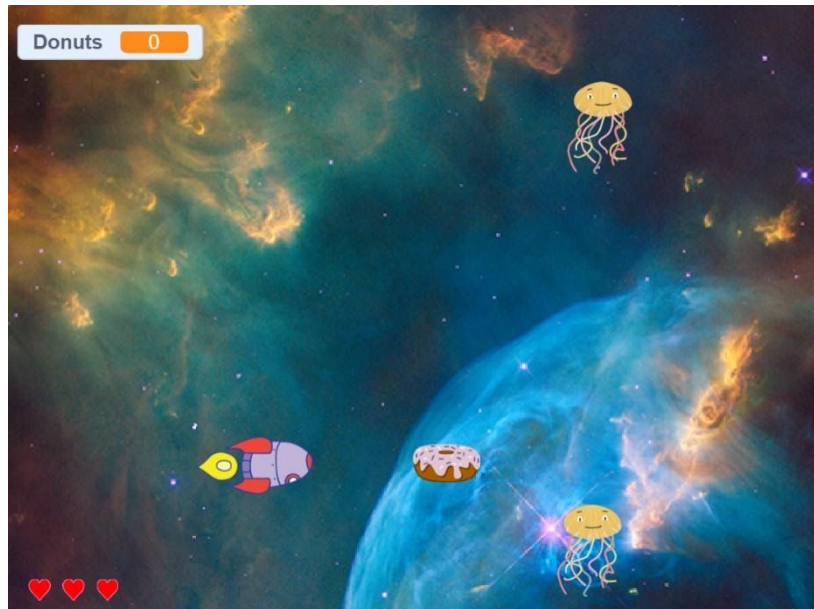# Donuts in Space

We will be creating a side scrolling game where the objective is to collect as many donuts as you can while trying to avoid colliding with the alien jellyfish.

1. First thing we need to do is create our variables. Click on the variables menu and click on the "Make a variable" button. Name this variable "Donuts" and click ok. This variable is going to help us keep track of how many donuts we collected.
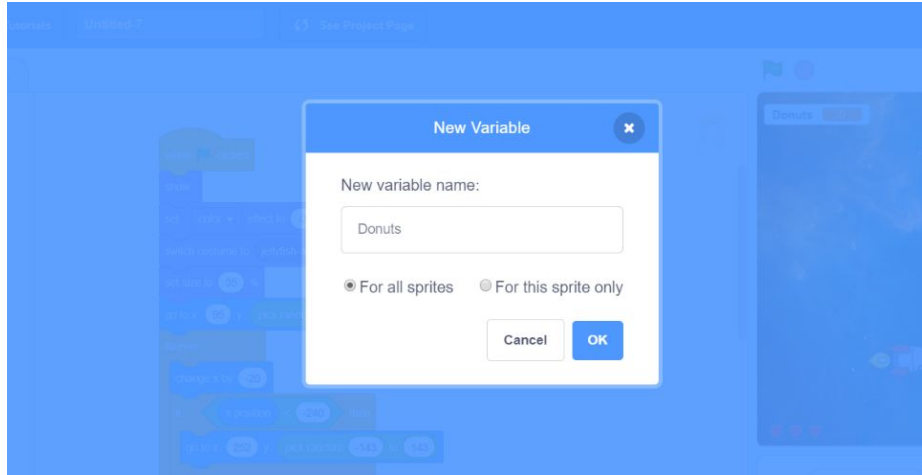
2. Next, create the second variable. Name this variable "Collisions" and click ok. It will keep track of how many times the spaceship collides with an octopus. The game ends after 3 collisions.
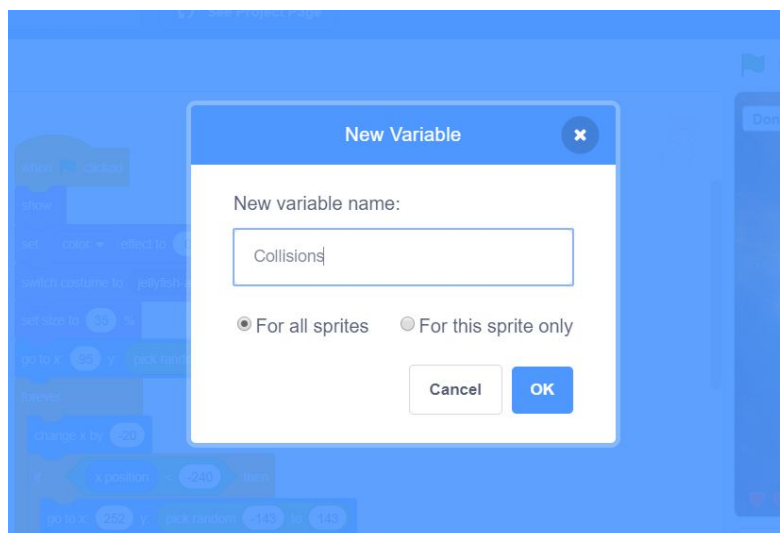
3. After we are done creating our variables we need to add our sprites. Go to the sprite area, click on "Choose a sprite", and add the following sprites.

   Rocketship x1

   Jellyfish x2

   Donut x1

   Heart x3

4. Now it's time to start creating the code needed for our sprites. We will start with the Rocketship. Click on the Rocketship sprite and add the following code to the script area.

   This block of code ensures us when a new game is started the number of collisions is set to 0. We also want to shrink the size of our sprite using the set size block and make the Rocketship point to the right because our game is a sidescroller that moves from left to right. We are able to control our Rocketship with the mouse using the forever loop.

5. The next thing we want to do is animate our Rocketship. With the Rocketship sprite still selected, add the following code.


We use the "next costume" block inside our forever loop to make the Rocketship animate the entire time the game is running. We added a "wait 1 second" block to slow down the speed of the animation.

6. Select one of the Jellyfish sprites. We are now going to add the sound effect that plays when the Rocketship collides with the Jellyfish.

First, click on the sounds tab
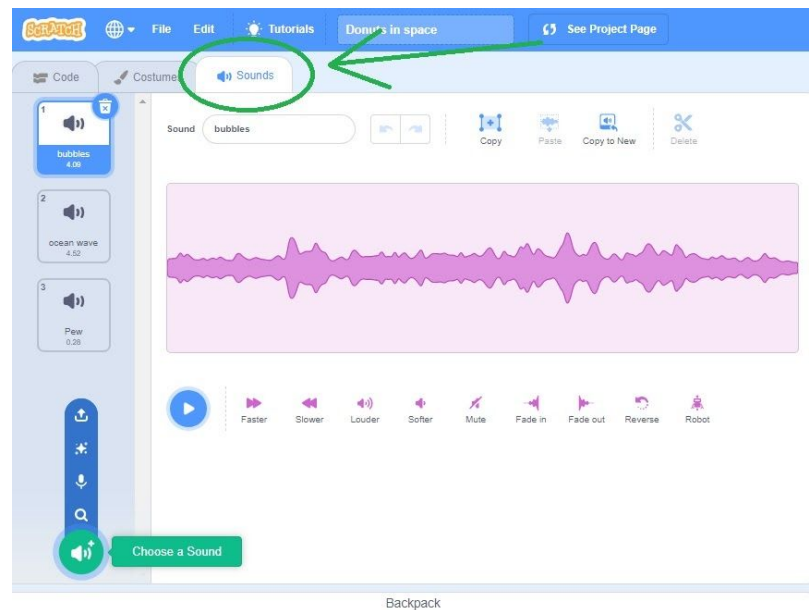
Then, click on the "Choose a Sound" button.
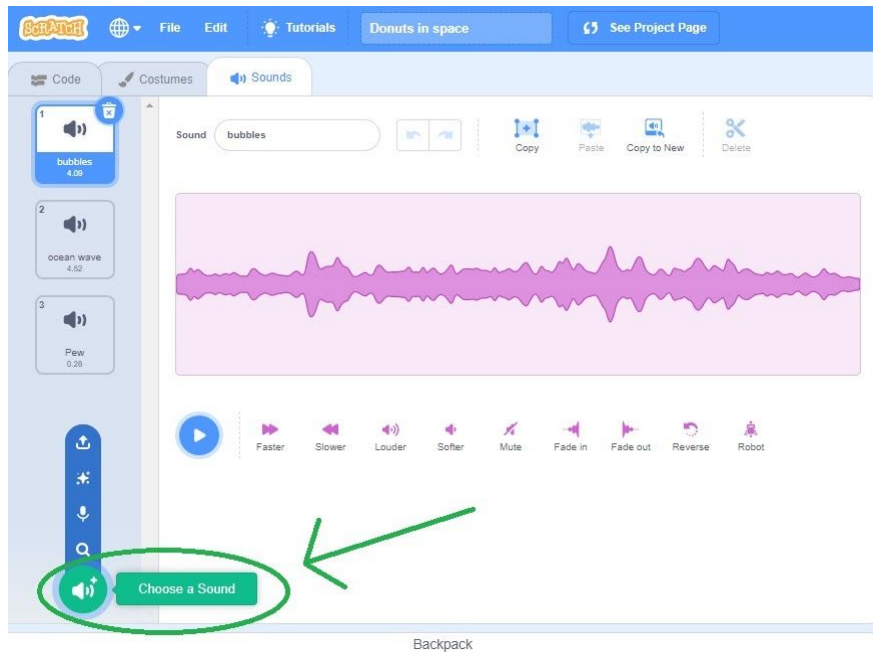
Search for the word "Pew" and double click it to add it to our sprite.

7. Now select the first Jellyfish sprite and add the following code.

The first thing we do after we click the "When green flag clicked" block is make sure our Jellyfish is showing when the game starts. We then set the default values for our costume and color. These values will change throughout our game while our sprite is animating. We also use the set size block to shrink our Jellyfish sprite in order to make the game more playable.

Inside our forever loop we are making our sprite move left to right. The 1st IF statement checks when the sprite touches the edge. If it touches the edge, we reset it's position to give it the scrolling effect.

The 2nd IF statement checks to see when the Jellyfish collides with the Rocketship. If the 2 sprites collide we play our "Pew" sound, add 1 to our collision variable, and broadcast collision to our Heart sprites. After that we hide our sprite, reset it's position to the right side of the screen, show the sprite, and continue scrolling.

8. With the Jellyfish sprite still selected we are going to add 2 more scripts. The following code will animate our Jellyfish and give them some cool color changing effects.
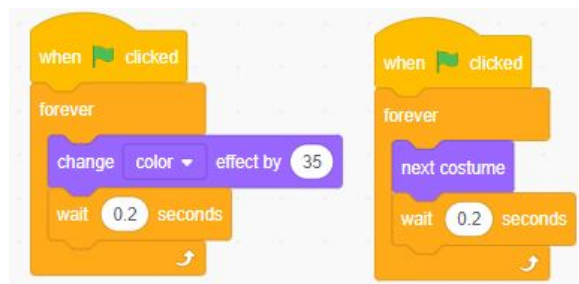
9. The next step is to copy the same exact code we just did for 1st Jellyfish and enter it into the 2nd Jellyfish sprite. The only thing we need to change is the "change x by -15" block inside the forever loop. Change this value to -20 for our 2nd Jellyfish. This is going to make our Jellyfish move at different speeds. Making the game a little bit more challenging. Remember to add ALL the code we did for our 1st Jellyfish into the 2nd Jellyfish.

10.   Before we add our code for our donut, click on the sounds tab again and search for the sound "Coin". If you do not remember how to add a sound, please go back to step 6. This is the sound that will play when a donut is collected.

11. Now it's time to add the code for our Donut sprite. Select the Donut sprite and add the following code.

The code for our Donut sprite is almost identical to the code we entered for the Jellyfish sprite. When it comes to movement, we actually want our donut to scroll across the screen the same way our jellyfish do. The only difference is inside our IF statement that checks when the donut collides with our rocketship. Instead of removing a

life, we increase our "Donuts" variable and play the "Coin" sound we added to our sprite.

12. Now it's time to add the code for our Heart sprites. Remember we have 3 heart sprites. Each of these sprites will need to have some code added to it. Add the code below to each of the heart sprites.

Heart 1

Heart 2

Heart 3

The code after the "when green flag clicked" block for each sprite is very similar, although they each have a different Y-position. What we are doing is lining up our heart sprites to create a row.

After the "when I receive collision" block we check to see how many collisions our rocketship has made. After every collision, we hide one of the heart sprites. Heart 3 checks to see when we have made 3 collisions. You will notice we added the "stop all" block into the Heart 3 sprite. This ends the game after 3 collisions have been made.

13. We are almost done! All that's needed is to pick a background for our game. Click on the "choose a backdrop" button in the backdrop area and select a backdrop for our game. The backdrop I chose is "Nebula". You can choose the same or whatever backdrop you feel like using.
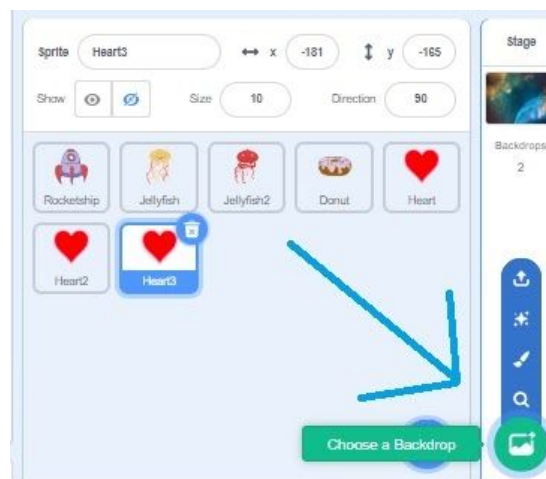
Good Work!

Now try playing your game to see if it works correctly. Click the green flag and use the mouse to control your spaceships. Remember to avoid touching the Jellyfish and try collecting as many donuts as you can.