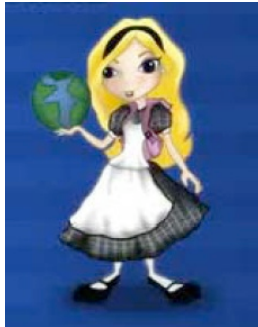


The Essentials of Alice



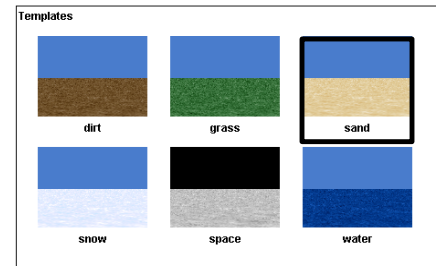
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under the direction of
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Duke University
May 2009

*This tutorial will teach you how to create a short animation in an Alice world.
Follow the steps and use the pictures to help find things on your screen.*

Step 1: Choosing a Background

When you open Alice, the first thing you must do is choose a background for your animation. You have six choices. Select the **templates** tab to see the background choices.

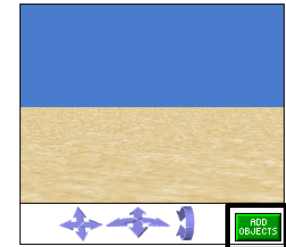
For this tutorial, choose the **sand** background, and then click **Open**.



Step 2: Adding an Object

Next, add an **object**. The **object** will be the main character in your Alice animation.

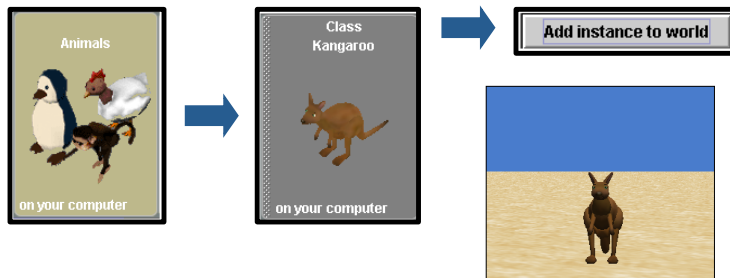
Click on the green **Add Objects** button under your viewing screen.



Step 2 (continued): Adding an Object

At the bottom of your screen, a library of objects will appear.

Click on **Animals**, and then scroll to the right and click on **Class Kangaroo**, and then click **Add Instance to World**.



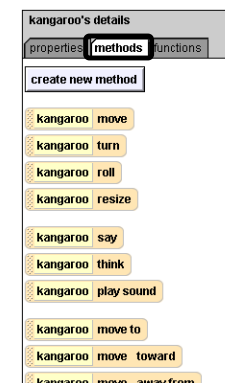
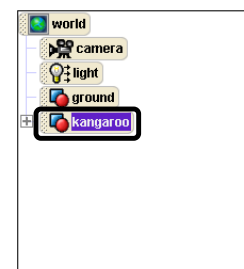
Click the green **Done** button to the right to exit the object-adding screen.



A kangaroo will appear in your viewing screen. Your Alice world now contains a kangaroo!

Step 3: Finding the methods

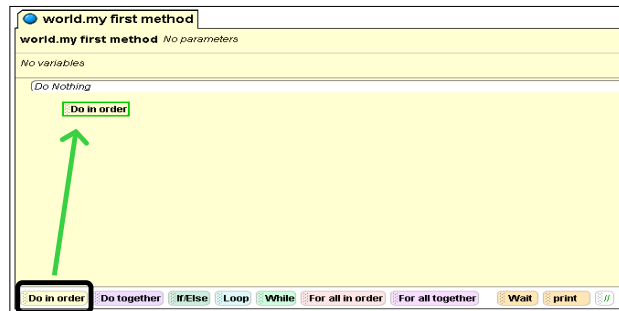
To control the kangaroo's actions, we must use commands called **methods**.



To find a list of methods the kangaroo can do, click on the word **kangaroo** in the **object tree**, which is the list of objects in your world at the top left of the screen. Below the object tree, click on the **methods** tab to see a list of methods.

Step 4: Adding Methods

This is called the **method editor**, and this is where we will put a list of the methods that we want our kangaroo to carry out.

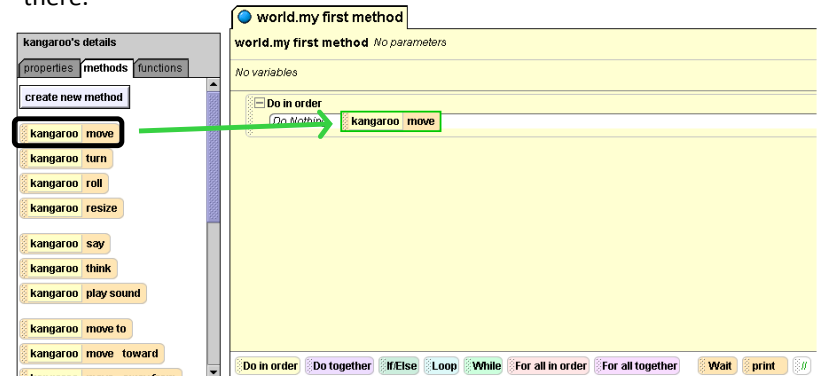


Find the **Do in order** button at the bottom of the method editor, and drag and drop it into the method editor. Now, when we drag and drop methods inside this **Do in order**, they will be carried out one by one, in the order that they are listed.

Step 4 (continued): Adding Methods

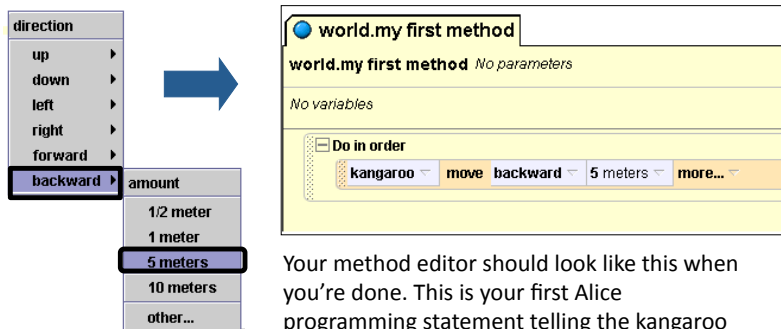
Let's make the kangaroo move backwards and then forwards again.

Find the **move** method in the kangaroo's list of methods, click on it, and drag it over to the **Do in order**. Release your mouse button to drop it there.



Step 5: Method Specifics

When you drop the **move** method, you will see a gray drop down menu appear. Slide your mouse to **backwards** for direction. Then a list of **amounts** will appear; click on **5 meters**.

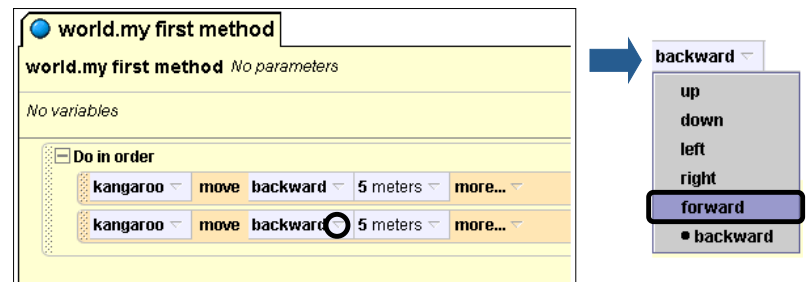


Your method editor should look like this when you're done. This is your first Alice programming statement telling the kangaroo to move backwards, using the **move** method.

Step 6: Finishing the Method

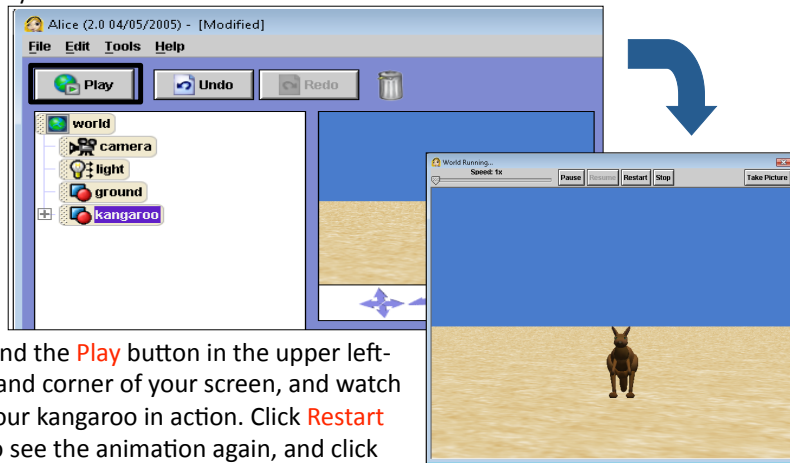
Let's make the kangaroo move forward to its original position.

Right click on the word **move** in the statement you placed in the editor and click **make copy**. Now you have the same statement twice. On the lower **move** statement, click on the small down arrow next to the word **backward**. A list of directions will drop down. Click on **forward** to change the direction of the second statement to forward.



Step 7: Playing Your World

Now you can play your world, and your kangaroo will carry out the program in your method editor.

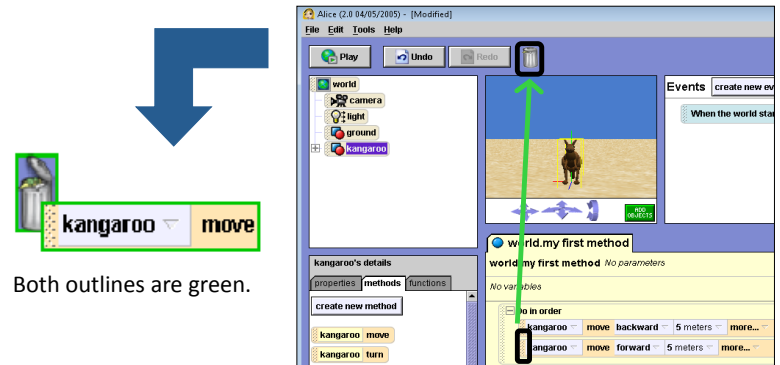


Find the **Play** button in the upper left-hand corner of your screen, and watch your kangaroo in action. Click **Restart** to see the animation again, and click **Stop** when you are done.

Step 8: Editing your program

What if you want to get rid of a statement from your method editor?

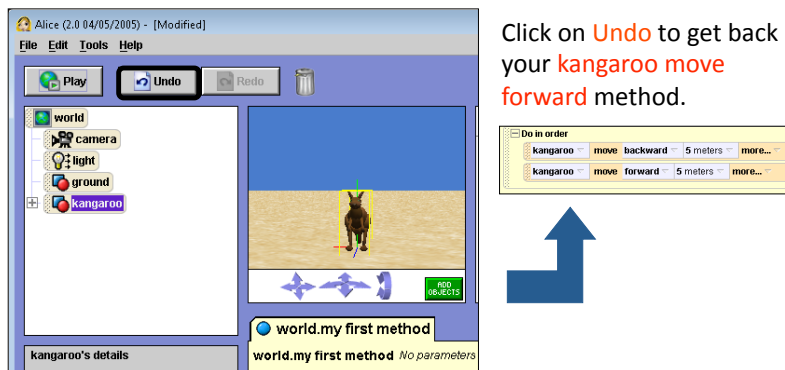
Click on the leftmost part of the statement and drag it up to the trash can in the upper left-hand corner. When the outlines around both the trash can and method are green, drop the method to delete it. Try this on the **kangaroo move forward** method.



Both outlines are green.

Step 8 (continued): Editing your program

Now how do you get your method back if you decide you want it after all? By clicking on the **Undo** button in the upper left hand corner of the screen. You can use this button to undo any mistakes you make in Alice. It is very important, and will save you from a lot of frustration.

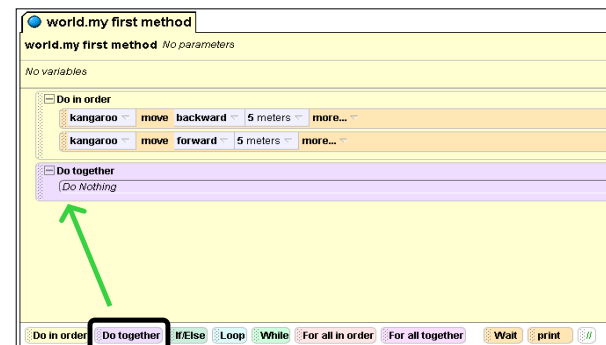


Click on **Undo** to get back your **kangaroo move forward** method.

Step 9: Doing two methods at once

You can also make your kangaroo carry out more than one method at once, by using **Do together**. Let's make the kangaroo turn its tail and say "Crikey!" at the same time.

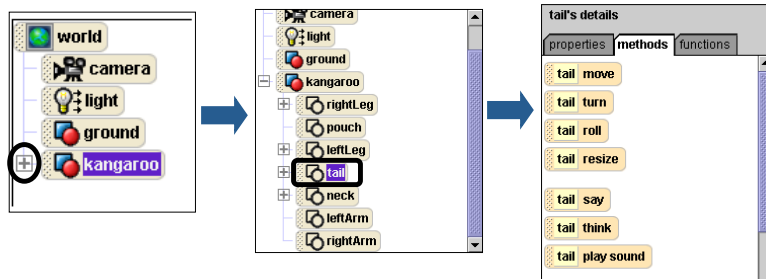
Find the **Do together** button at the bottom of your method editor and drag and drop it under your **Do in order**.



Step 10: Moving a Specific Part

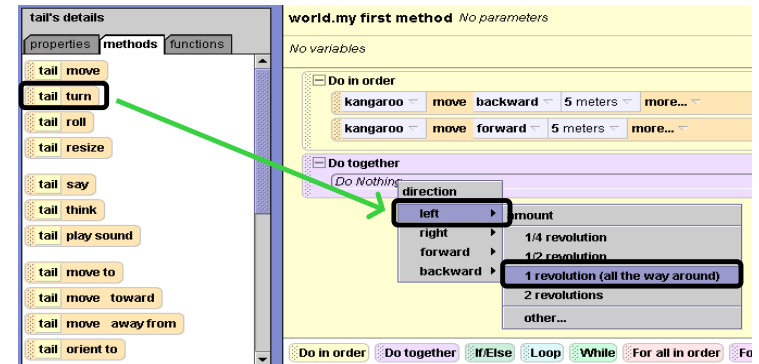
We want to move only the tail so we need to find that specific part.

Click the **plus sign** to the left of kangaroo in the object tree. A list of the kangaroo's parts will appear. Click on **tail**, and a list of the **tail's** methods will appear below the object tree.

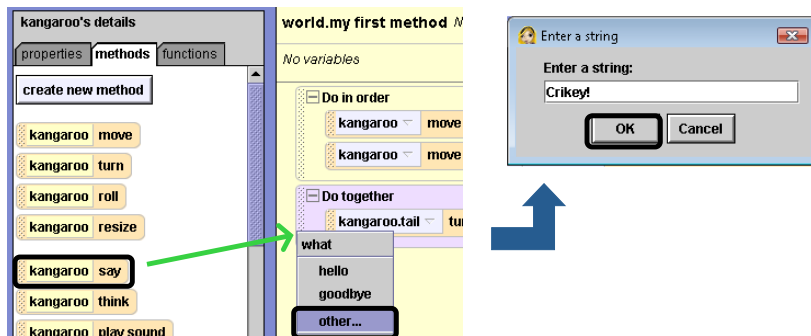


Step 10 (continued): Moving a Specific Part

To make the tail turn, drag and drop the tail's **turn** method into the **Do together**. On the drop down menu of directions, choose **left**, and then for the amount, choose **1 revolution (all the way around)**. Try playing your world to see what it looks like.



Step 11: Talking



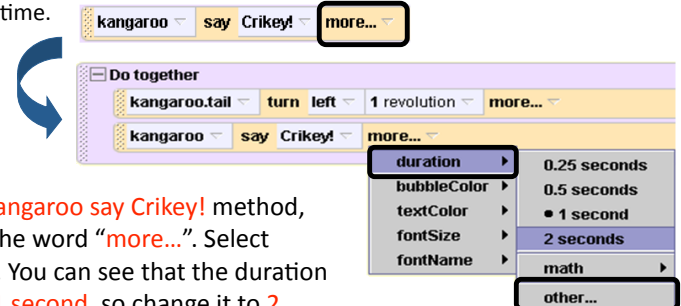
Click on the **kangaroo** in the object tree to display the **kangaroo's** methods again. To make the **kangaroo** talk, click on the **say** method and drop it into the **Do together** under the **turn** method. On the drop down menu that appears, click on **"other..."** and then type in **"Crikey!"**. Then click **OK**.

Step 12: Adjusting the Timing



Play your world to see how it looks so far.

It seems that the kangaroo says "Crikey!" a little too quickly. To make the speech bubble stay on the screen longer, we can adjust the length of the method's time.



On the **kangaroo say Crikey!** method, click on the word **"more..."**. Select **duration**. You can see that the duration is set at **1 second**, so change it to **2 seconds**. Then play your world and see the difference in timing.

Step 13: Your Turn!

When you are finished, your program will look like this:

Do in order					
kangaroo	move	backward	5 meters	more...	
kangaroo	move	forward	5 meters	more...	

Do together					
kangaroo.tail	turn	left	1 revolution	more...	
kangaroo	say	Crikey!	duration = 2 seconds	more...	



These are only the very basics of what you can do with Alice. Try out your kangaroo's other methods, and see what you can make him do!