<p style="text-align:center">Lesson 1 – Space Rainbows</p>
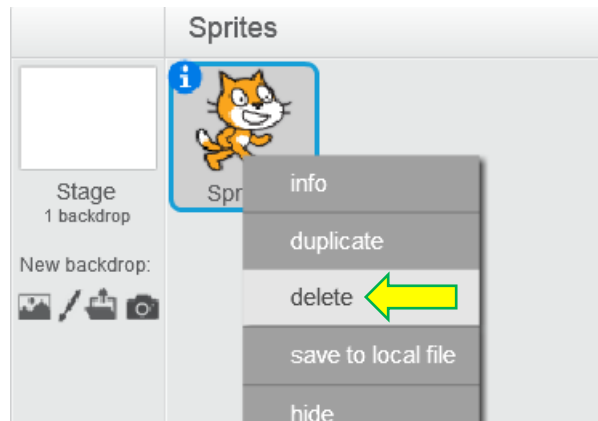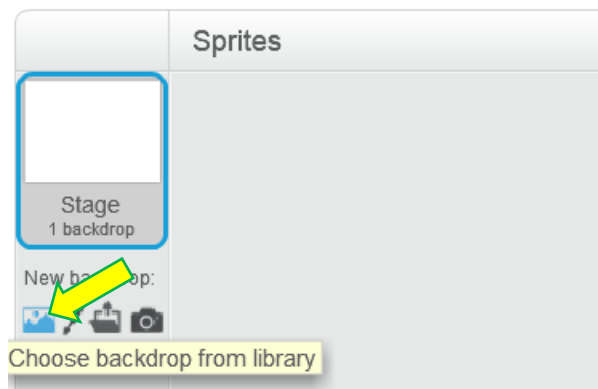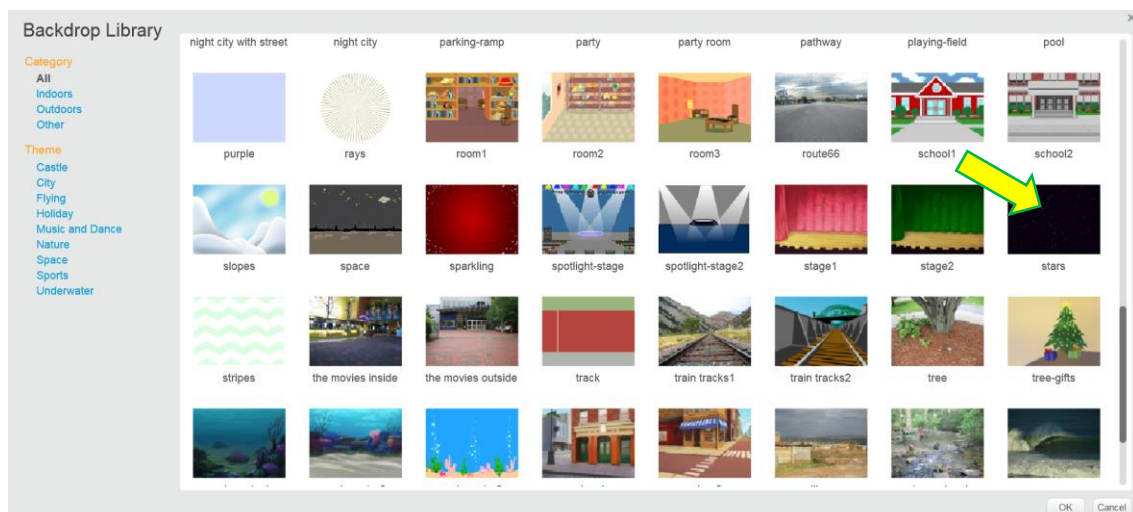
1. Create a background
    a. Clear the Stage:
        i. Right click sprite in Sprites space and select delete.

    b. Choose a backdrop:
        i. Click **Choose Backdrop from Library** button.
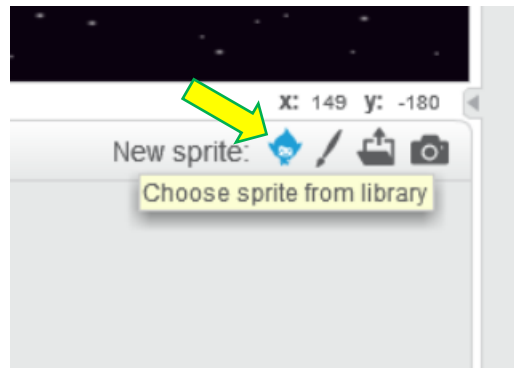

        ii. Scroll down and select the **Stars** background (look under the **Space** theme).
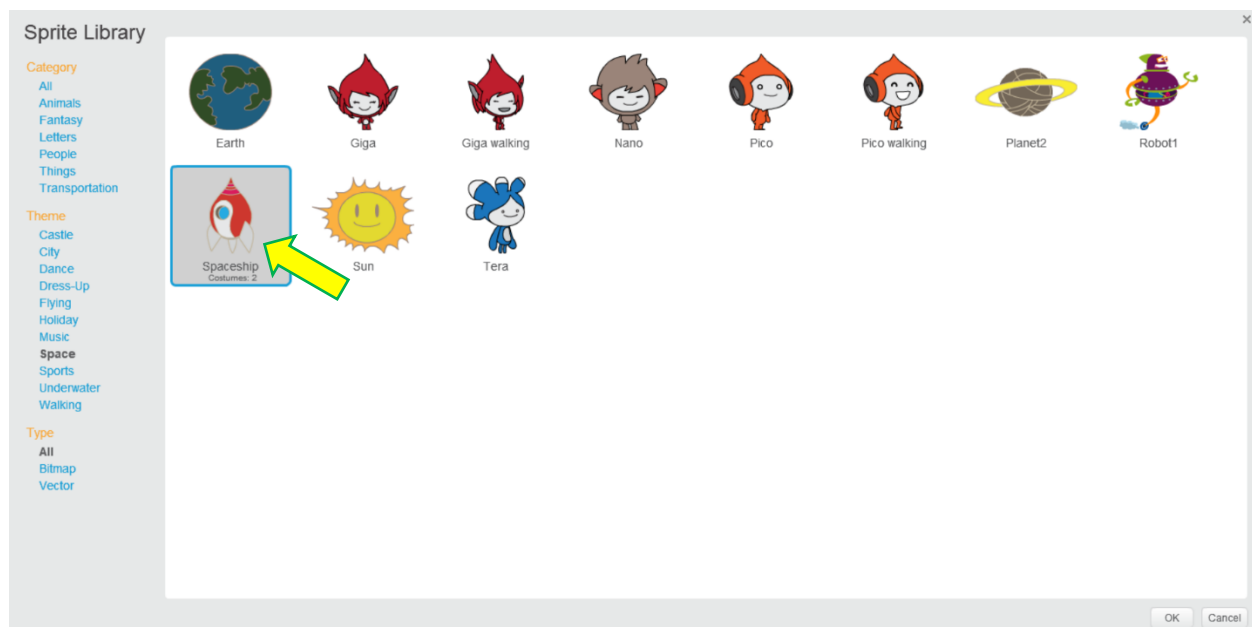
2. Create Bouncing Spaceships
    a. Select a sprite:
        i. In the Sprite List box, select **Choose Sprite from Library**.

        ii. Select the **Spaceship** sprite (or choose any other sprite you want):
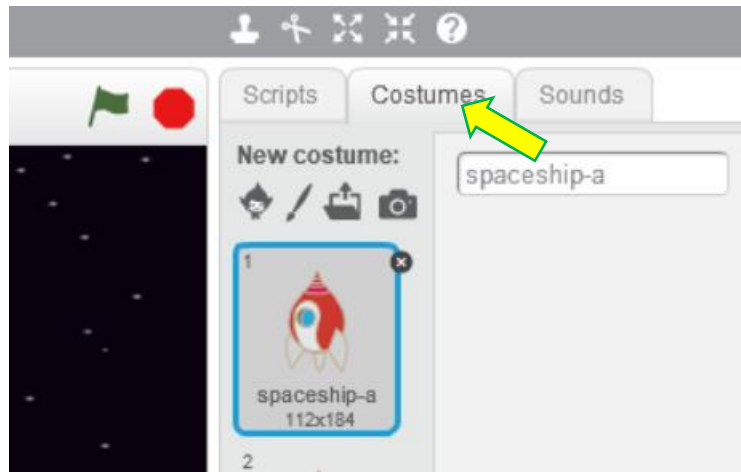   1. Look for the spaceship in the **Transportation** category or **Space** theme tabs.

b. Edit the sprite's size:
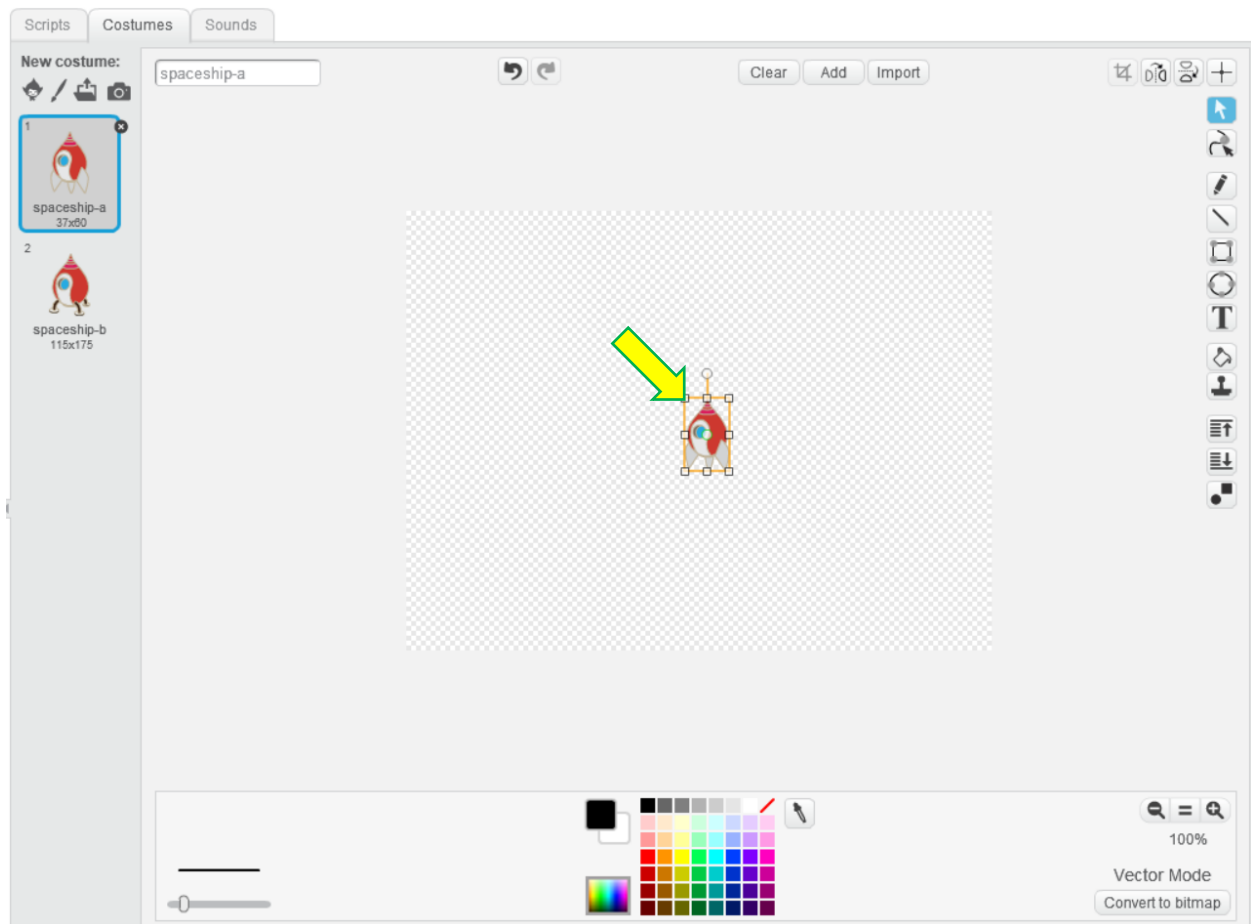   i. Click the **Costumes** tab.
   1. This lets you edit sprite appearances.

   ii. Resize the sprite:
       1. Select your sprite in the canvas.
       2. Hold the Shift key, and drag a corner of the sprite to make it smaller.
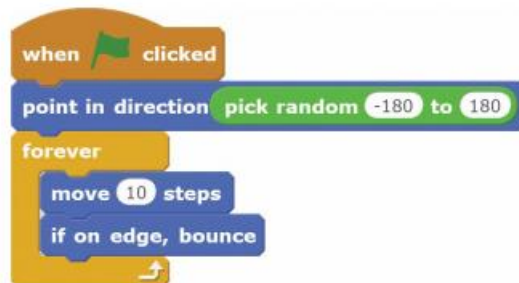
iii. Reset the costume center:
1. Click and drag the sprite to the center of the canvas…
2. OR select **Set Costume Center** button in top right corner and then just click in the center of sprite.
a. This will center the sprite costume where you clicked.
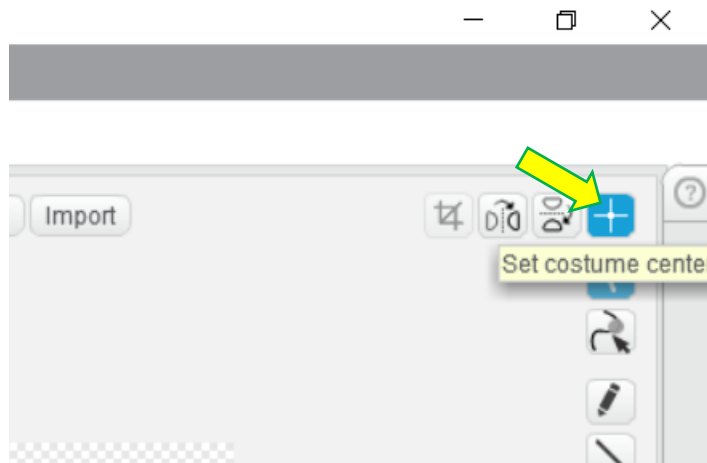
c. Add the code:
i. Add the following code to the Scripts area:

1. These blocks can be found in:
a. **Events** (brown)
b. **Motion** (blue)
c. **Operators** (green)
d. **Control** (yellow)
2. What the code does:
a. Picks a random direction (-180 to 180, which is 360 total)
i. In Scratch, directions are calculated in degrees:
1. 0° is North
2. 90° is East
3. -90° is West
4. -180°/180° is South
b. Forever loop:
i. Moves 10 steps.
ii. "Bounces" if sprite hits the edge of the stage.
d. Create 2 more duplicate sprites:

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i. Right click on Spaceship sprite and select Duplicate.
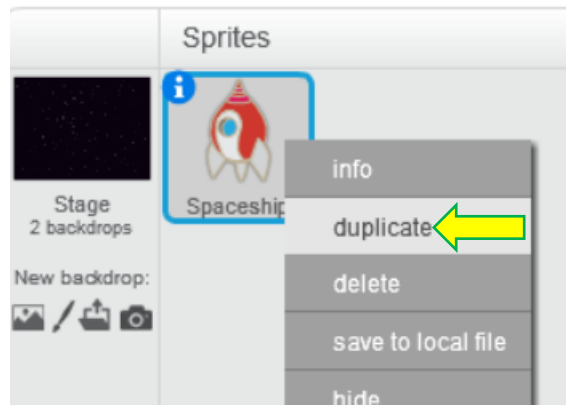
ii. Do this twice so you have three spaceships total.

e. SAVE and RUN.

3. Let's add Rainbows!
   a. Create a new sprite:
      i. In the Sprite List box, select **Paint New Sprite**.
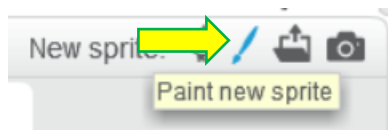

      ii. In the **Costumes** tab:
         1. Select the **Ellipse** drawing tool.
         2. Select the filled shape (bottom left).
         3. Choose a color.
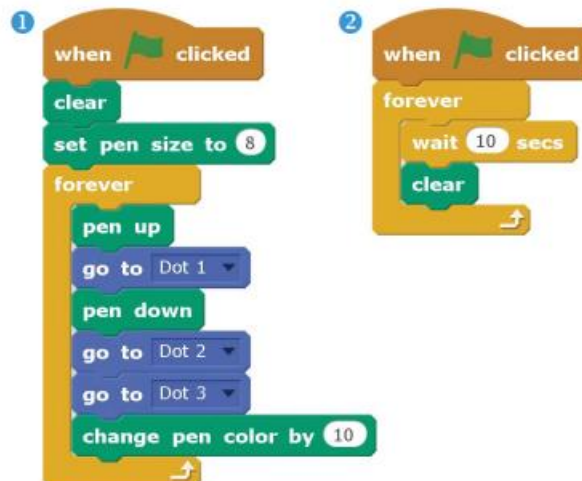   4. Draw a small circle (hold shift) at the center of the canvas.
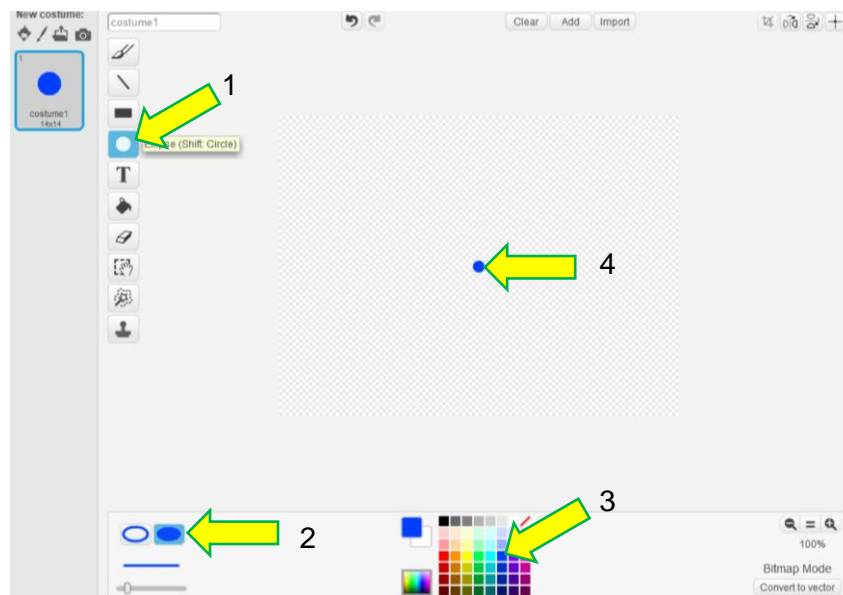
      iii. Right click sprite in Sprite List box and select info.
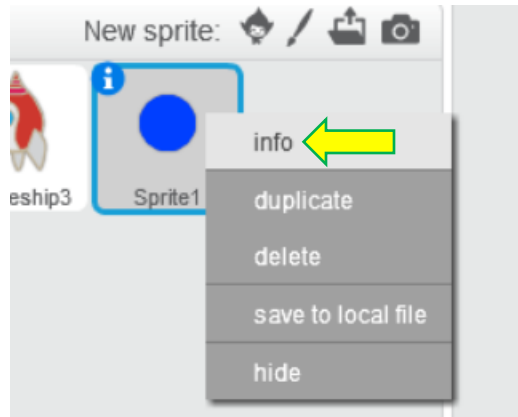
1. Rename sprite ("DrawingDot").
2. Uncheck the **Show** box.
3. Click the back button (left pointing triangle in circle located at top left of Sprite List).
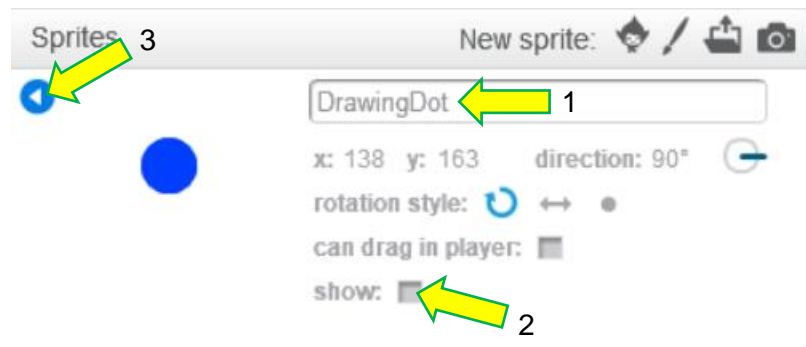
b. Add the rainbow drawing code:
   i. Add the following code to the Scripts area: (Dot = Spaceship):

1. These blocks can be found in:
   a. **Events** (brown)
   b. **Pen** (turquoise)

        c. **Motion** (blue)

        d. **Control** (yellow)

2. What Script 1 does:
    a. Clears the stage of all previously drawn pen lines.
    b. Sets the pen size.
    c. Forever loop:
        i. Lifts pen tip up
        ii. Moves to spaceship 1
        iii. Puts pen tip down
        iv. Moves to spaceship 2
        v. Moves to spaceship 3
        vi. Changes pen color
3. What Script 2 does:
    a. Forever loop:
        i. Waits 10 seconds
        ii. Clears the stage of all previously drawn pen lines
    c. SAVE and RUN
4. We're done!
    a. Hold shift while clicking green flag to turn **Turbo Mode** on and off.