



# Lesson 2: Parallelism in Storytelling Alice

## Goals

- Learn how to make characters move at the same time

It's simple to make things happen one at a time in Alice, but how do we make them happen together? After this lesson, you should be able to make different people do different things at the same time!

## Remember Alice Locations

Here's a reminder of what Alice looks like and where everything is located.

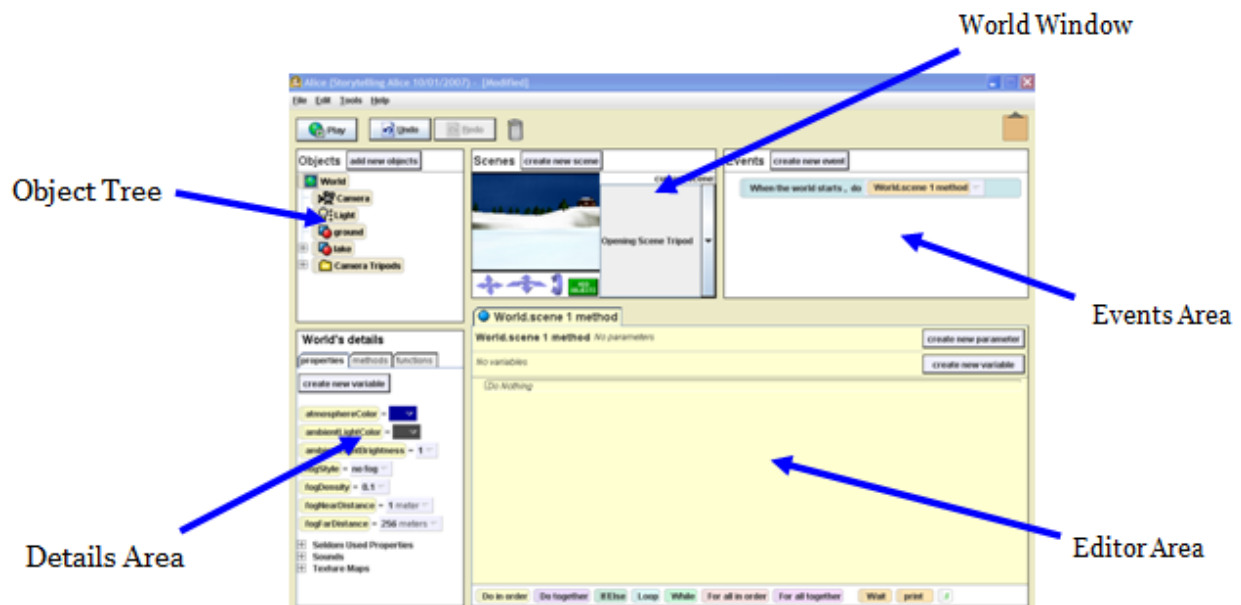


Figure 1. Defines Each Area in the *Storytelling Alice* Program.

## Creating a World

Alice is a program that lets you create and direct your own movies in your very own world! You get to pick all of the characters who will be in the movie and decide where that movie will take place. Alice is a really fun program, so let's get started and learn how to use it! It's the day of the big sixth grade race! Let's see who is going to win!

1. Click on **File** at the top left corner of the screen, shown in Figure 2 to the right, and click on **New World**.

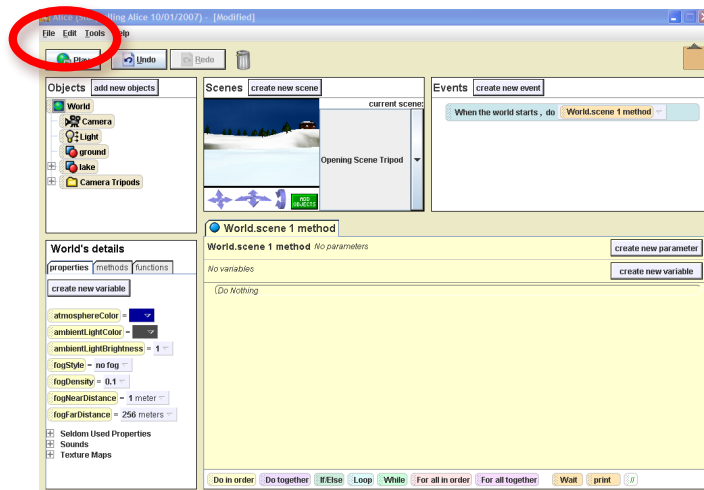


Figure 2. Creating a New World.

2. The “Welcome to Alice!” window will pop up with the **Templates** tab open, shown in Figure 3. Click on **grass**, and click **Open**.

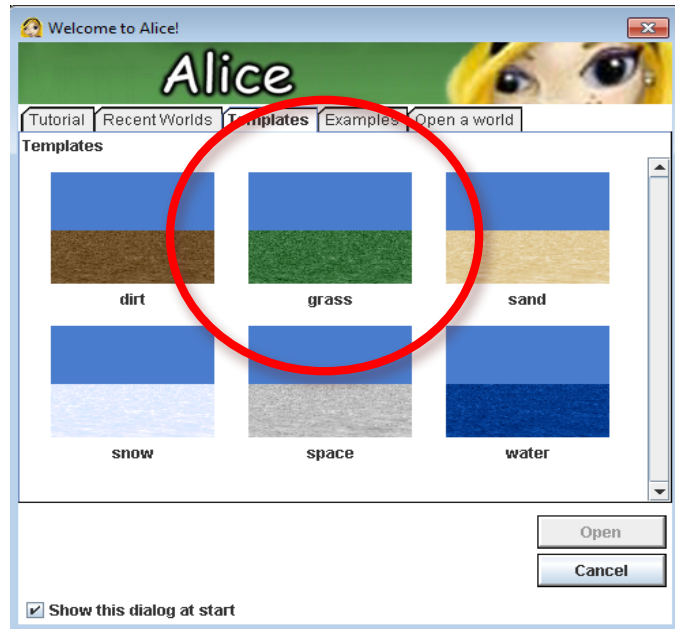




Figure 3. Selecting the Grass Template.


## Adding Objects

Right now all our movie shows is a bunch of grass, so we need to add a setting and some characters to the scene! In this section, we'll add two people to the movie, Dave and Dora, and also give them a gym to run around in!

- Click on  in the **Scenes** window or in the **Objects** window click , so we can add the gym and our two runners.

- In the *Editor Area*, a new tab should open, showing different places to get objects from. Click the **Scenes** folder to find the Gym.



- Click on the picture of the Gym, as seen in Figure 4, then click on the **Class Gym** picture to add it to the scene and click .

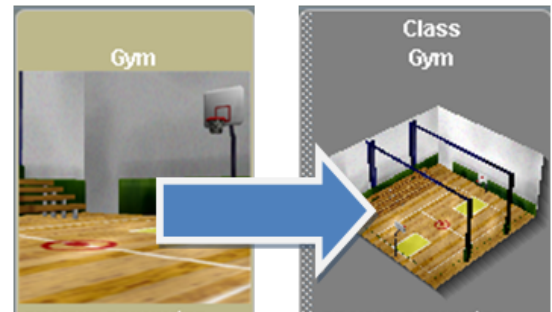


Figure 4. Finding the Gym.






- Click the .
- Next, let's search and add Dave and Dora. To start, type: **Dave** into the search box in the top left of that tab, then hit **Search!**
- Click on **Class Dave**.
- In the **Dave** window that appears, click .
- Now, for Dora, type: **Dora** into the search box in the top left of that tab, and then hit **Search!**
- Click on **Class Dora**.



Figure 5. Adding Dave and Dora.

- In the **Dora** window that appears, click .

- Click on the green box on the right side that says  in red or in the **Objects** window, click  to get back to making our movie!

## Setting the Scene

Now that we have our characters and the gym to the scene, we need to learn about how to arrange them so that everything starts in the right place. In this section you will be moving the camera to get a better look at the gym, and we'll move Dave and Dora to the starting line!



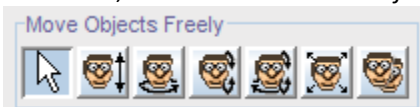
14. Find the *camera controls*: We can use these to move the camera around. Our goal is to move the camera so that it looks at the gym like in Figure 6 below.



Figure 6. Positioning the Camera.

The easiest way to do this is just to play around and click the different arrows to see how the scene moves.

15. To move a character, **click** on the character in the scene and then **drag** them to the location you want.
16. After moving Dave and Dora, we need to change the direction they're facing. To rotate a character, we need to use the *object controls* you see in the upper right part of the screen:



Right now, "Move Objects Freely" (the mouse arrow) is probably selected. To change the direction the character is facing, first select "Turn Objects Left and Right", the face that looks like this:



17. After selecting “Move Objects Left and Right”, **click** on the character you want to turn and **drag** the cursor around until they are facing the correct direction. The direction the character is facing determines where a character walks, so this is very important!
18. Now that we’re done adding and moving objects, see if your gym looks like Figure 7 below. Note that Dave and Dora are behind the endline on one side of the gym.





Figure 7. How the Characters Should Be Positioned.

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## Let’s Get Moving!

Now that everyone is in position, it’s time to tell Dave and Dora to start moving across the gym. We are going to do this by using the **walk** block, which tells that character to walk a certain distance.

19. Now let’s have Dave walk to the other side of the gym. Click on  **Dave** in the *Objects Tree*, and this will change the *Details Area* to show what Dave can do. Click  **Dave walk** and drag it onto the *Do Nothing* in the *Editor Area*.
20. After doing this, select **other...** for the distance.
21. Type in **10**, and press **Okay**. Look at Figure 8 below.

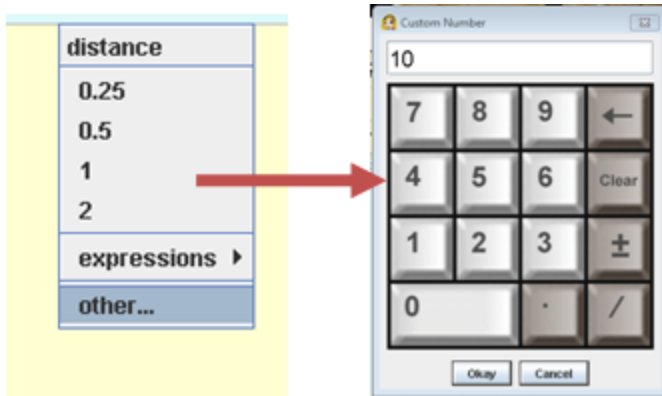






Figure 8. Typing the Distance to Walk.

### But why?

We're entering a custom distance here because the largest we can select in the beginning is only "2 steps." Telling Dave and Dora to only move 2 steps isn't far enough!

22. Let's do the same thing for Dora. Click on  in the *Objects Tree* and this will change the *Details Area* to show what Dora can do. Click  and drag it below the  in the *Editor Area*.
23. Since we have already typed **10** in before, we can go ahead and select it right away this time, shown in Figure 9.
24. Click  to see what we've done so far!

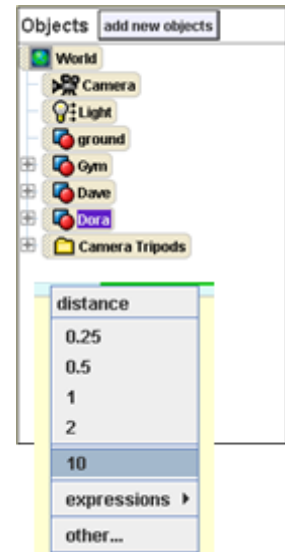


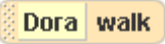



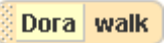


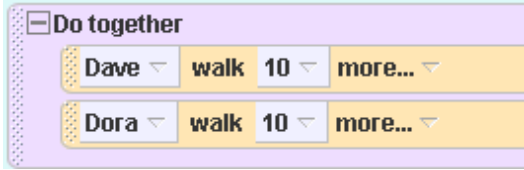


Figure 9. Choosing Distance.

## Let's Play Together!

It won't be much of a race if Dave gets to go all the way across the gym before Dora starts moving, so we need to get them to move at the same time! In Alice, you can make two things happen at the same time by using a  block.

25. Drag a  block from the bottom of the *Editor Area* to under .
26. Next, drag the  you already have in the editor area *inside* the  block so that it looks like the picture to the right.
 
27. Now drag the  block under the  but **still inside** the  block. When you're done, it should look like this:



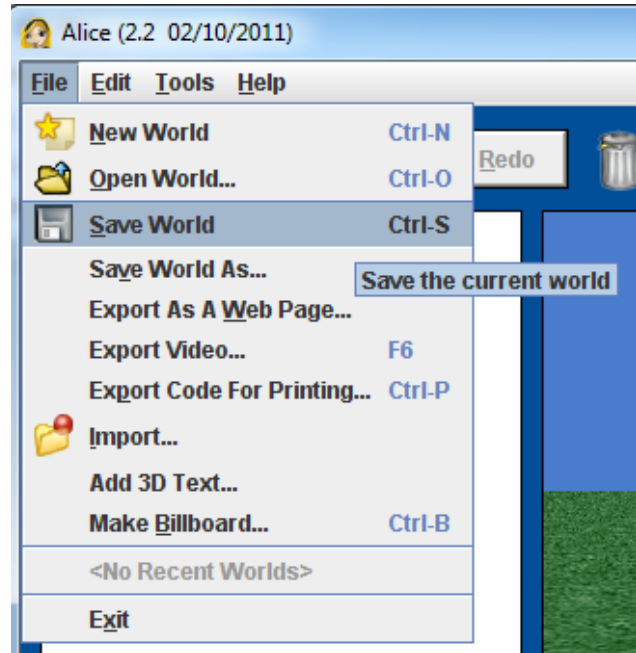
Here we're telling Dave and Dora to move at the same time! We can't do that without a **do together** block.

28. Click  to see the full video and decide who wins the race!

## Time to Save!

Now that you're done with today's lesson, make sure to save your video in a safe place where you can get to it again. Some lessons after this will use this race scene, so do your best not to lose it! To save, click on **File -> Save World**.

Type the File Name as "Race\_Lesson2" and click **Save**.



## Summary

In this lesson, we learned how to have two things happen at the same time. In Computer Science, making two things happen at the same time is called **parallelism**.

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## What To Look Forward To

Now that we know how to make many things happen at once, we'll learn how to use **loops**, which make things happen a bunch of times over and over again.

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## Key Terms

1. **Parallelism**
    - Having objects do different actions at the same time
  2. **Do together Block**
    - The special block used to make different things happen at the same time
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## Extra Exercises

- ★ Experiment with some different step sizes to find out how big 1 step, 2 steps, and 20 steps are in the Alice world.
  - ★★ Can you experiment and figure out what block would be used to make Dave and Dora turn around?
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