

# The Essentials of Alice



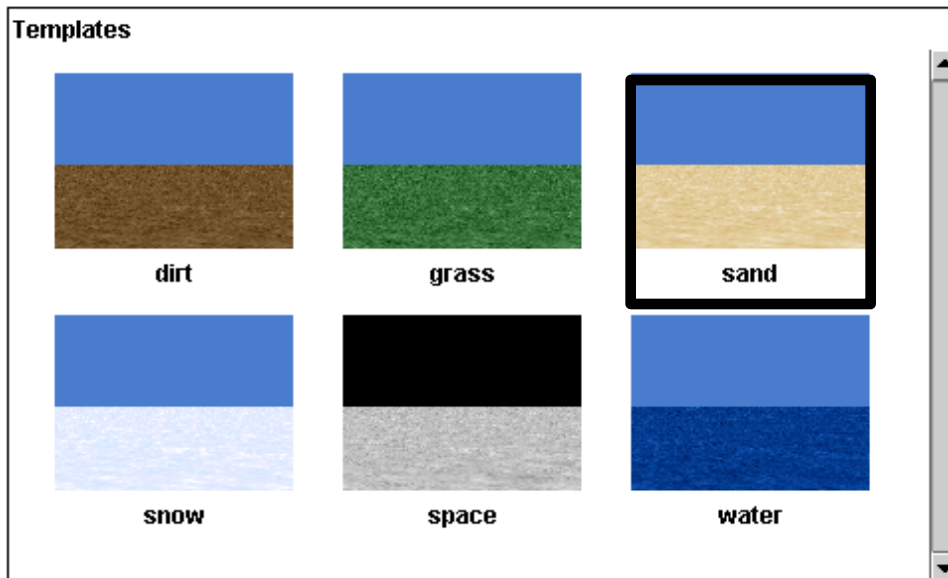
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*This tutorial will teach you how to create a short animation in an Alice world.  
Follow the steps and use the pictures to help find things on your screen.*

### 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.

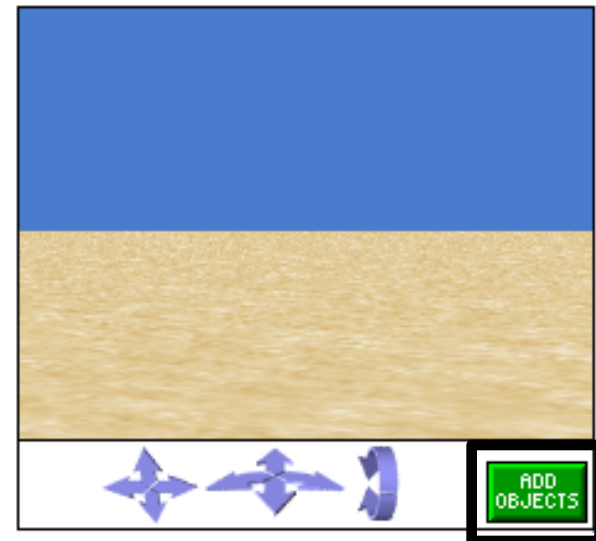
For this tutorial, choose the **sand** background, and then click **Open**.



### Step 2: Adding an Object

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

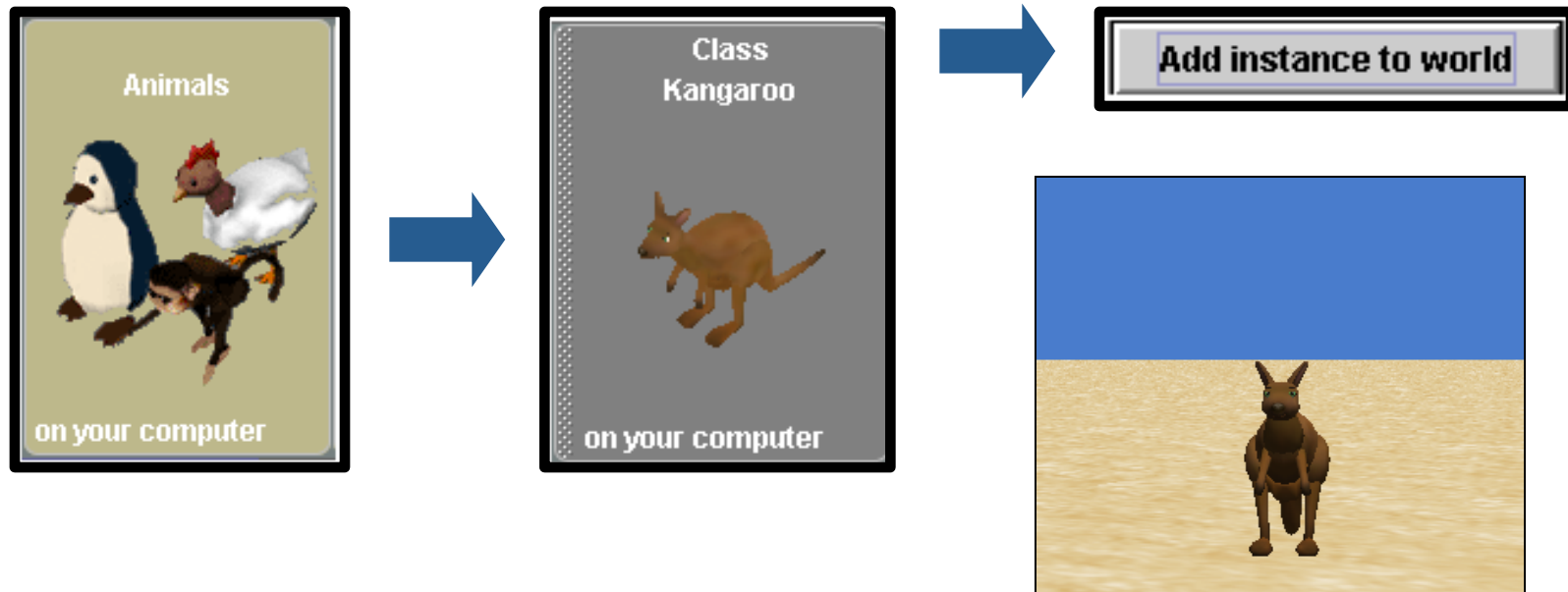
Click on the green **Add Objects** button under your viewing screen.



## 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



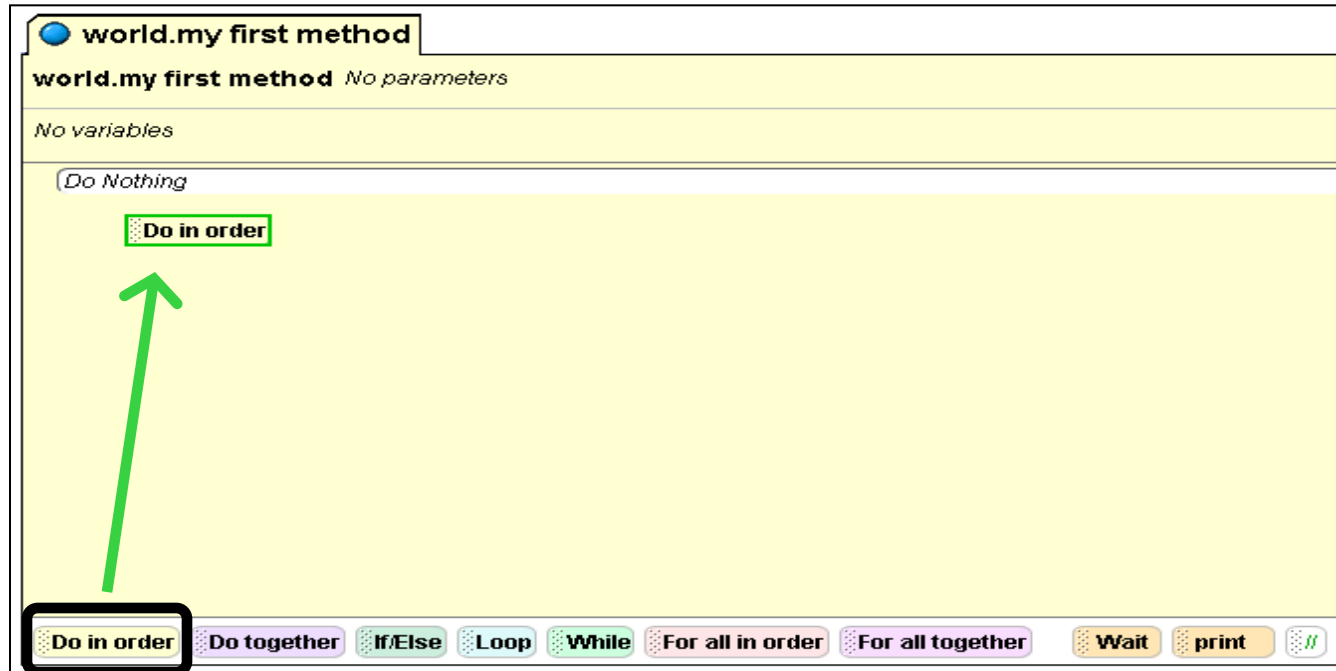
To control the kangaroo's actions, we must use commands called **methods**.



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

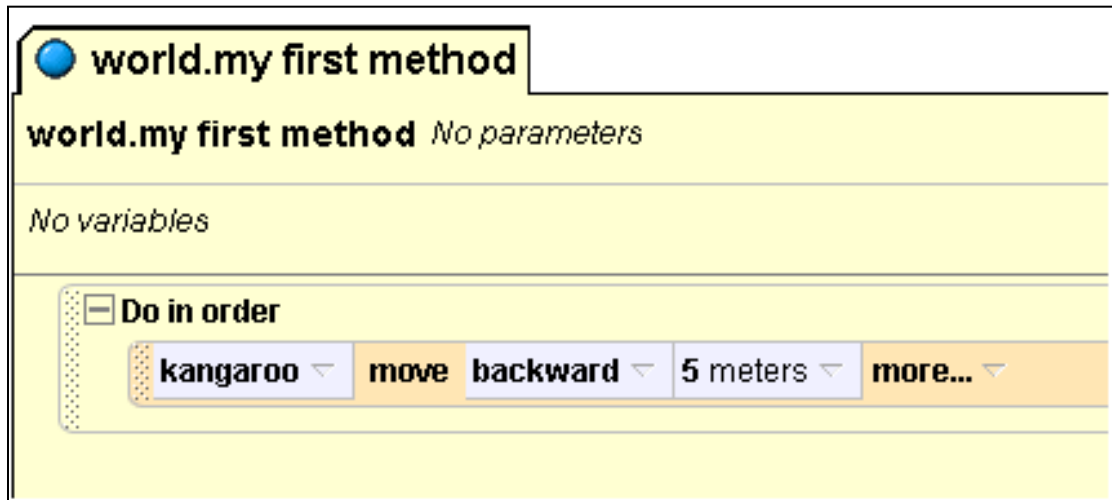
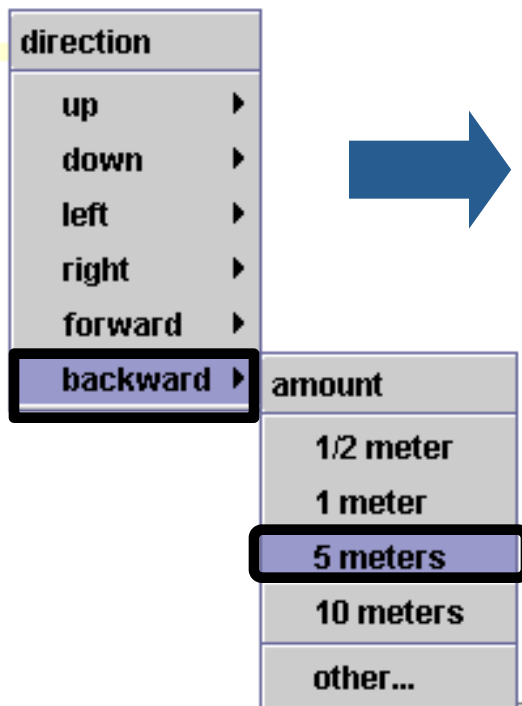
Let's make the kangaroo move backwards and then forwards again.

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.

The screenshot shows a programming environment with two main panels. On the left is a 'kangaroo's details' panel with tabs for 'properties', 'methods', and 'functions'. The 'methods' tab is active, showing a list of methods: 'kangaroo move', 'kangaroo turn', 'kangaroo roll', 'kangaroo resize', 'kangaroo say', 'kangaroo think', 'kangaroo play sound', 'kangaroo move to', 'kangaroo move toward', and 'kangaroo move away from'. The 'kangaroo move' method is highlighted with a black border. A green arrow points from this method to the 'Do in order' block in the script area on the right. The script area is titled 'world.my first method' and contains a 'Do in order' block with a 'Do Nothing' block inside it. The 'kangaroo move' method block is being dragged into the 'Do in order' block. At the bottom of the script area, there is a palette of control blocks: 'Do in order', 'Do together', 'If/Else', 'Loop', 'While', 'For all in order', 'For all together', 'Wait', 'print', and a comment block.

## 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**.

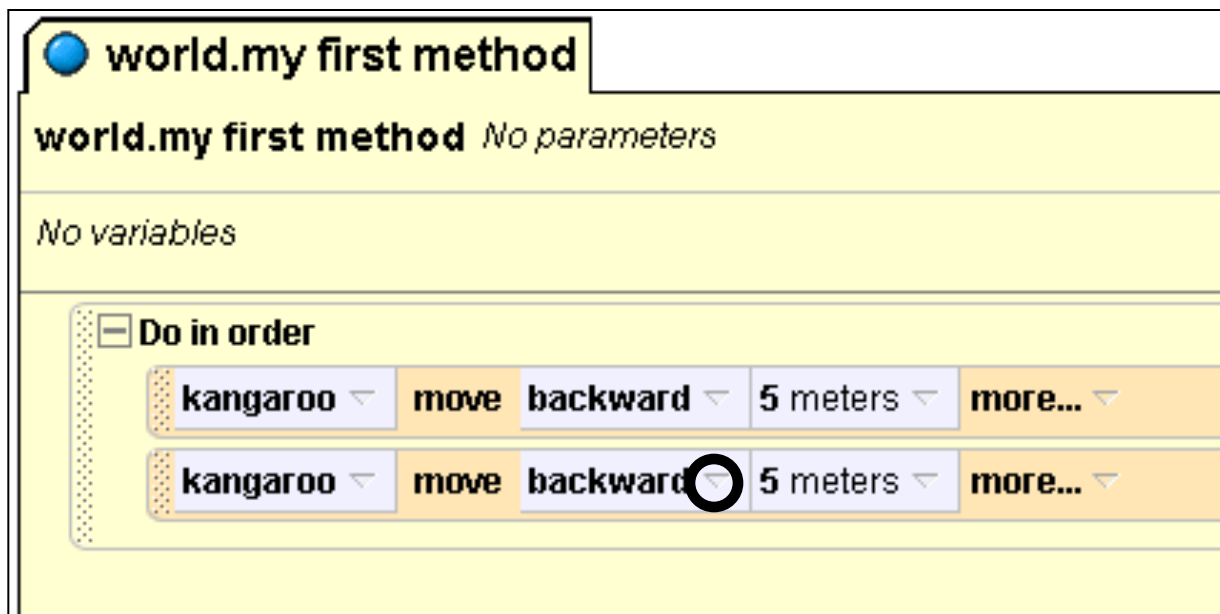


Your method editor should look like this when you're done. This is your first Alice programming statement telling the kangaroo to move backwards, using the **move** method.

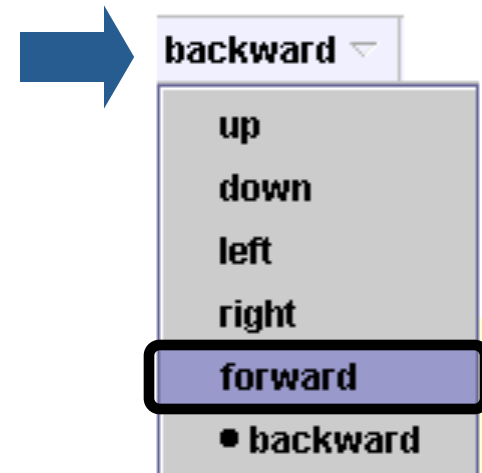
## Step 6: Finishing the Method

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.



The image shows a Scratch editor window titled "world.my first method". The window contains a method definition with the name "world.my first method" and the note "No parameters". Below the name, it says "No variables". The method body is a "Do in order" block containing two identical "kangaroo move backward 5 meters" blocks. A mouse cursor is hovering over the "backward" dropdown menu of the second block.

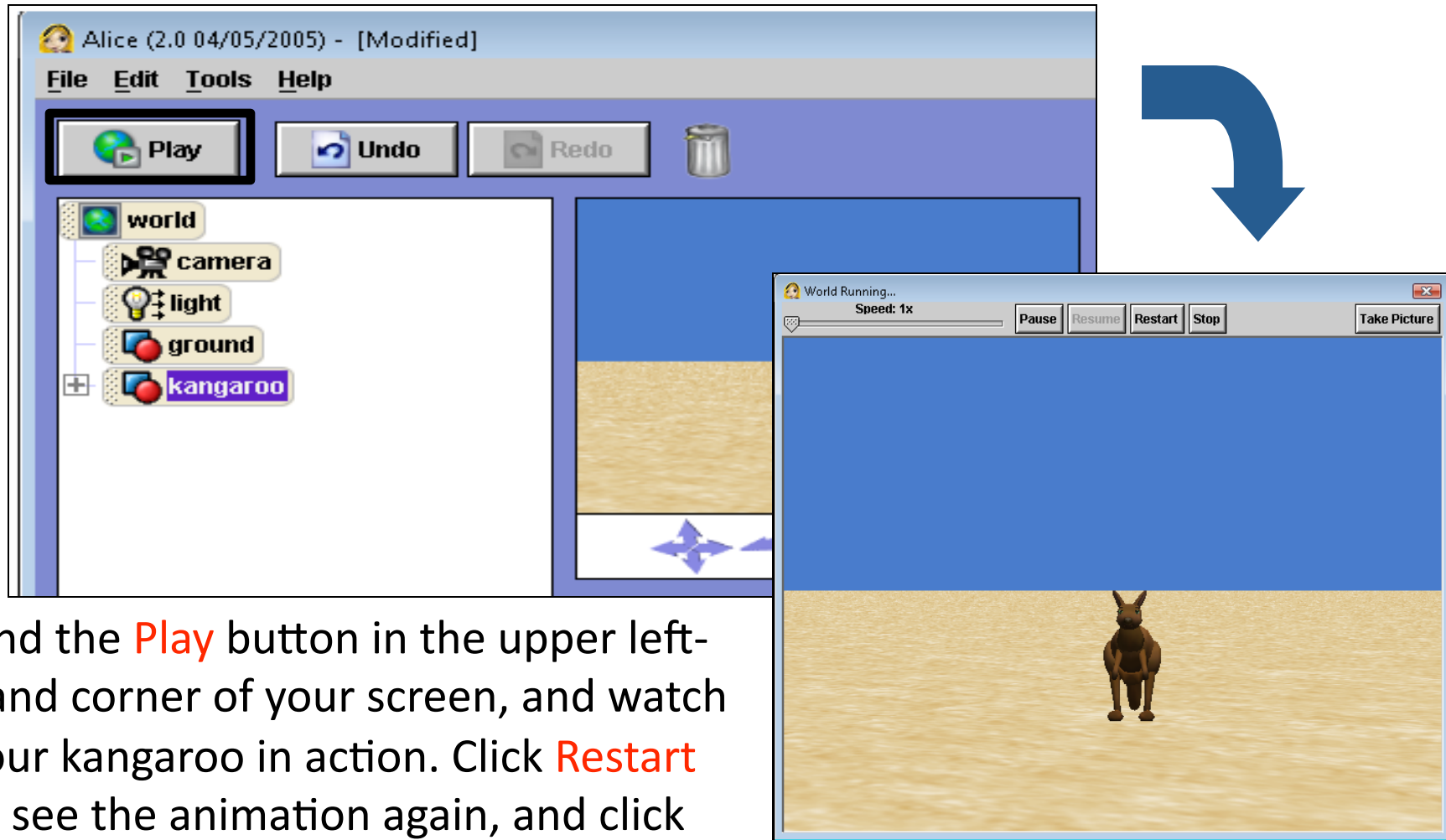


The image shows a dropdown menu for the "backward" direction. The menu is open, showing a list of directions: "up", "down", "left", "right", "forward", and "backward". The "forward" option is highlighted with a black border, indicating it is the selected option.



## 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.

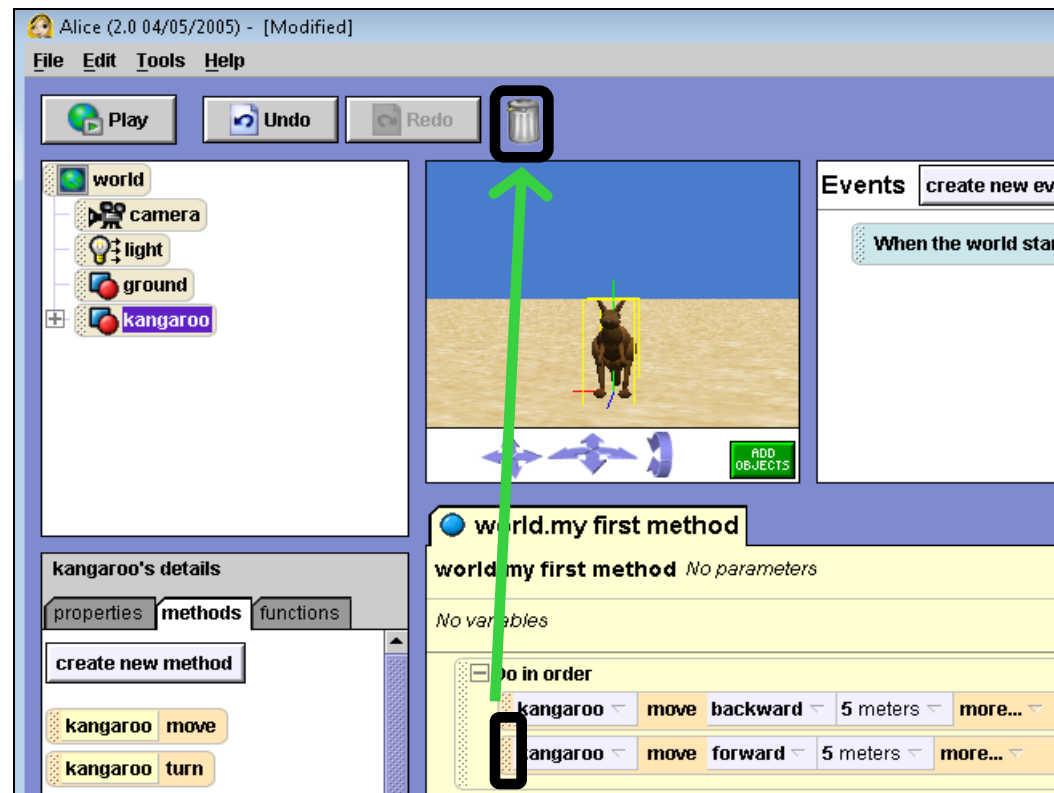
## Step 8: Editing your program

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.

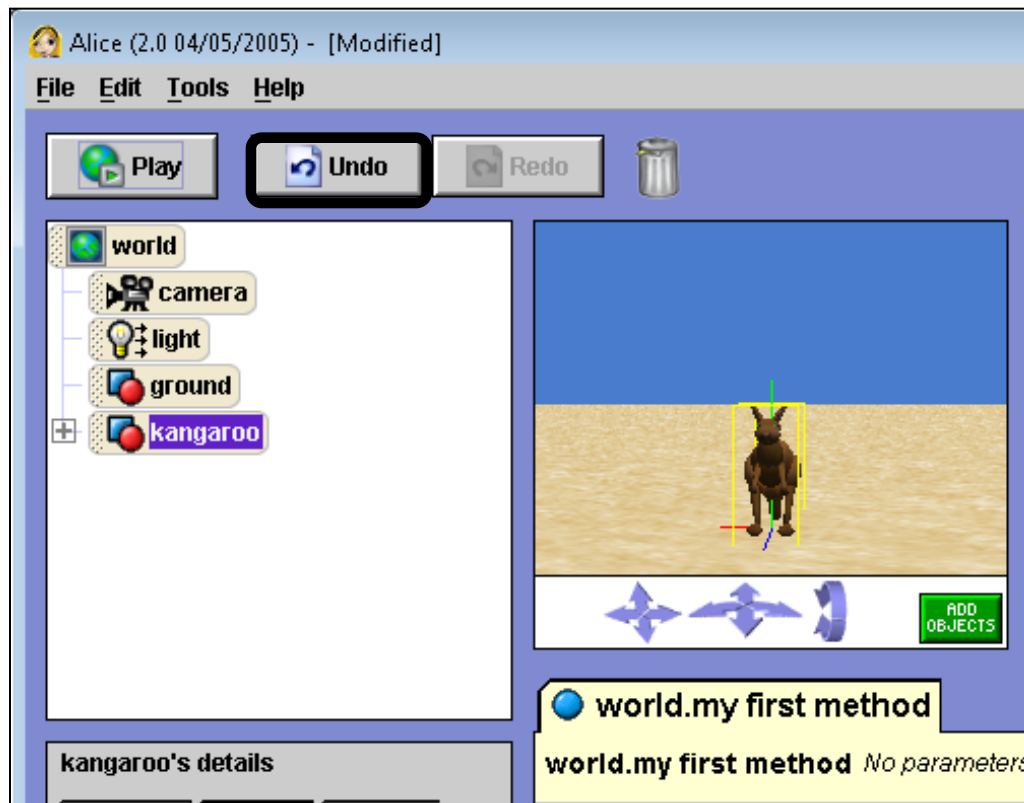


Both outlines are green.



## 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.



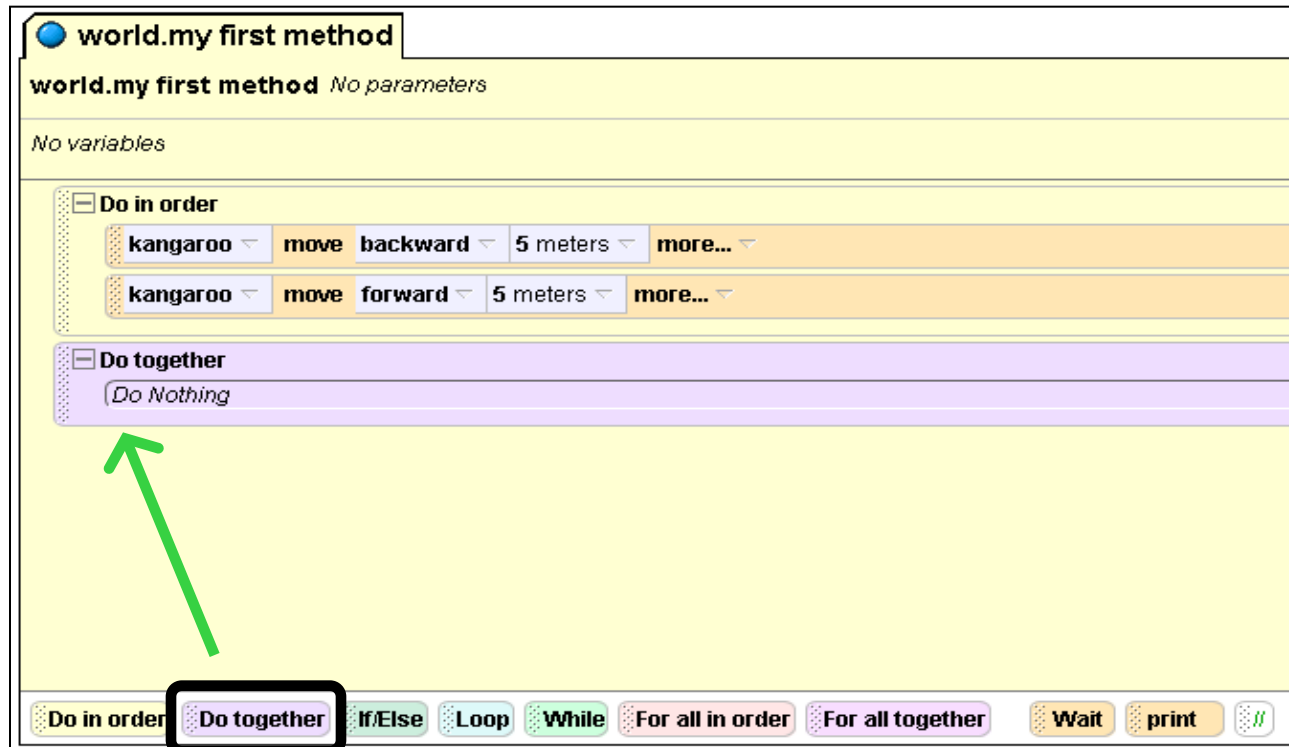
Click on **Undo** to get back your **kangaroo move forward** method.



## 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**.

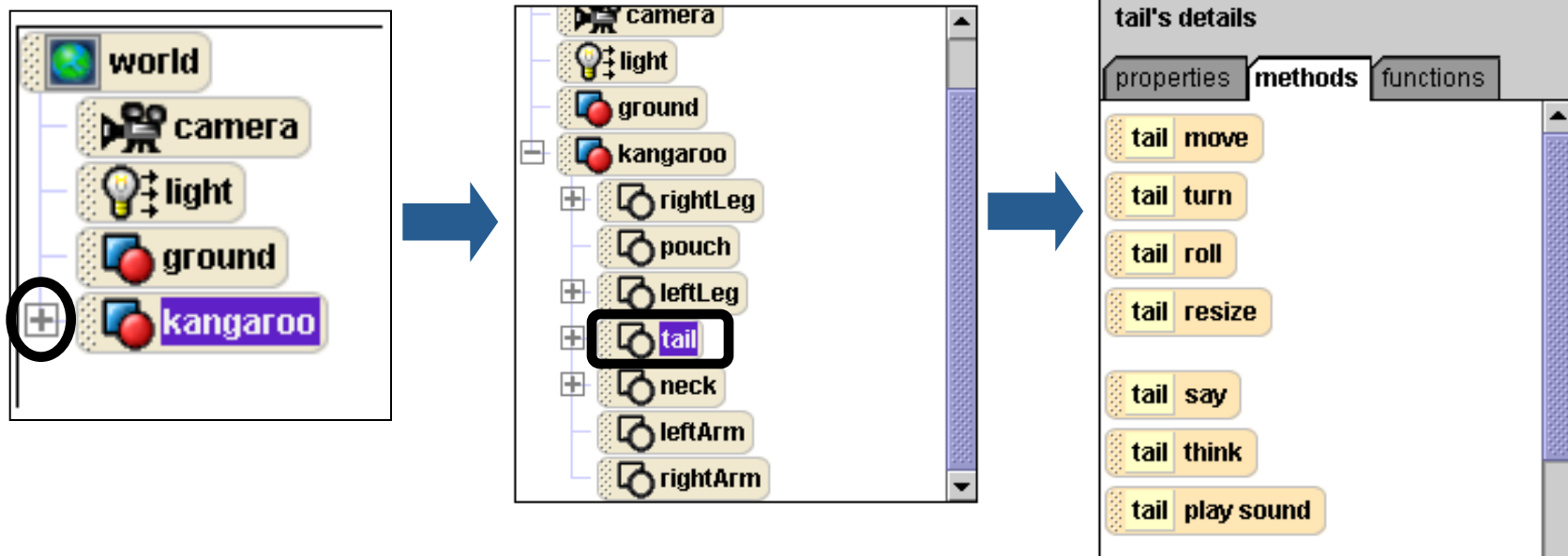


The screenshot shows a Scratch method editor for a method named "world.my first method". The editor contains a "Do in order" block with two sub-blocks: "kangaroo" moving backward 5 meters and "kangaroo" moving forward 5 meters. Below it is a "Do together" block containing a "Do Nothing" block. A green arrow points from the "Do together" block in the bottom toolbar to the "Do together" block in the editor. The "Do together" block in the toolbar is highlighted with a black border.

## 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.

The screenshot shows a programming environment with two main panels. On the left is the 'tail's details' panel, which has three tabs: 'properties', 'methods', and 'functions'. The 'methods' tab is active, displaying a list of methods for the 'tail' object: 'move', 'turn', 'roll', 'resize', 'say', 'think', 'play sound', 'move to', 'move toward', 'move away from', and 'orient to'. The 'tail turn' method is highlighted with a black box. A green arrow points from this box to the 'Do together' block in the script area on the right. The script area is titled 'world.my first method' and contains two 'Do in order' blocks and one 'Do together' block. The 'Do together' block is currently empty and has a dropdown menu open. The dropdown menu has two sections: 'direction' and 'amount'. In the 'direction' section, 'left' is selected and highlighted with a black box. In the 'amount' section, '1 revolution (all the way around)' is selected and highlighted with a black box. At the bottom of the script area, there are several control blocks: 'Do in order', 'Do together', 'If/Else', 'Loop', 'While', 'For all in order', and 'Fo'.

## Step 11: Talking

The image shows a software interface for creating a character named 'kangaroo'. On the left, a panel titled 'kangaroo's details' has tabs for 'properties', 'methods', and 'functions'. Under the 'methods' tab, there is a 'create new method' button and several methods: 'move', 'turn', 'roll', 'resize', 'say', 'think', and 'play sound'. The 'say' method is highlighted with a black box. A green arrow points from the 'say' method to a dropdown menu that is open, showing options: 'what', 'hello', 'goodbye', and 'other...'. The 'other...' option is also highlighted with a black box. A blue arrow points from the 'other...' option to a dialog box titled 'Enter a string'. The dialog box has a text input field containing 'Crikey!' and two buttons: 'OK' and 'Cancel'.

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.

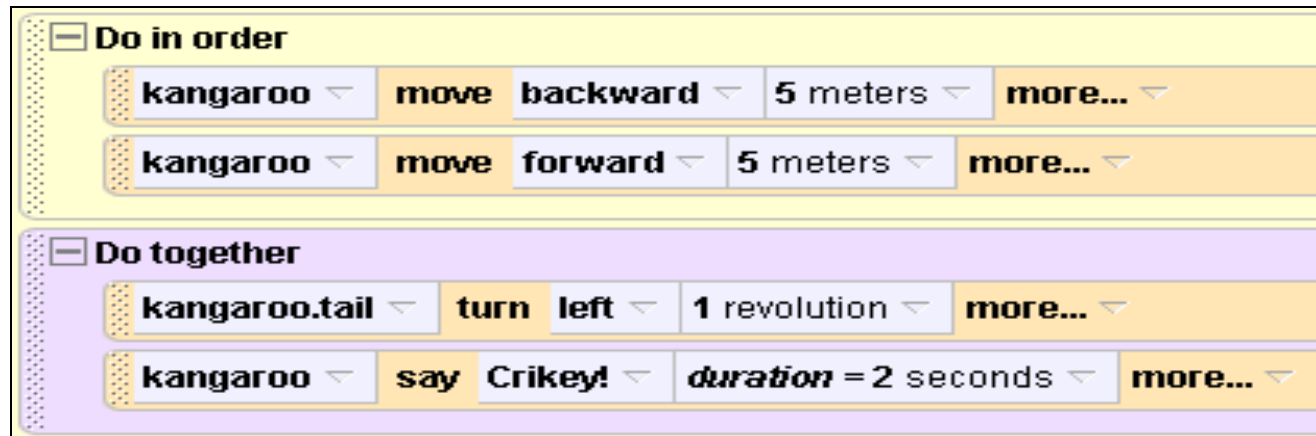
The screenshot shows the Scratch code editor. A 'Do together' block contains two methods: 'kangaroo.tail turn left 1 revolution' and 'kangaroo say Crikey!'. The 'more...' dropdown for the 'say Crikey!' method is open, showing a list of options: 'duration' (0.25 seconds), 'bubbleColor' (0.5 seconds), 'textColor' (1 second), 'fontSize' (2 seconds), 'fontName', and 'math'. The 'duration' option is selected, and the value '2 seconds' is highlighted.

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:



The image shows a Scratch code editor with two main sections: "Do in order" and "Do together".

- Do in order:**
  - Block 1: `kangaroo` `move backward` `5 meters` `more...`
  - Block 2: `kangaroo` `move forward` `5 meters` `more...`
- Do together:**
  - Block 1: `kangaroo.tail` `turn left` `1 revolution` `more...`
  - Block 2: `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!*