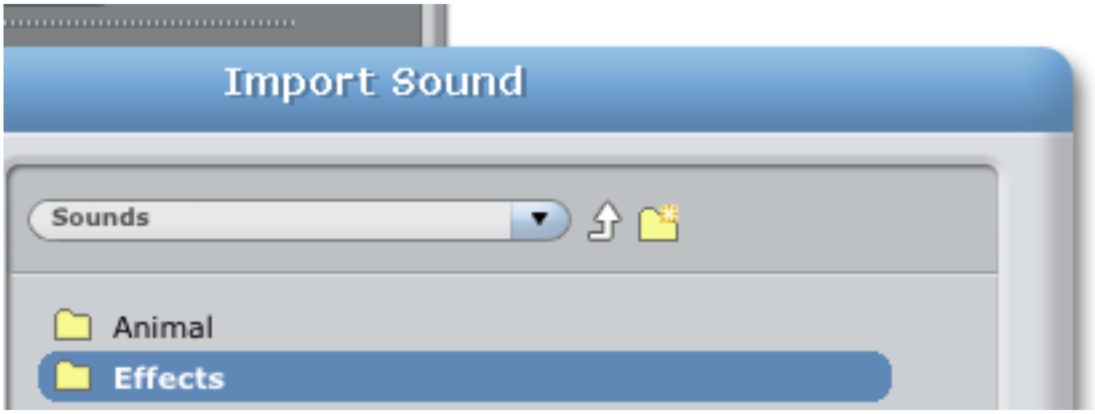
b. Click on import to get a sound.



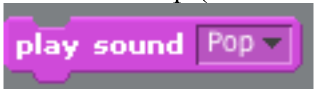
strawberry

x: 120 y: 120 direction: 90

c. Double click on effects and choose a sound and hit OK to choose the sound.



d. Drag in the play sound instruction from Sound and add it to the top of the forever if loop (above the point in direction instruction).



```
play sound Pop
```

e. In the play sound instruction, choose the sound that you selected.

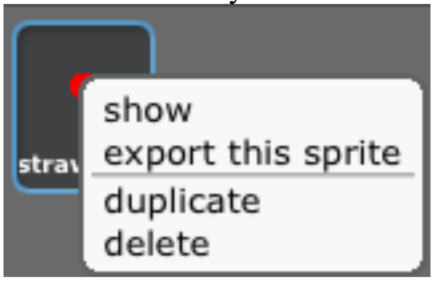
f. Play the game to test the sound.

g. Test that your sound is played when your sprite eats the strawberry.

☐ Test successful.

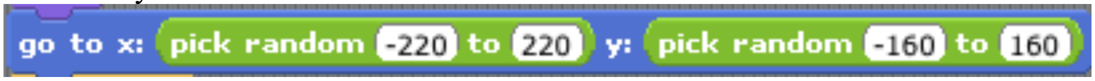
13. Now you will duplicate your “Strawberry” sprite to create a slightly modified strawberry.

a. Right click on the “Strawberry” icon and select “duplicate” to create another strawberry.



b. Click on this new strawberry sprite.

c. Modify the “go to x: y:” statement to use two “pick random” statements. For x: declare a range from -220 to 200. For y: choose -160 to 160. These randomizing statements will cause the strawberry to be located at a random x/y coordinate.



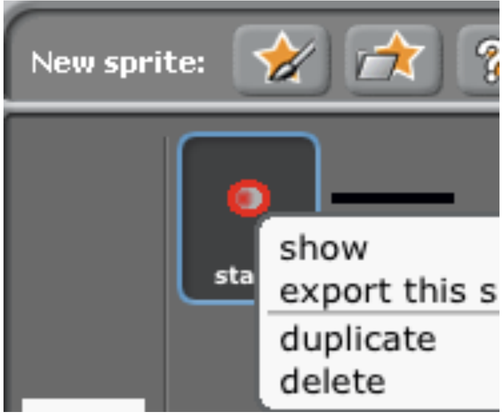
```
go to x: pick random -220 to 220 y: pick random -160 to 160
```

d. Test your code. Two strawberries should appear. Run this test several times. The strawberry with the “pick random” statements should appear in a different location each time you execute the game.

□ Test successful.

14. Duplicate the strawberry with the “pick random” statements at least 10 times.

a. Right click on the strawberry with the “pick random” statements and selct “duplicate” to duplicate the strawberry.



b. Duplicate the sprite at least 10 times.

c. Play your game several times to verify that all your strawberries appear and that they appear in different locations each time you play.

□ Test successful.

15. Play your game and see how many moves it takes to eat all your strawberries.