

Changing Camera Views!

Set Point of View to



By Bella Onwumbiko

under the direction of Professor Susan Rodger

Duke University

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Introduction!

In this tutorial, we will set up four camera views that will focus on the main character in our Alice world. As she walks, we will change the camera's point of view in order to see different sides/angles of the character.

You will become more comfortable:

- Dropping **dummy cameras** to create interesting views
- Using the camera's **vehicle property**
- Using the camera's **set point of view to** method
- Using a walking character

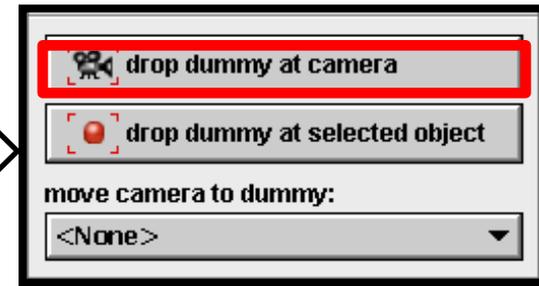
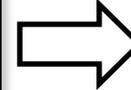
Section 1a: Setting up the World

Create a new world → **snow template**.

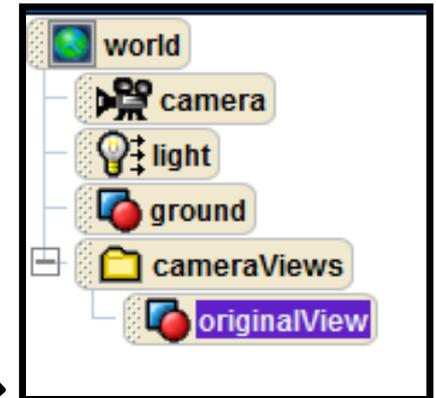
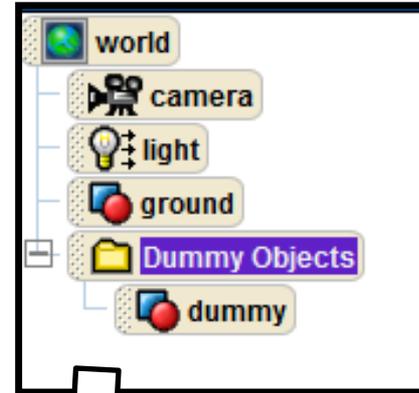
Save it! After you have saved the file go into the "Layout" mode by clicking on the green button **Add Objects**.

ADD
OBJECTS

1) Click **more controls** →
drop a dummy at camera.

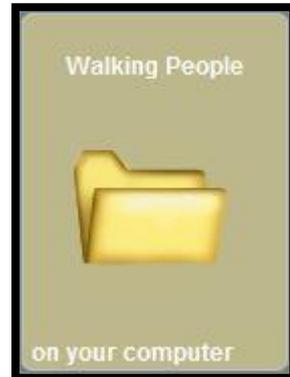
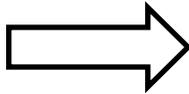


2) In the **object tree**, right click on
'**Dummy Objects**'. Rename the folder to
'**cameraViews**'.



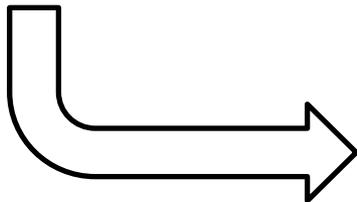
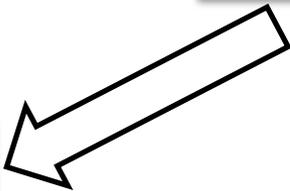
3) Open the new **cameraViews** folder.
Right click on '**dummy**' & Rename the
dummy to '**originalView**'.

Section 1b: Adding Objects



In the gallery below, click on the **People** folder and open the **Walking People** folder.

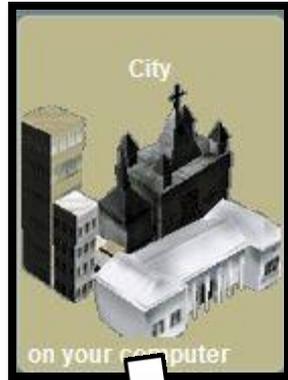
Add **Rockette** to your world! If you look at **Rockette**'s methods tab, you should see that she already knows how to walk! We will use this later!



Place the **Rockette** in the world so it looks like this!

Section 1b: Adding Objects (cont..)

Local Gallery (English)



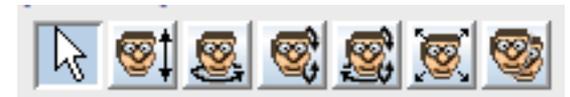
Click on **Local Gallery**.
Open the **City** folder. Add
a **Road** to the world.



Right click on **Road** in the object tree.
Resize the **Road** to be 3 times bigger:
Methods → Resize → other → 3

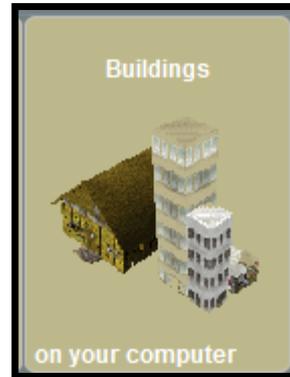
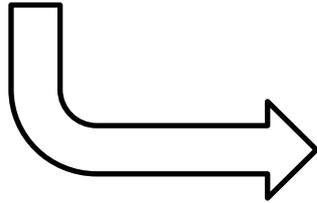


Once you resize the **Road**, use the
buttons in the upper right-hand corner to
position the scene
like this.



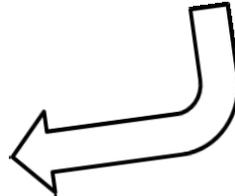
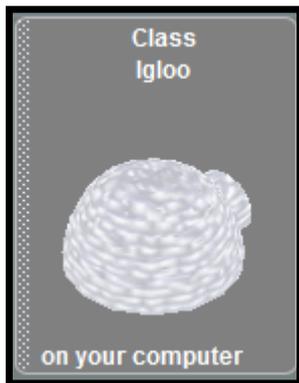
Section 1b: Adding Objects (cont..)

Local Gallery (English)

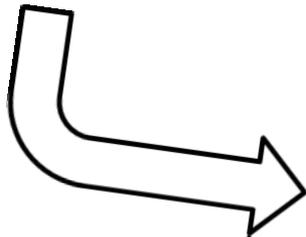


Click on **Local Gallery**.
Open the **Buildings** folder.

Add an **Igloo** to the world.

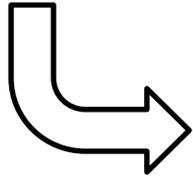


Use the buttons in the upper right-hand corner to position the scene like this.



Section 1b: Adding Objects (cont..)

Local Gallery (English)



Click on **Local Gallery**. Open the **Holidays** folder. Open the **Christmas** folder.

Add a **ChristmasTree** to the world.

Use the buttons in the upper right-hand corner to position the scene like this.



Section 1c: Adding Dummy Cameras

We want to drop 3 additional dummy cameras around the **Rockette**:

- 1) rightSideView
- 2) frontView
- 3) leftSideView

Screen shots of the camera views that you need to have are on the next slide

Method 1: Using the camera buttons

- You will need to **use the middle set of buttons** for most of the camera movement.
- The leftmost set of buttons will also be useful.
- You will not need to use the rightmost set of buttons.



Method 2: Using Alice built-in methods
(Right click on camera in object tree)

- 1) camera **set point of view to** rockette
- 2) camera **move** (right, forward, or left) 5 meters
- 3) camera **turn to face** rockette
- 4) camera **move** up ½ meter

Once you get the camera in the proper position, **drop a dummy camera**, and **rename** it appropriately & repeat for the other views.

Section 1c: Adding Dummy Cameras (cont...)

originalView



rightSideView



You should now have these 4 camera views setup!



frontView



leftSideView

Click **DONE** when you are finished.



Section 2: Writing the Code!

At the same time that the **Rockette** is walking down the road, we want to change the camera's point of view to the **leftSideView**, **frontView**, **rightSideView**, and then **Rockette**'s point of view, a default camera view.

DO TOGETHER

rockette walk

DO IN ORDER

camera set POV to leftSideView

camera set POV to frontView

camera set POV to rightSideView

camera set POV to rockette.head

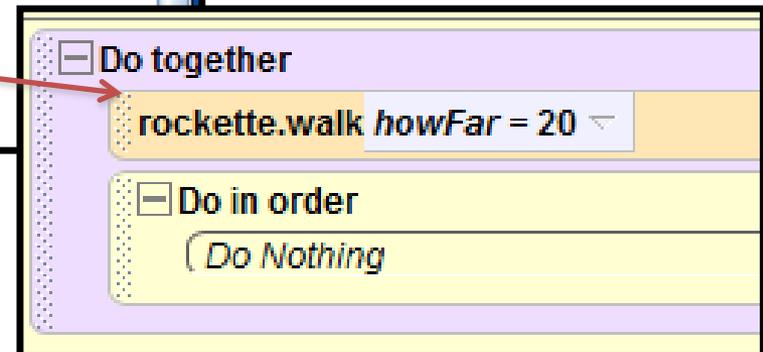
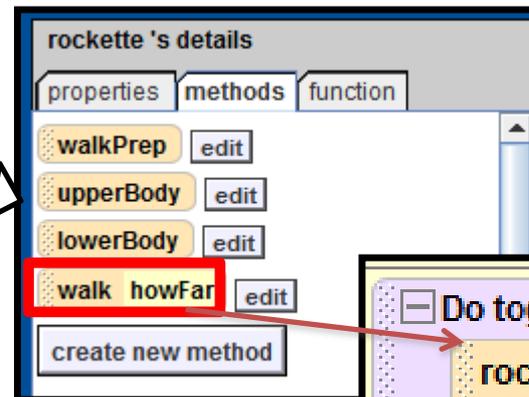
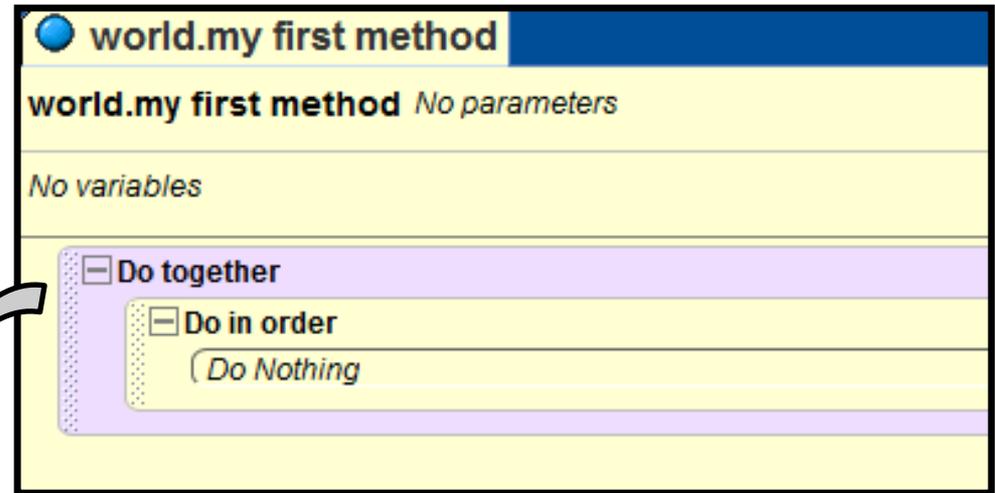
I'll show you exactly how to write this code in the next few slides!

Section 2: Writing the Code! (cont...)

In world.my first method,
Drag in a **Do together** and
then drag in a **Do in order**
inside of the **Do together**

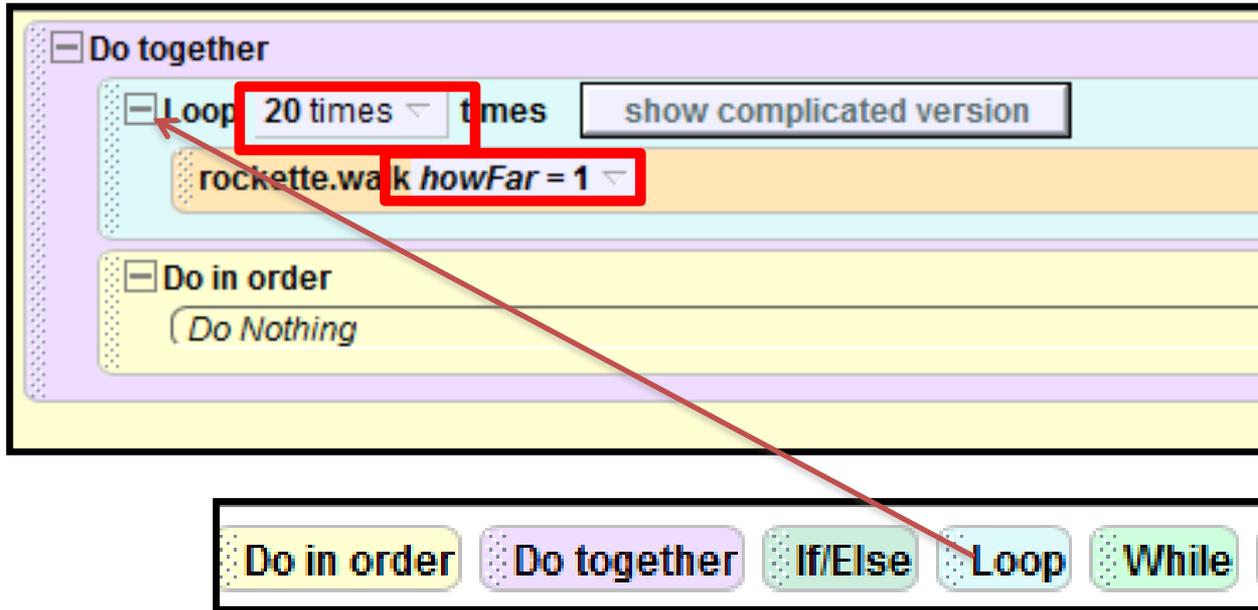
Next, we will make the
rockette walk! Click on
rockette in the object tree.
Drag and drop the **walk**
method into the **Do together**,
and above the **Do in order**.
Select for the **rockette** to
move **20 meters**.

Play the world to see what
happens!



Section 2: Writing the Code! (cont...)

The **rockette** moves really fast because she needs to cover 20 meters in one second! To fix this, we will make a **loop** that runs **20 times**. Each time the loop runs, the **rockette** will walk 1 meter, in 1 second. Try this:



The image shows a Scratch code editor interface. A purple 'Do together' block is selected, containing a light blue 'Loop' block. The 'Loop' block is set to '20 times' and contains a 'show complicated version' button and a 'rockette.walk howFar = 1' block. A red box highlights the '20 times' dropdown menu, and another red box highlights the 'howFar = 1' dropdown menu. A red arrow points from the 'Loop' block to the 'Loop' block in the 'Do in order' block below it. At the bottom, a toolbar shows 'Do in order', 'Do together', 'If/Else', 'Loop', and 'While' blocks.

Make sure you change the distance that rockette walks to be 1 meter!

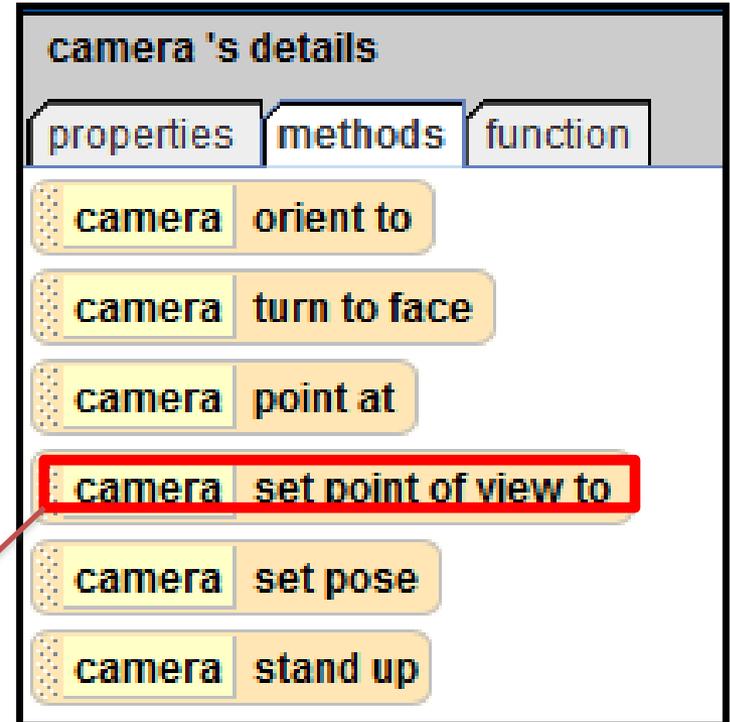
Play the world to see what happens now!



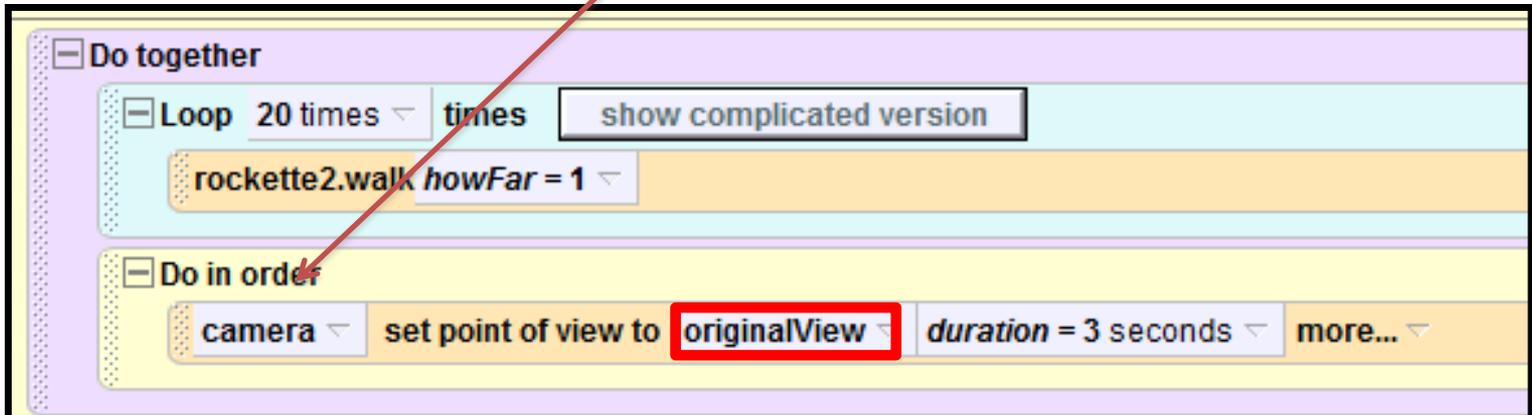
Section 2: Writing the Code! (cont...)

Alright! Now that we have the **rockette** walking, we can worry about how to move the camera around her as she walks!

Click on **camera** in the object tree. Go to the **methods** tab, and click and drag camera **set point of view** → **originalView**. Place this in the **Do in order**



Change the duration to 3 seconds!



Section 2: Writing the Code! (cont...)

Do the same thing for the other views in the cameraViews folder that you created earlier!

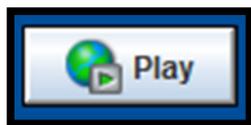
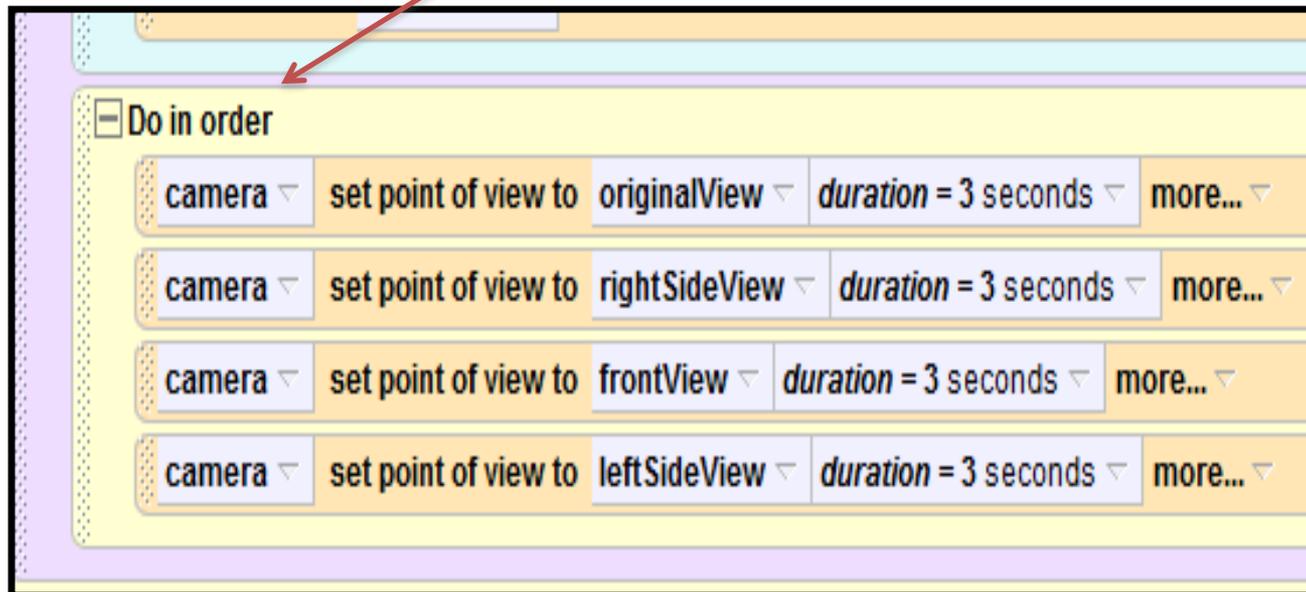
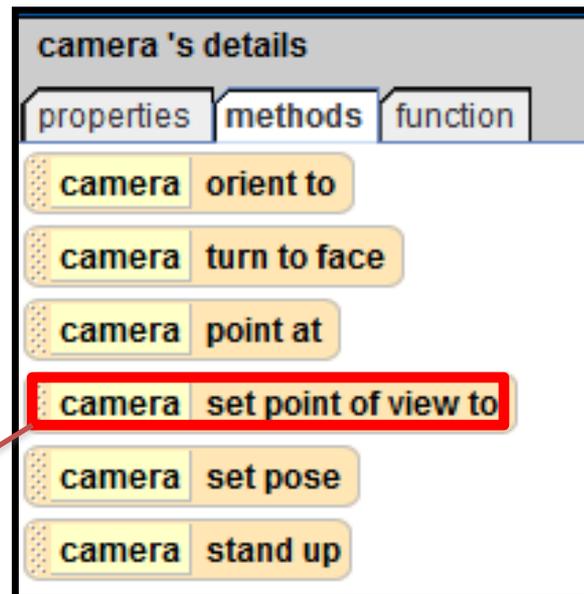
Click on **camera** in the object tree.
Go to the **methods** tab, and click and drag camera **set point of view to** to

- 1) rightSideView
- 2) frontView
- 3) leftSideView

Place these in the **Do in order**

Change the duration to 3 seconds!

Play the world to see what happens now!



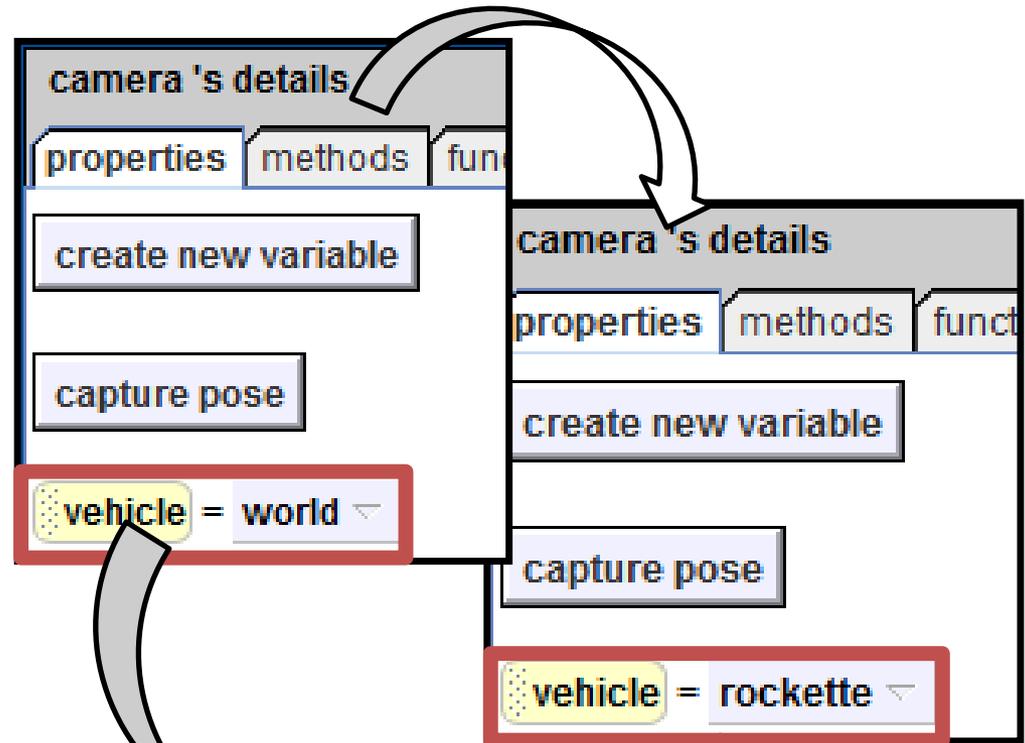
Section 2: Writing the Code! (cont..)

Oh no! The **rockette** walked right out of the camera's view! We need to figure out how to make the camera follow the **rockette**, no matter where she goes!

We will use the **vehicle property**! We must **set the vehicle** for each of the **camera views** to be the **rockette**. This will "glue" the **camera** to the **rockette**.

Click on **camera** in the object tree. Click on the properties tab. Change the **vehicle** to be the **entire rockette**.

Change the vehicle for each of the camera views (**originalView**, **rightSideView**, **frontView**, **leftSideView**) by clicking on each, one at a time, in the object tree. Select the properties tab. **Change Vehicle to the entire rockette.**



Play the word now to see what happens!



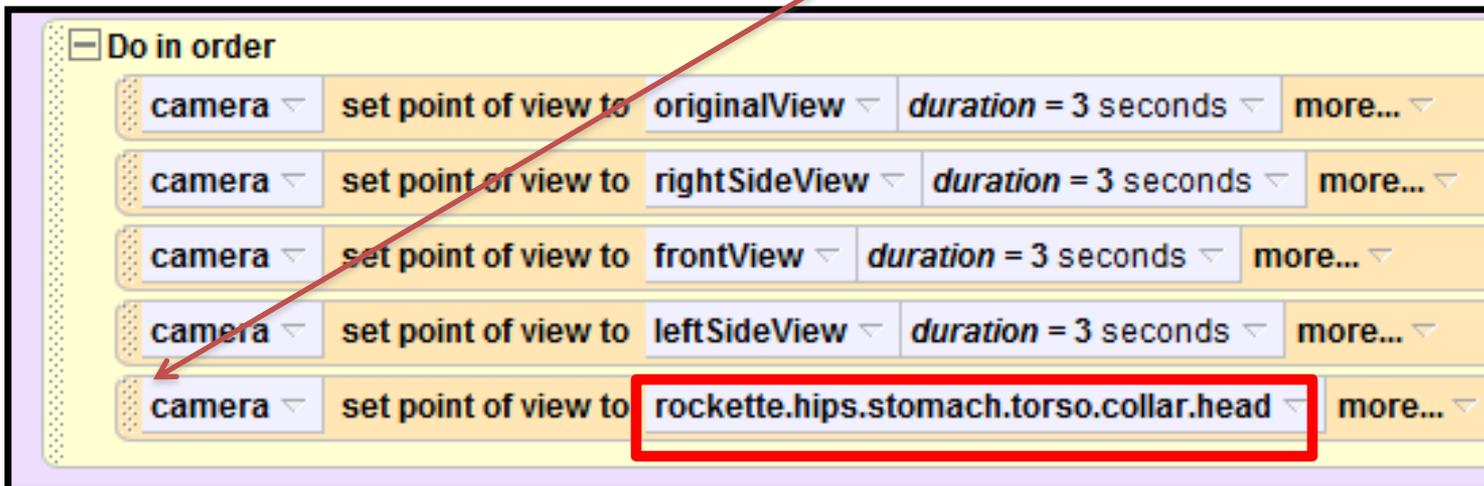
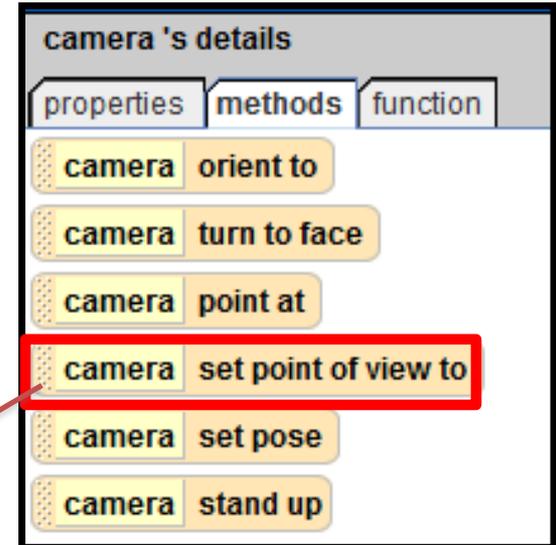
Section 2: Writing the Code! (cont...)

Let's add one more camera view! This one will be from the point of view of the **rockette**.

Click on **camera** in the object tree, go to the methods tab, and drag **set point of view to**

Rockette → hips → stomach → torso → collar → head → entire head

so that it is the last thing in the **Do in order** command.



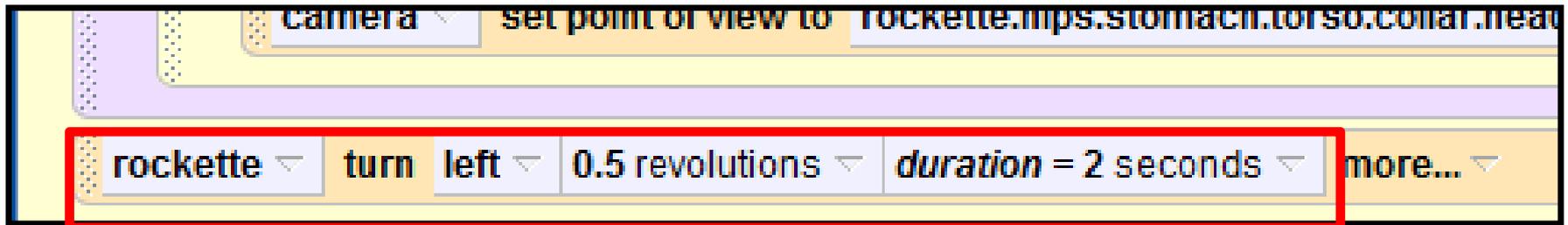
Section 2: Write the Code! (cont...)

The last thing we will do is turn the **rockette left $\frac{1}{2}$** revolution:

Click on **rockette** in the object tree.

Drag **turn** to the bottom of the method editor, outside of the do together.

Change the **duration to 2 seconds**.



Section 2: Write the Code! (cont...)

Here is the final code for world.myfirstmethod:

The image shows a Scratch code editor window titled "world.my first method". The code is as follows:

```
world.my first method No parameters  
No variables  
Do together  
  Loop 20 times times show complicated version  
    rockette.walk howFar = 1  
  Do in order  
    camera set point of view to originalView duration = 3 seconds more...  
    camera set point of view to rightSideView duration = 3 seconds more...  
    camera set point of view to frontView duration = 3 seconds more...  
    camera set point of view to leftSideView duration = 3 seconds more...  
    camera set point of view to rockette.hips.stomach.torso.collar.head more...  
rockette turn left 0.5 revolutions duration = 2 seconds more...
```

Section 3: Finishing up!

Play the world!



Now you should feel more comfortable with manipulating the camera to create interesting views!

Section 3: Finishing up!

NOTE:

We set up a camera view for the original scene view called “**originalView**,” but we later moved it with our character. However, if you would easily like to go back to that original scene in your animation, here is a simple solution:

- Set the camera’s POV to **originalView**, in place
- Drop a dummy camera & rename it **backView**
- Set the vehicle of **backView** to the **rockette**
- Set the vehicle of the **originalView** to **world**
- Now you can move the **backView** with the **rockette**, instead of the **originalView**

You will essentially replace **originalView** with a dummy object called **backView** in the Do in order