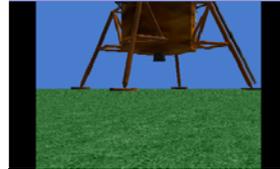


Compsci 94
(with some modifications)

Scene Changes 2.0



This is a modification of the Scene Change tutorial
written by Deborah Nelson in June 2009

By Chris Brown
Duke University
Under the direction of
Professor Susan Rodger
July 2012

1

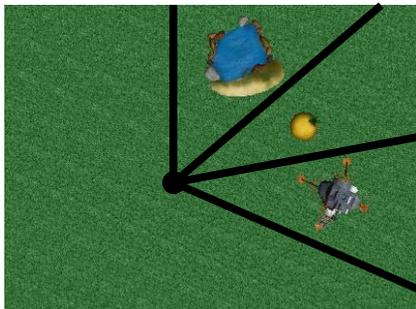
Scene Changes

- This tutorial will show you how to create different scenes in Alice. You will make the Alice world dark, then light again into a different scene with a different ground texture and new objects. You will also learn how to move a character between scenes and do different actions.

2

Scene Changes

- In the picture below, you can see how we will set up the 3 scenes. We will put in the three different environments, then rotate the camera from a fixed spot to move to each one while fading out and fading in the light. You can have anywhere up to 8 scenes in a world using this technique.



3

Load world

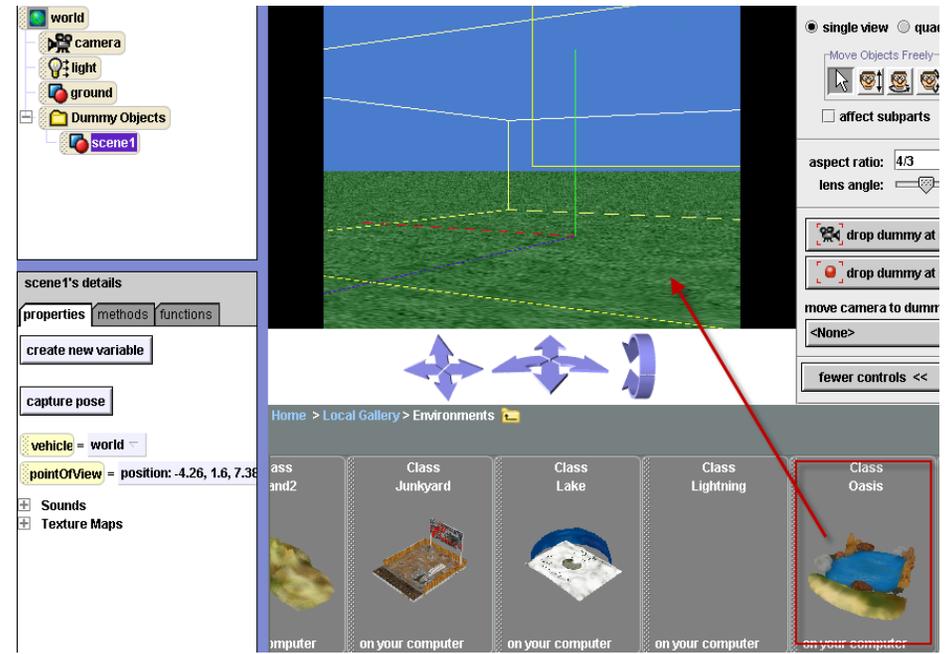
- Open a new world, with any template.
- Save it in a directory that you can find again.
- After you have opened the file go into the "Layout" mode by clicking on the green button **Add Objects** (toward the middle of screen).
- Overview: creating scene changes
 - Add objects.
 - Drop dummy objects at camera positions.
 - Write two methods for transition.

4

Part One: Set up

- Click **more controls**. Click **drop a dummy at the camera**.
- In the object tree, expand the Dummy Objects folder. Rename the dummy 'scene1' (by right clicking on it and selecting **rename**).
- Go to the **Environments** folder.
- Scroll over to **Oasis**. Drag **Oasis** into the scene.
- See the screenshot on the next slide for an illustration

5



6

Add a Character

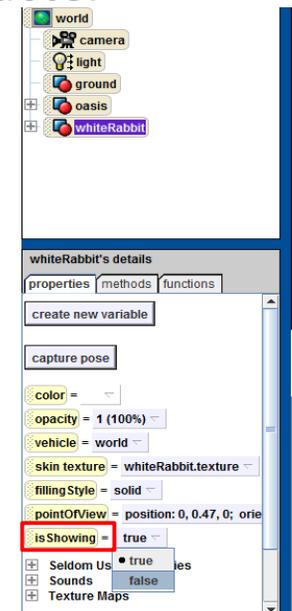
- While you are in scene 1, add a **WhiteRabbit** object from the **Animals** folder in the Local Gallery. Use the buttons in the top right corner to move the **WhiteRabbit** so that it is standing on the oasis and facing the camera as seen below.



7

Add a Character

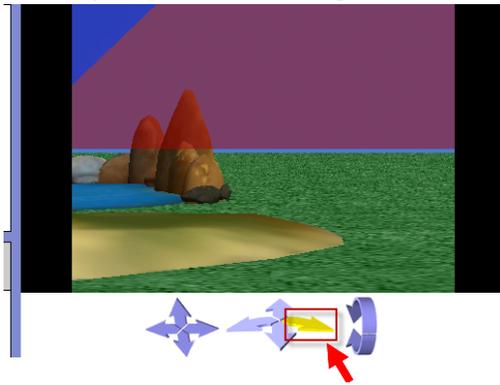
- Now, we want to set this object to be invisible. Click on **whiteRabbit** in the Object Tree and click on the **properties** tab. Find the **isShowing** property and set the value to **false**. This should make the **WhiteRabbit** disappear from the scene. The best way to move characters from scene to scene is to use invisible placeholder objects.



8

Set up Scene 2- move camera over

- Once the oasis is in your scene, use the camera position arrow to move the camera view, until you can no longer see the oasis.

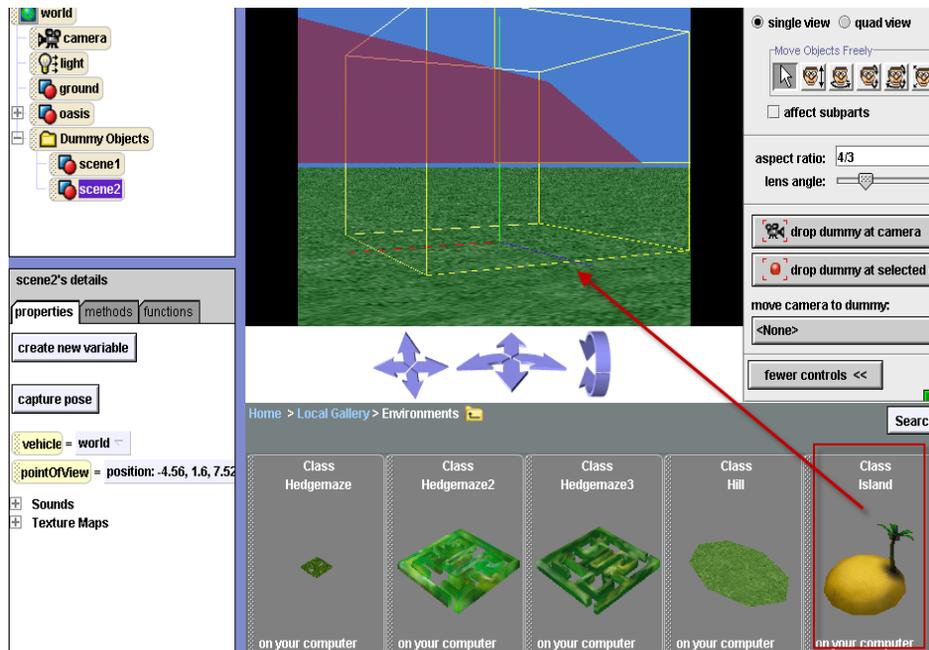


9

Drop dummy at camera

- When you can no longer see the oasis or the dummy object, drop a new dummy at the camera.
- In the object tree, rename this dummy 'scene2'.
- In the Environments folder, scroll over to **Island** Drag **Island** into the scene.
- See the screenshot on the next slide for an illustration.

10



11

What to do if you can't find your object

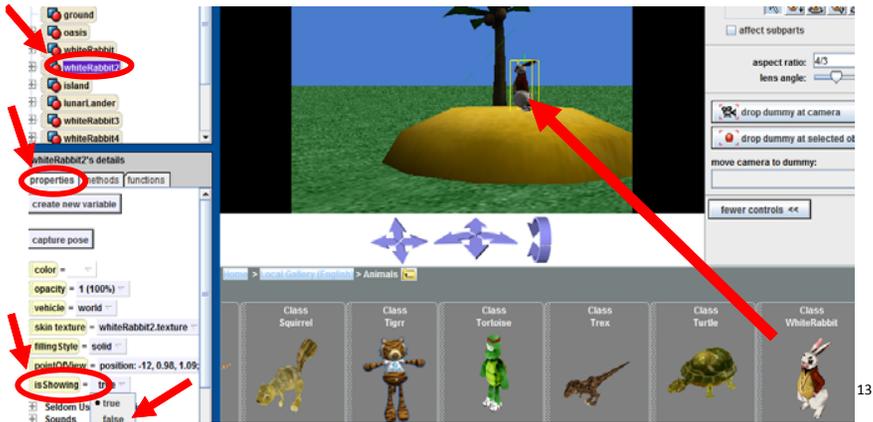
- Sometimes, when you drag an object into your world, it appears at the origin of the world, which is not in your new scene.
- Scroll down to that object - in this case **island** -in object tree.
- Right click** on island and select **methods, move to, camera**.
- Now, drag your island into your scene. If that doesn't work, **right click** on it in the object tree again and select **methods, orient to, camera**.
- Right click** on it in the object tree again and select **methods, move, forward, 5 meters**.

Once you have one object in your scene, you can use that as the reference to move all of the other objects into your scene.

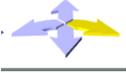
12

Add a Character

- After the island is in view, import another **WhiteRabbit** object and position so that it is facing the palm tree.
- Click on **whiteRabbit2** in the **Object Tree** and set its **isShowing** property to **false**. The “orient to” method will turn the character to face the same direction as the invisible **whiteRabbit2**.



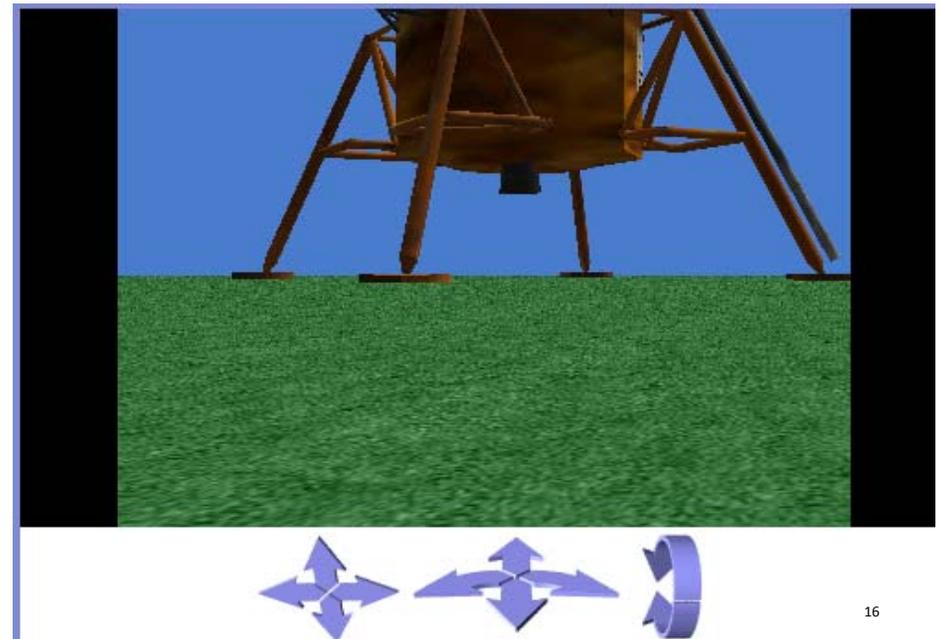
Set up scene 3

- Move the camera over (to the right) until you can no longer see the island. 
- Drop a dummy at the camera.
- In the object tree, rename it “scene3”.
- Go to the **Space** Folder.

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- Drag **lunarLander** into the scene.
- Before you release the mouse to drop it into the scene, hold down the shift key on your keyboard. Continue to drag the object.
- If you're on a PC, you will see the yellow bound box move up because shift makes your object move up as you drag it in.
- See the screenshot in the next slide for a illustration of where my lunarLander is positioned.

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Add a Character

- Import another **WhiteRabbit** into scene 3 in front of the Lunar Lander and set its **isShowing** property to **false**. You should have a total of 3 whiteRabbits, one in each scene. Now go back to scene 1 and add in another **WhiteRabbit** character, but let this one stay visible.



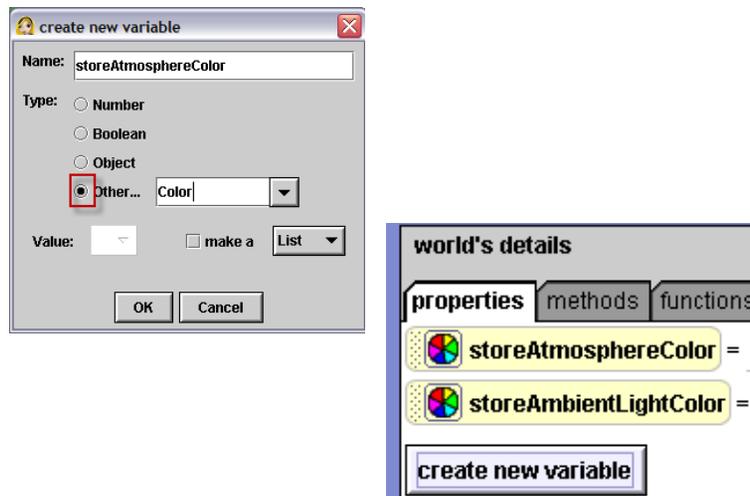
17

Part Two: Writing methods

- Click on the **Done** button to go back to the method editor.
- In the world detail pane, click the properties create new variables.
- Name it '**storeAtmosphereColor**'.
- Select type Other and select Color.
- Make another color variable and name it '**storeAmbientLightColor**'.
- See the screenshot on the next slide for an illustration

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The color property variables



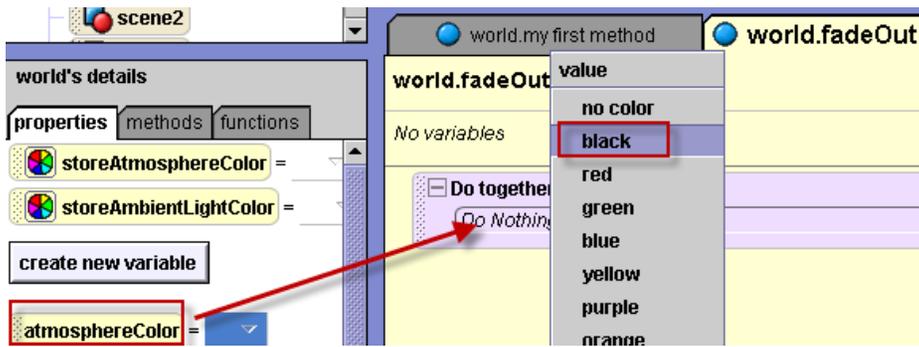
19

Write fadeOut method

- Create a new method named 'fadeOut'.
- Drag in a Do together from the bottom of the window.
- Click on the **properties** tab in the world details pane.
- Drag atmosphereColor into the fadeOut method. Set value to black. Note, this is not the variable we created.
- See the screenshot on the next slide for an illustration.

20

world.fadeOut



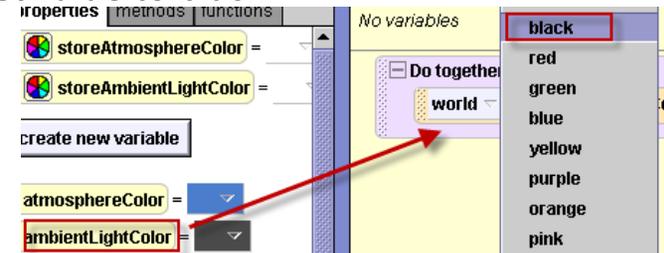
- Resulting code:



21

world.fadeOut

- Drag ambientLightColor into the do together. Set value to black.



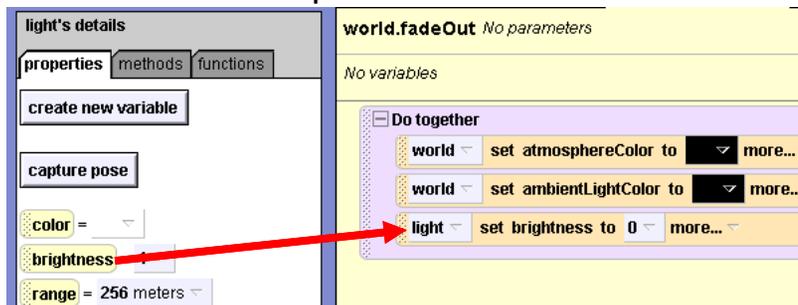
- Resulting Code:



22

world.fadeOut

- Click on the **light** in the object tree. From the properties tab, drag **brightness** into the fadeOut method. Select Other and set value to 0.
- Here is the complete method:



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world.fadeOut

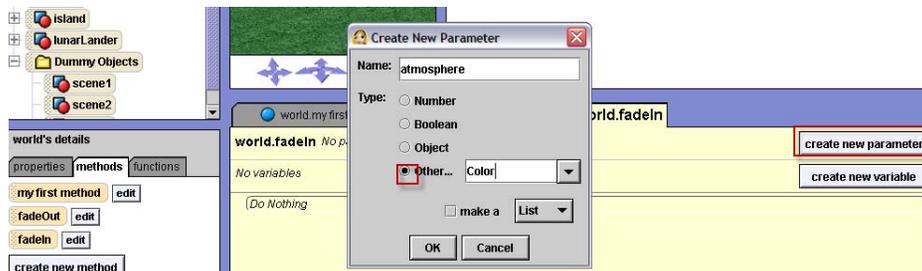
- To test the fadeOut method, in the events panel, change the 'myfirstmethod' to fadeOut.
- Play your world.
- The screen should fade to be completely black.



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Write fadeIn method

- Click on the methods tab in the **world** details pane. Create new method. Name it 'fadeIn'.
- Click create new parameter in the method. Name it 'atmosphere'. Select type color.



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world.fadeIn

- Drag in a Do together.
- Then, click on the properties tab in the world details pane.
- Drag "atmosphereColor" into the fadeIn method. Set value to expressions, select the parameter, atmosphere.
- Resulting code:



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world.fadeIn

- Drag "ambientLightColor" into the fadeIn method. Set value to **expressions**, select "storeAmbientLightColor"
- Click on **light** in the object tree
- In the properties tab, drag "brightness" into the method. Set value to 1.
- Resulting code:



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Write scene one method

- Click on **world** in the object tree and click on the methods tab. Create a new method: name it 'scene1'.
- In the beginning of this method, drag in a Do together. Then, go to **whiteRabbit4**'s methods and drag "whiteRabbit4 move to- whiteRabbit" and "whiteRabbit orient to- whiteRabbit" into the Do together. This puts the visible white rabbit into the same position as the invisible placeholder and then turns it to face the same direction.



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Write scene one method

- Outside of the Do together statement, drag in a “whiteRabbit4 say- ” and enter the string “Put everything you want to happen in scene 1 in this method.” Below is the entire code for scene1.

world.my first method world.fadeOut world.fadeIn world.scene1

world.scene1 No parameters

No variables

Do together

- whiteRabbit4 move to whiteRabbit more...
- whiteRabbit4 orient to whiteRabbit more...
- whiteRabbit4 say Put everything you want to happen in scene 1 in this method. more...

29

Write scene two method

- Create a new world method: name it ‘scene2’.
- We want to do the same thing in scene 2, except we want **whiteRabbit4** to move to **whiteRabbit2**. You can copy the instructions from scene1 by dragging them to the clipboard in the top right corner, then drag them from the clipboard into scene2.

Events create new event

When the world starts, do world.fadeOut

Events run methods when certain things happen (like when the mouse is clicked on an Object or when a certain key is pressed)

world.my first method world.fadeOut world.fadeIn world.scene1 world.scene2 world.scene3

world.scene1 No parameters

create new parameter

variables

create new variable

Do together

- whiteRabbit4 move to whiteRabbit more...
- whiteRabbit4 orient to whiteRabbit more...
- whiteRabbit4 say Put everything you want to happen in scene 1 in this method. more...

30

Write scene two method

- After pasting the code into the scene2 method, you will need to change all of the occurrences of **whiteRabbit** to **whiteRabbit2** and change whiteRabbit4’s quote.

world.my first method world.fadeOut world.fadeIn world.scene1 world.scene2

world.scene2 No parameters

No variables

Do together

- whiteRabbit4 move to whiteRabbit2 more...
- whiteRabbit4 orient to whiteRabbit2 more...
- whiteRabbit4 say Put everything you want to happen in scene 2 in this method. more...

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Write scene three method

- Create new world method: name it ‘scene3’.
- Repeat the steps for creating scene2 except we want to refer to **whiteRabbit3** this time.

world.my first method world.fadeOut world.fadeIn world.scene1 world.scene2 world.scene3

world.scene3 No parameters

No variables

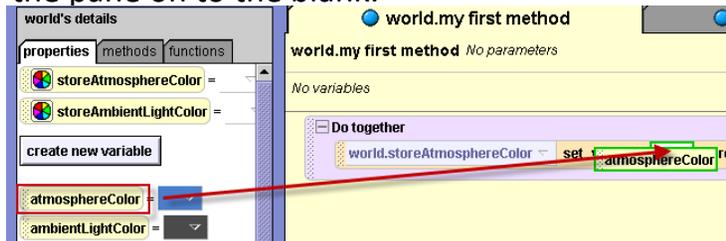
Do together

- whiteRabbit4 move to whiteRabbit3 more...
- whiteRabbit4 orient to whiteRabbit3 more...
- whiteRabbit4 say Put everything you want to happen in scene 3 in this method. more...

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In world.my first method: Store the initial properties

- Click on the world.my first method tab.
- Drag in a Do together.
- Drag the color property variable we created, “storeAtmosphereColor” into the do together
- Set value to **no color**. Drag atmosphereColor from the pane on to the blank.



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Store the initial properties

- Drag the color variable we created, “storeAmbientLightColor” into the Do together and set value to **no color** for now.
- Drag “ambientLightColor” from the pane over the no color value.
- Resulting code:



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Scene change: Camera

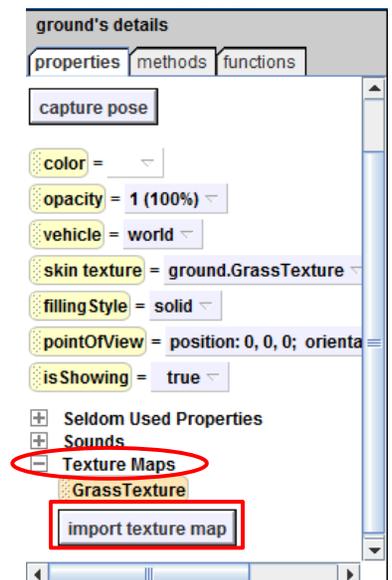
- Click on the **camera** in the object tree.
- Drag the camera “set point of view to” method into the Do together. Select Dummy Objects, select scene1.



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Changing the Ground

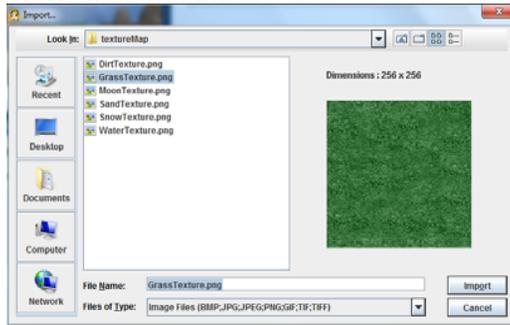
- Click on **ground** in the object tree.
- Go to ground’s properties.
- Under properties, go to the last property and select **Texture Maps**. Click on the “import texture map” button.



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Changing the Ground

- After clicking on the button to import texture maps, a window should pop up with all of the different ground textures in Alice.



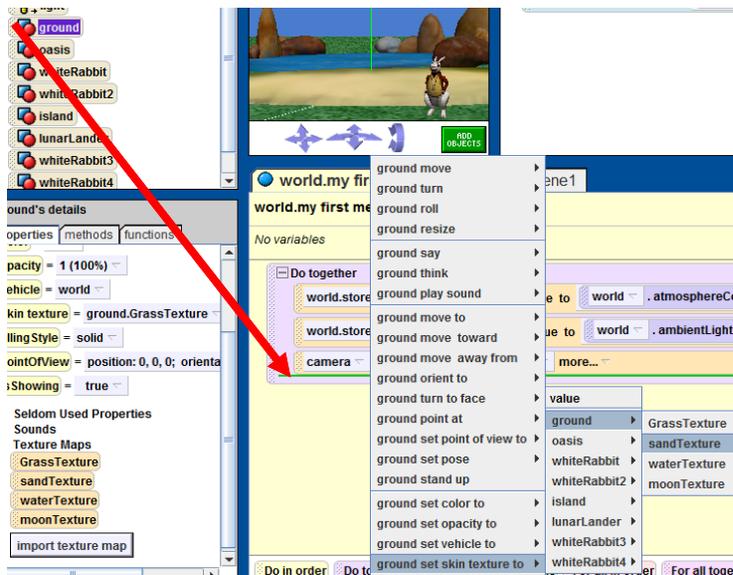
- For this world, you will need to import **SandTexture**, **WaterTexture**, and **MoonTexture**.

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Changing the Ground

- Drag the **ground** item from the Object Tree and drop it into the Do together after changing the point of view of the camera. Select “ground set skin texture to” → “ground” → “sandTexture”. This is a method that will change the ground texture from grass to sand at this point in the code. See the next slide for a screenshot of these instructions.

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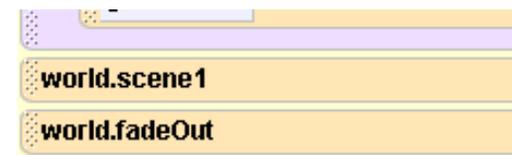


- Resulting code:



39

- Click on the **methods** tab in the world details pane
- Drag the scene1 method into world.my first method, *underneath* the do together
- Then drag in the fadeOut method



- To play you world, remember to change the event back to **world.my first method**. You should see your scene 1 method and then camera will fade out.



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Animation for Scene 2

- Drag in a new do together from the bottom of the window.
- In the do together:
 - Set the **camera** point of view to (dummy object) scene2.
 - Set the **ground** skin texture to waterTexture.



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Animation for Scene 2

- Underneath the do together, drag in the fadeIn method. For the parameter, select **expressions**, select the variable “storeAtmosphereColor”.
- Then drag in the scene2 method.

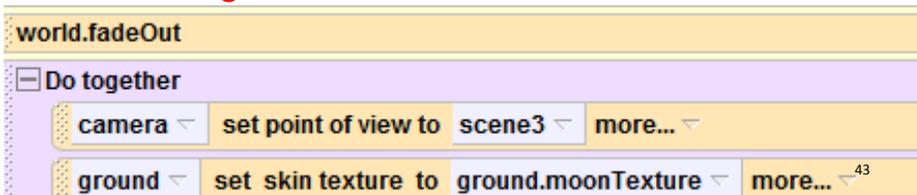


- Play your world and you should see your scene 1 code, the camera fade to black, and then the camera fade back in to your scene 2 method.

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Animation for Scene 3

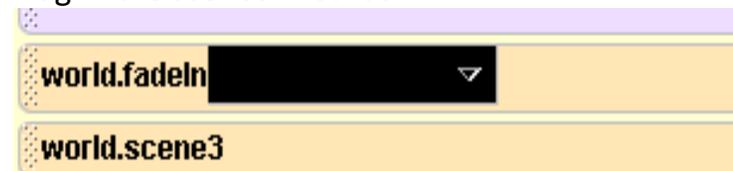
- Drag in the fadeOut method underneath the Do together.
- Drag in a new Do together from the bottom of the window.
- In the do together:
 - Set the **camera** point of view to (dummy object) scene3.
 - Set the **ground** skin texture to MoonTexture.



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Animation for Scene 3

- Underneath the Do together, drag in the fadeIn method.
- For the parameter, select black (because the atmosphere is black in space).
- Drag in the scene3 method.



- Play your world and you will see all three scenes with the camera fading out and in for each one. The entire code for world.my first method can be seen on the next slide.

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```
[-] Do together
  world.storeAtmosphereColor ▾ set value to world ▾ .atmosphereColor ▾ more... ▾
  world.storeAmbientLightColor ▾ set value to world ▾ .ambientLightColor ▾ more... ▾
  camera ▾ set point of view to scene1 ▾ more... ▾
  ground ▾ set skin texture to ground.sandTexture ▾ more... ▾
world.scene1
world.fadeOut
[-] Do together
  camera ▾ set point of view to scene2 ▾ more... ▾
  ground ▾ set skin texture to ground.waterTexture ▾ more... ▾
world.fadeIn atmosphere = world.storeAtmosphereColor ▾
world.scene2
world.fadeOut
[-] Do together
  camera ▾ set point of view to scene3 ▾ more... ▾
  ground ▾ set skin texture to ground.moonTexture ▾ more... ▾
world.fadeIn ▾
world.scene3
```

Recap

- A fadeOut and fadeIn method are used for transitions.
- The camera position and ground texture are set for each scene.
- To simplify world.myFirstMethod, a separate method is written for each scene.