

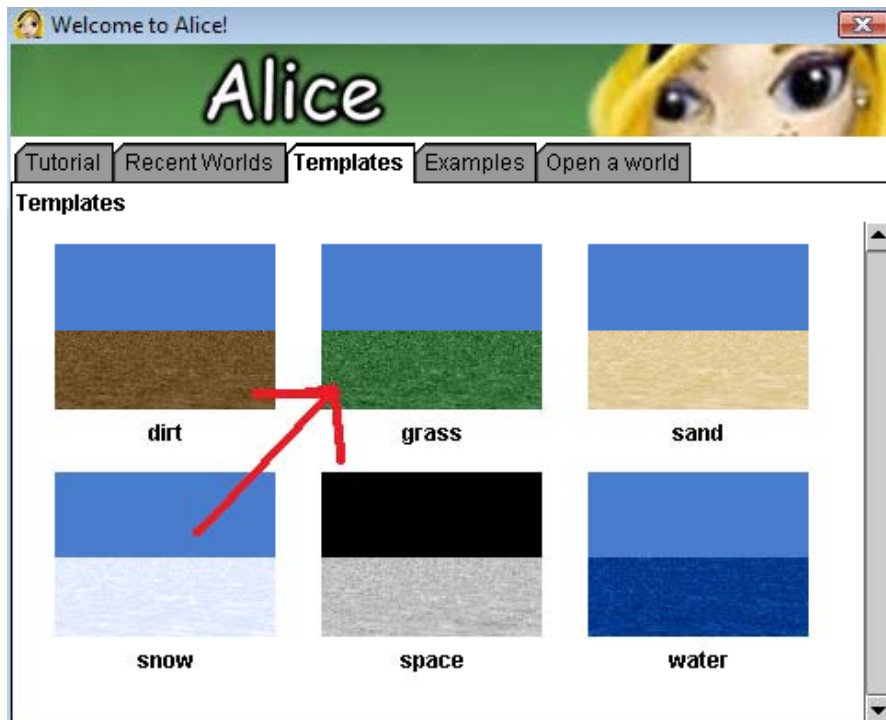
Alice

Learning to program: Part 1
Scene Setup and Starting Animation
by Ruthie Tucker and Jenna Hayes
Under the direction of Professor Susan Rodger
Duke University, July 2008

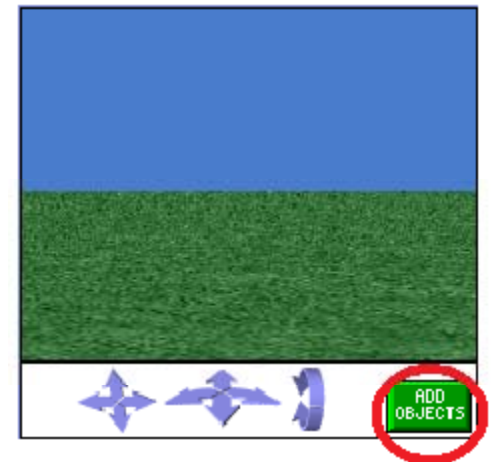


www.cs.duke.edu/csed/alice/aliceInSchools

Open up Alice, and choose a background for your Alice world. Your world is something you can put **objects** in and make them do things. There are six different background options. Choose **grass**.



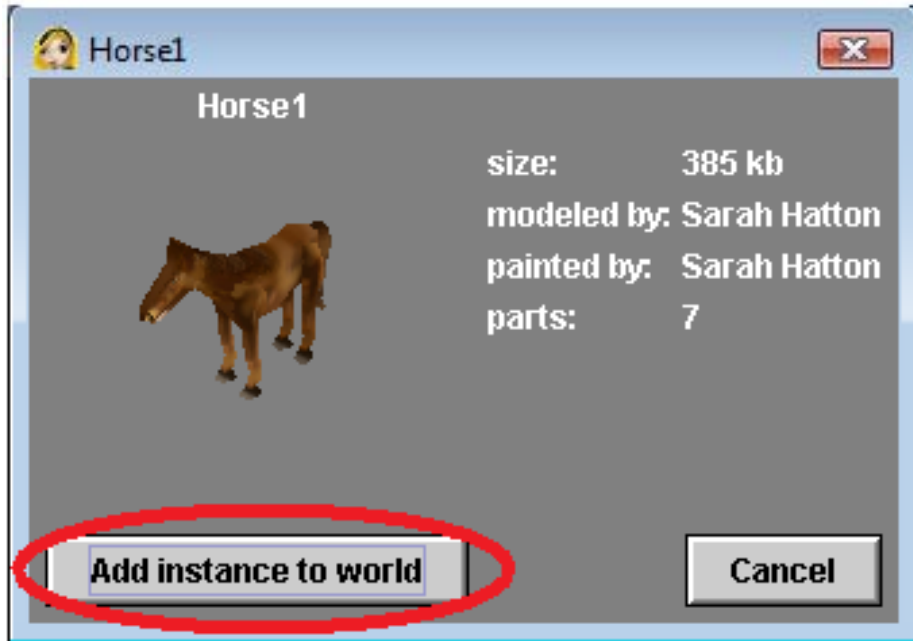
Add an **object** to your Alice world. Alice is full of different kinds of objects to add to your world to make it interesting. Click on the **Add Objects** button:



Click on the **animals** folder of objects:



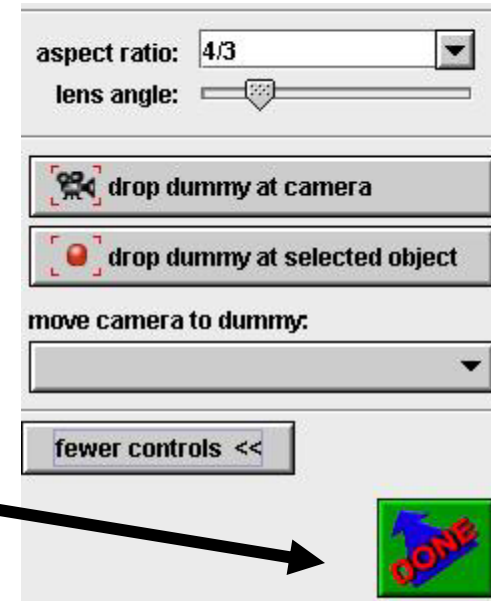
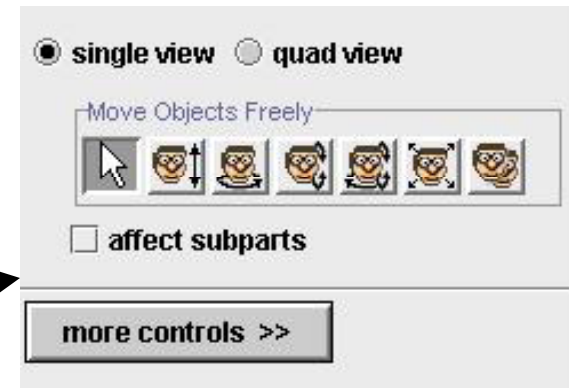
Find the **horse** among the types of objects and click on it. Then click **Add Instance to World**. This is how you add an object to your Alice world.



The horse object will appear in your world.

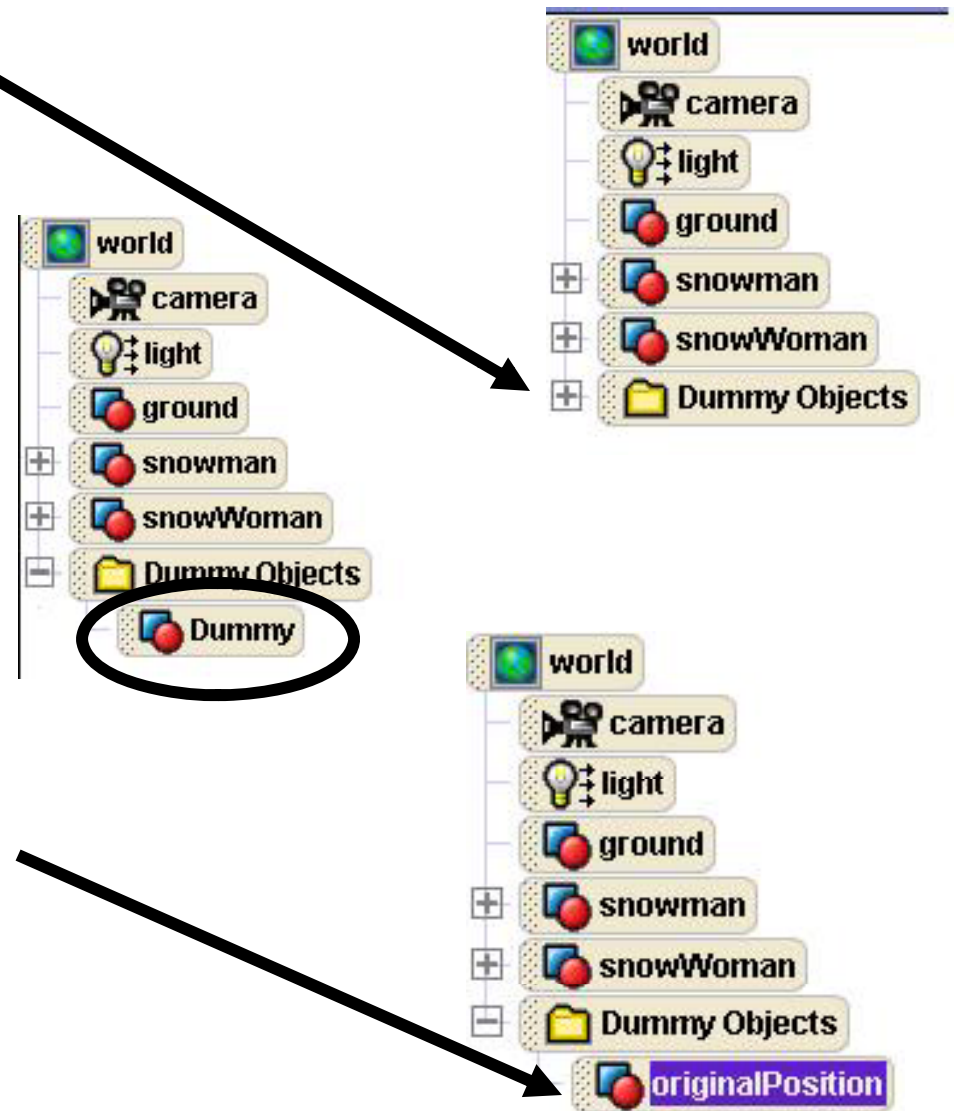
Adding a Dummy Camera

- This is to save current camera position for later
- Click on “more controls”
- Click on “drop dummy at camera”. Just click it once!
- Click the green **Done** arrow on the right hand side of the screen to go back to the main Alice window.



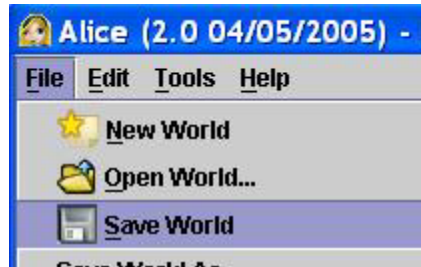
Adding a Dummy Camera (cont)

- A folder of Dummy Objects appears
- Click on the “+” by it
- The camera position saved is “Dummy”
- Click on it and select “rename” and rename it to “original position”
- We will use this later...



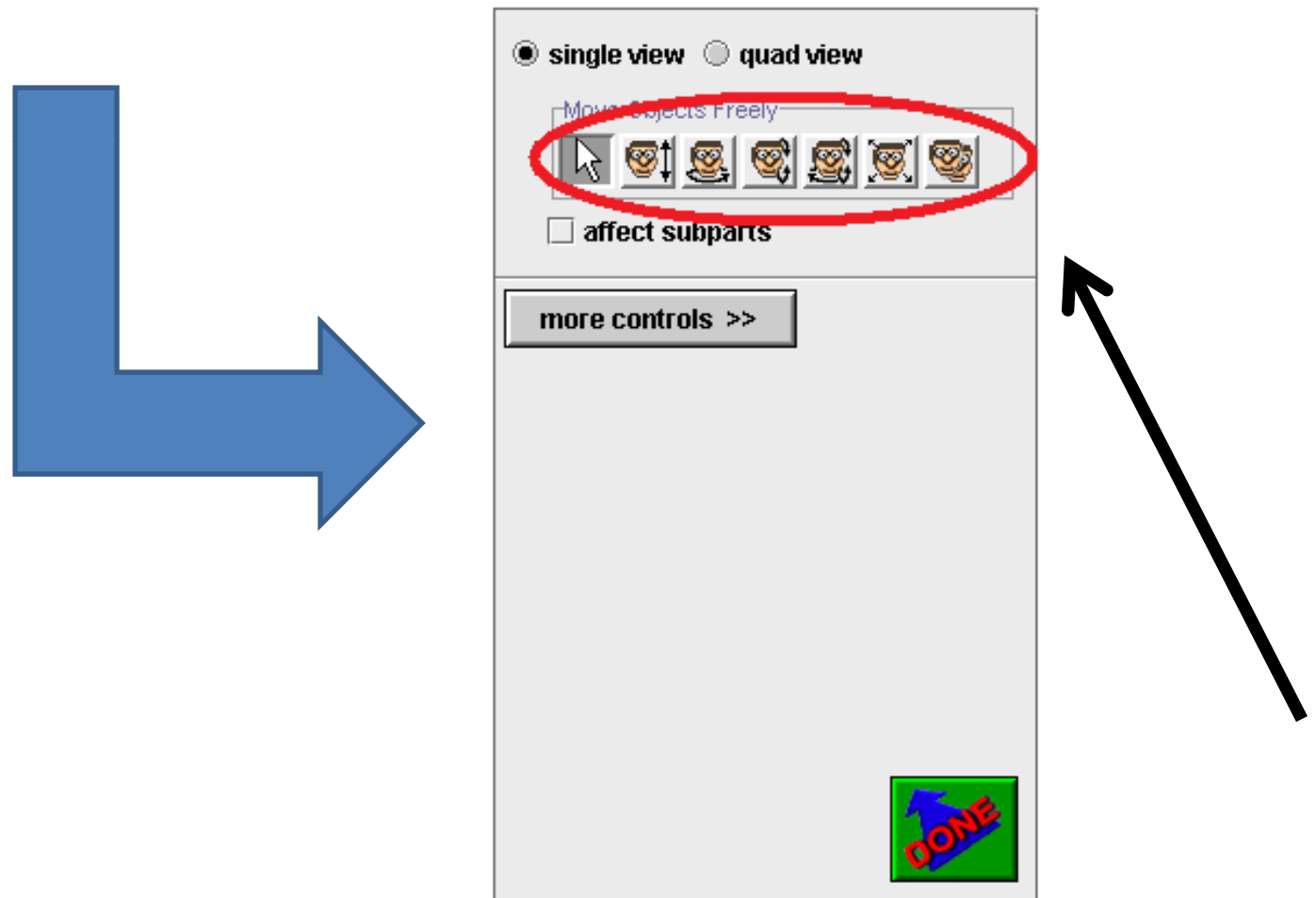
Save World

- Save world

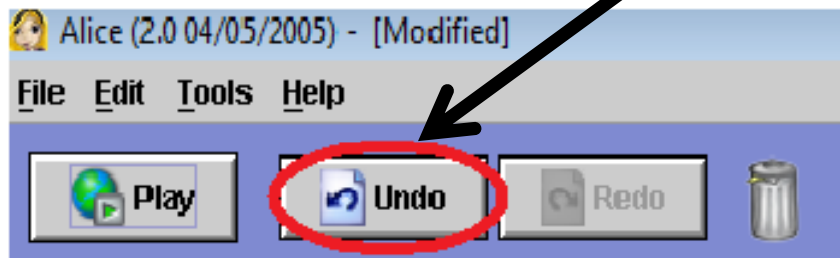
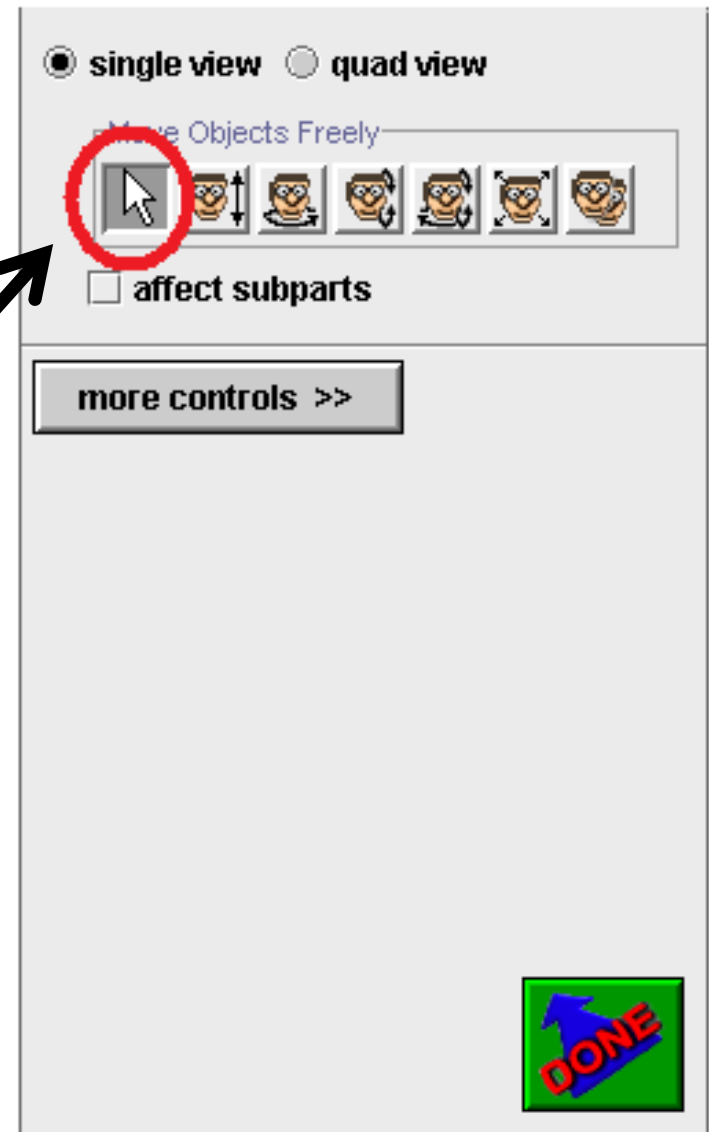


- Type in a name such as: horseWorld, and then “save”
- Alice will remind you to save your work every 15 minutes
- It is always a good idea to create a folder to put all your Alice worlds in.

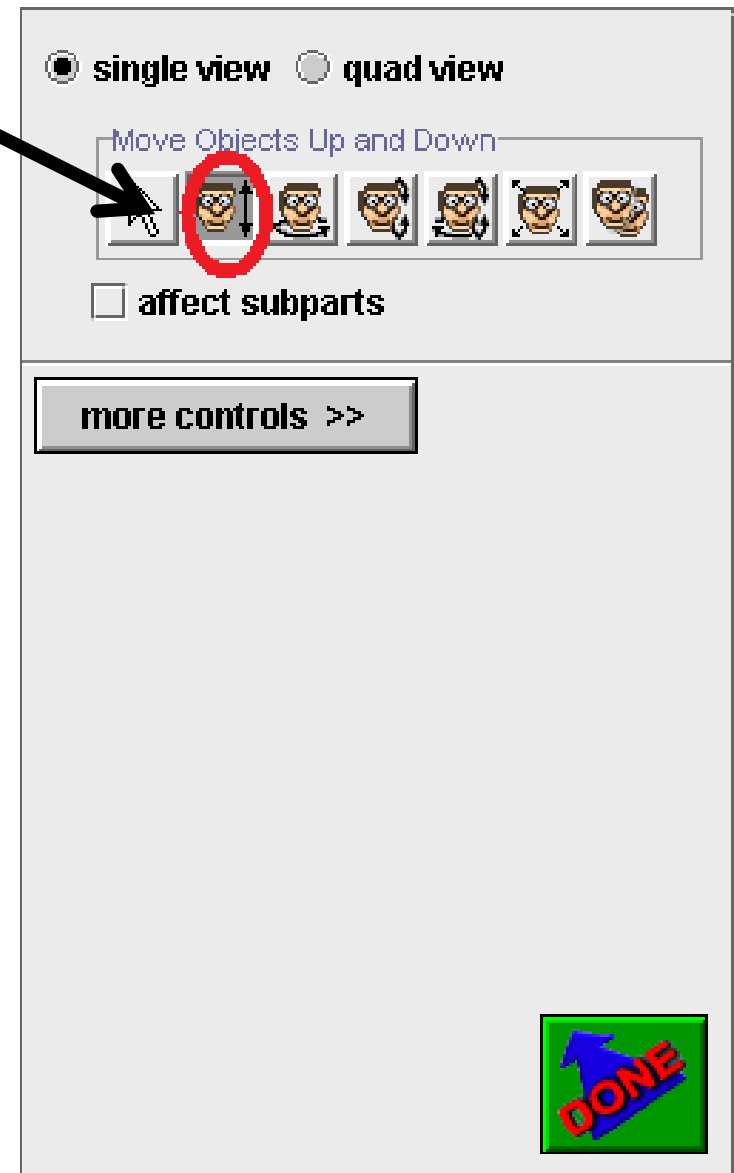
You may see that your horse looks like it's halfway underground. When objects are added, sometimes they appear in strange places. We need to move the horse so he looks like he's on the ground. Click on the **add Objects** button again. We are going to use these buttons that appear to move him around:



This button will move your horse further back from the camera or closer to the camera, to the right, or to the left. Click on your horse and drag him around. Try moving your horse forwards and backwards. If you don't like the way your horse looks after you move him, click the **Undo** button in the top left corner of the screen.



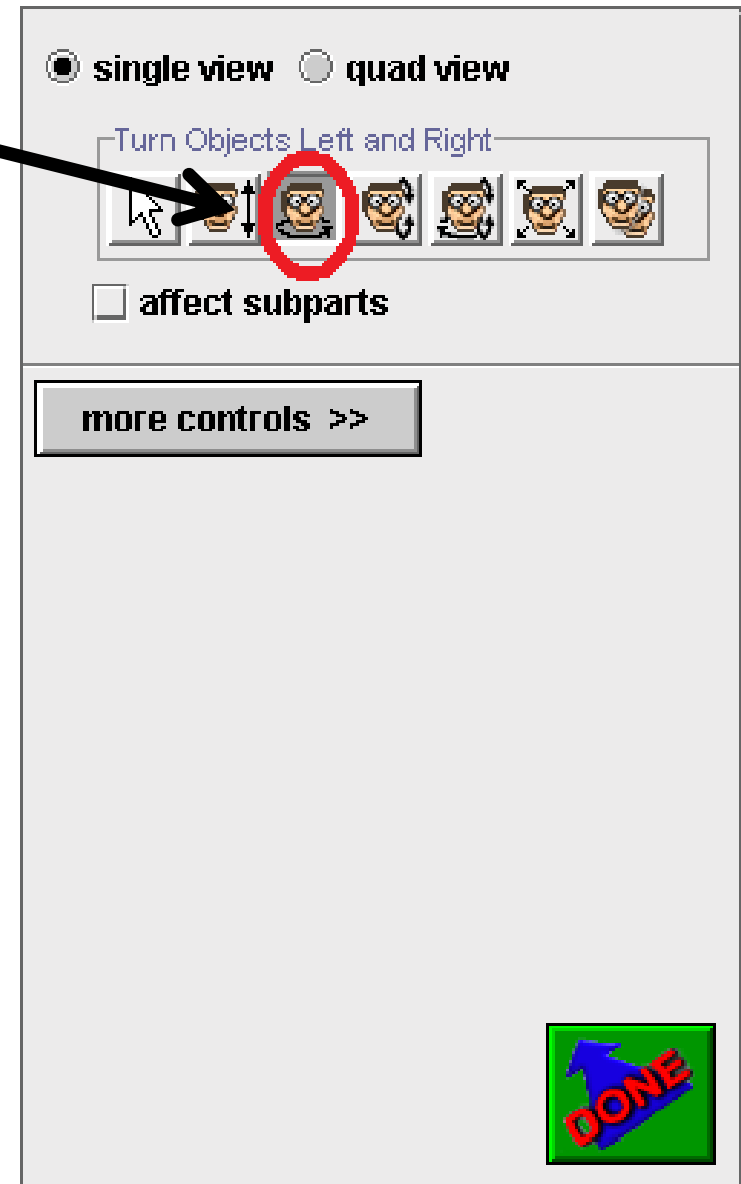
This button moves an object up and down when you click on it and drag it. Move your horse up until he is standing on the ground.



This button turns objects left and right. Use this to turn your horse a little to the left. Use **Undo** if you make a mistake.



Notice that your horse seems to turn around one point. This is your horse's **center**.



Each object in Alice has a **center**. This is the point on an Alice object that determines where it is in the world, and around which the object will rotate if commanded. Every object's center is different.



center



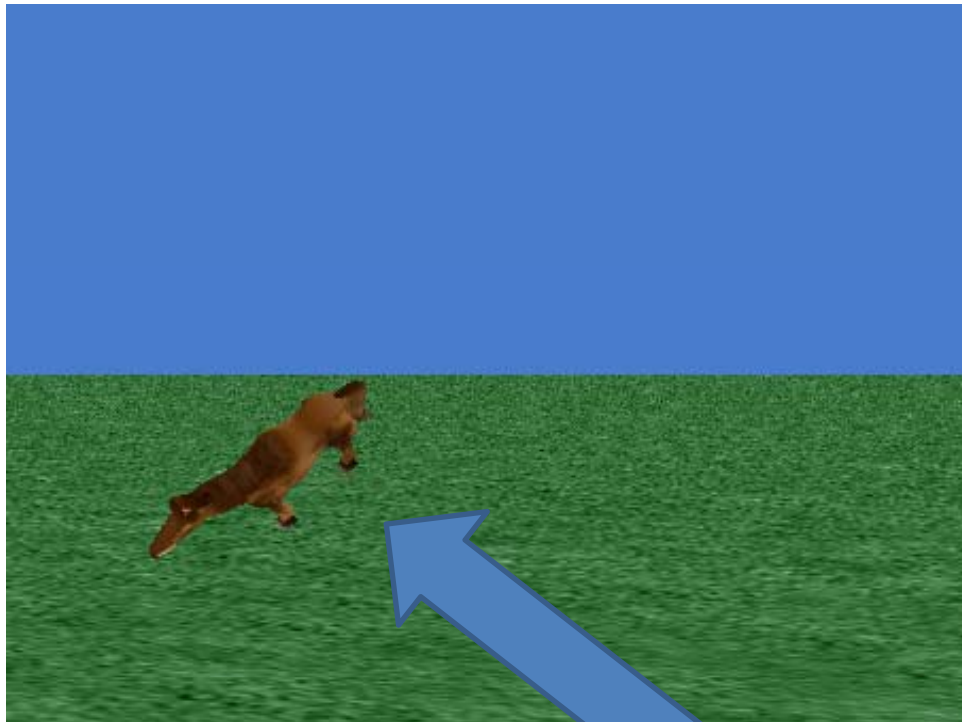
center



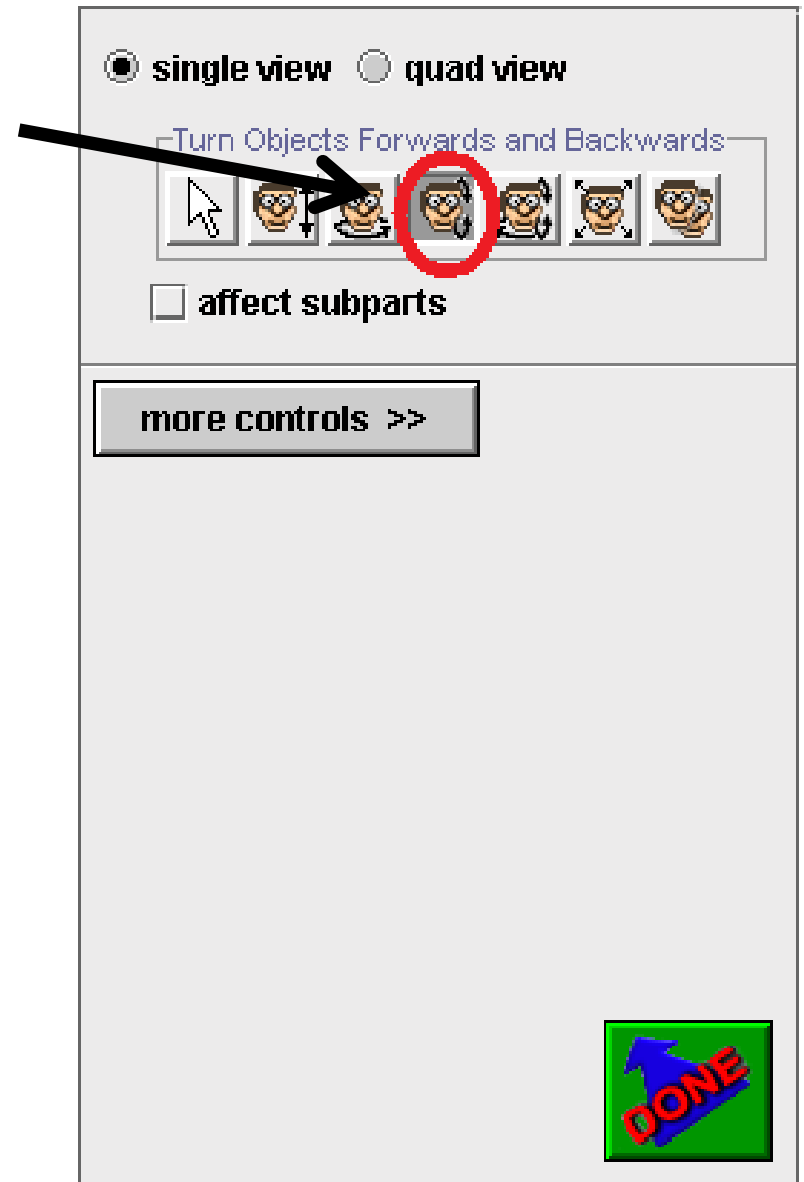
center



This button rotates an object forwards or backwards around its center. Try rotating your horse, and then put it back in its original position using **Undo**.



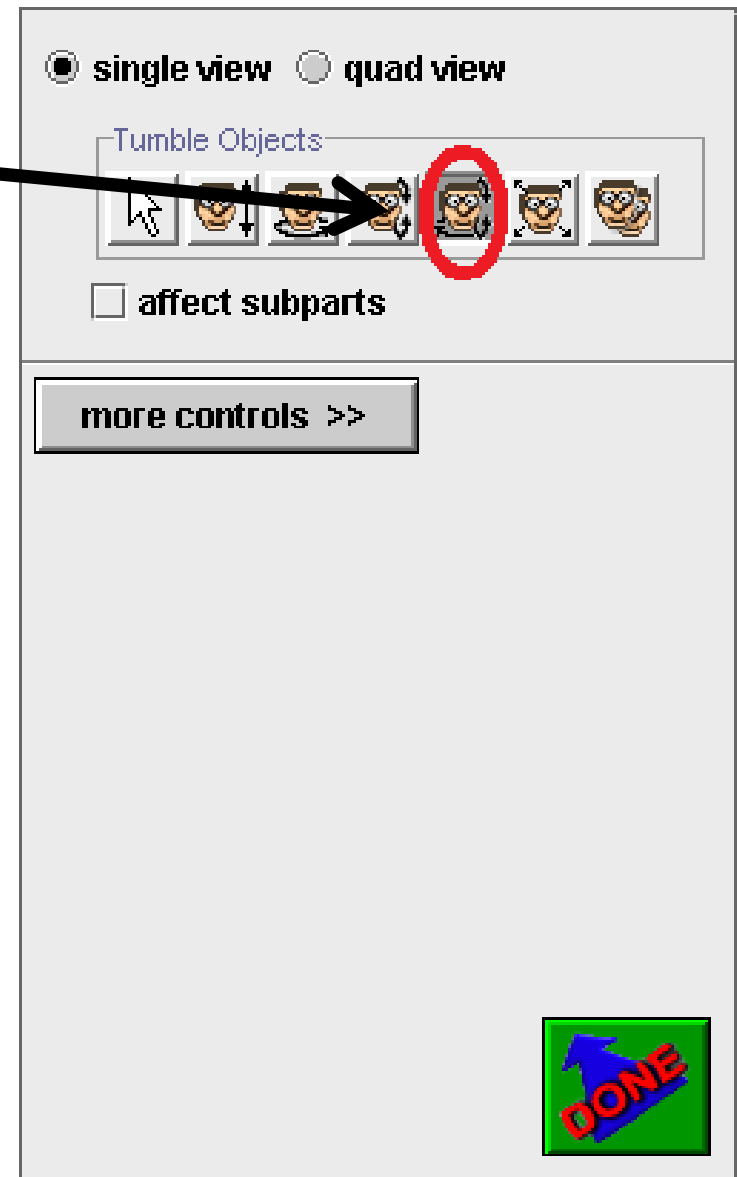
The horse is rotating.



This button tumbles an object in all kinds of crazy directions. Try this button on your horse, and then put it back to its original position using **Undo**.



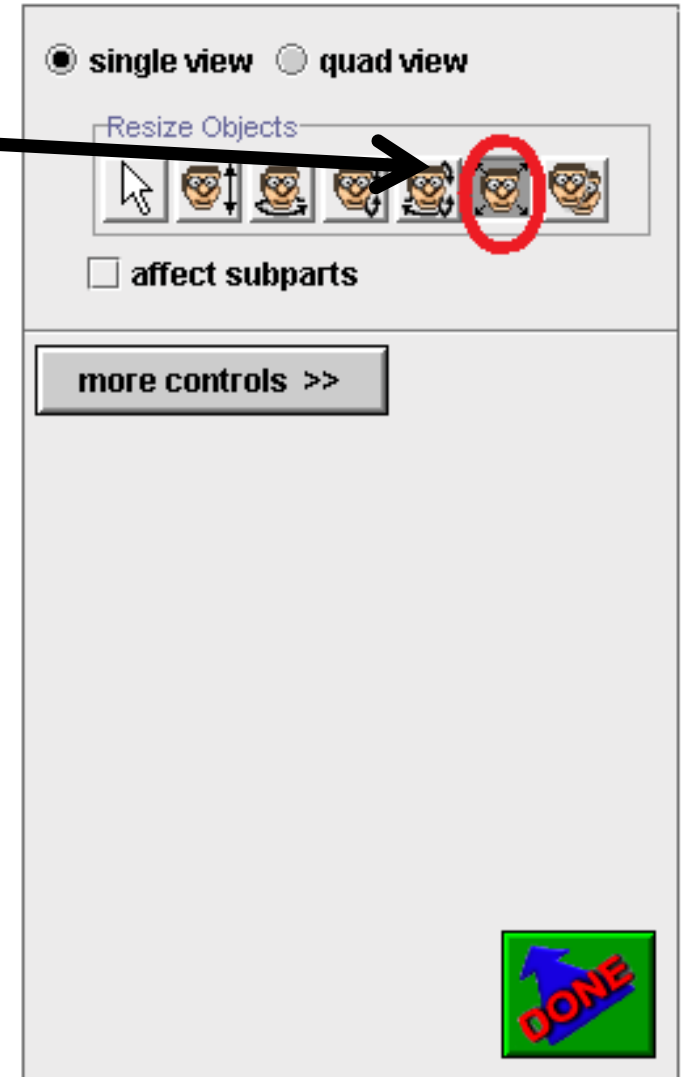
The horse is tumbling!



This button makes an object bigger or smaller. Try re-sizing your horse, so it is a little bigger, and then move him up out of the ground.



Giant horse!

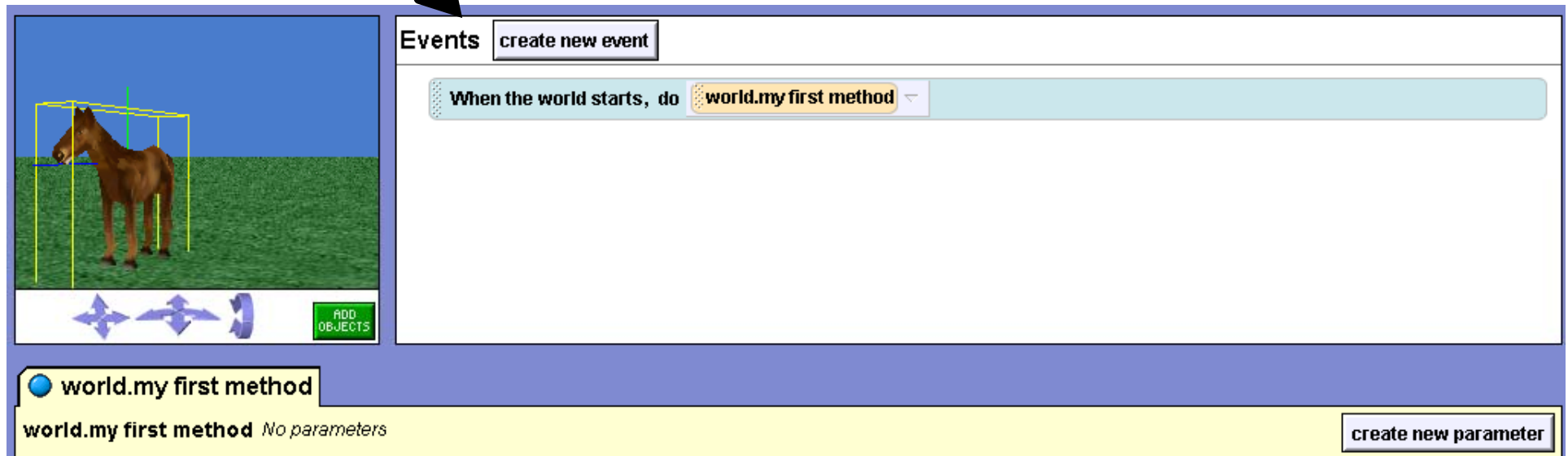


Creating an Event in Alice

-Now we are going to show you how to create an event in Alice.

-An event is something that you tell Alice to do after something else happens, such as pressing a key or clicking on something.

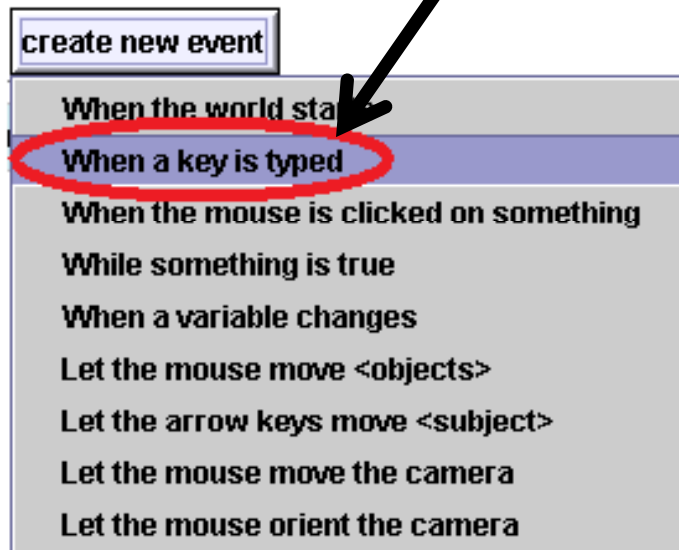
In the top right hand corner of the screen is the **Events Editor**. This is where you make events, which are commands that you tell Alice to do when a certain thing happens, such as when a key is pressed, or you click your mouse on something.



Click on the **create new event** button.

Choose the **when a key is typed option**.

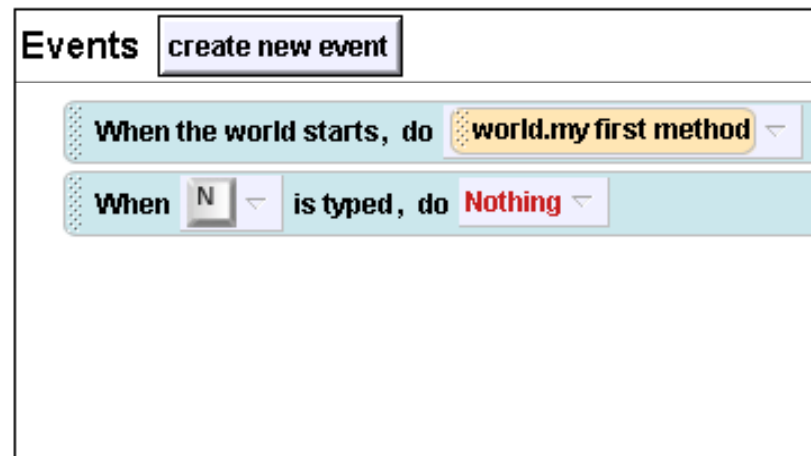
We are going to make it so that when we press the **N** key, our horse will say “NEEEEEEEIGH!”



Your event editor will now look like this:



Click on **any key**, then choose **letters**, then choose **N**. It will now look like this:



Now click on the **horse** in the list of objects, and then click on the **methods** tab. Find **horse say**, and drag it up to the events editor where it now says **Nothing**.

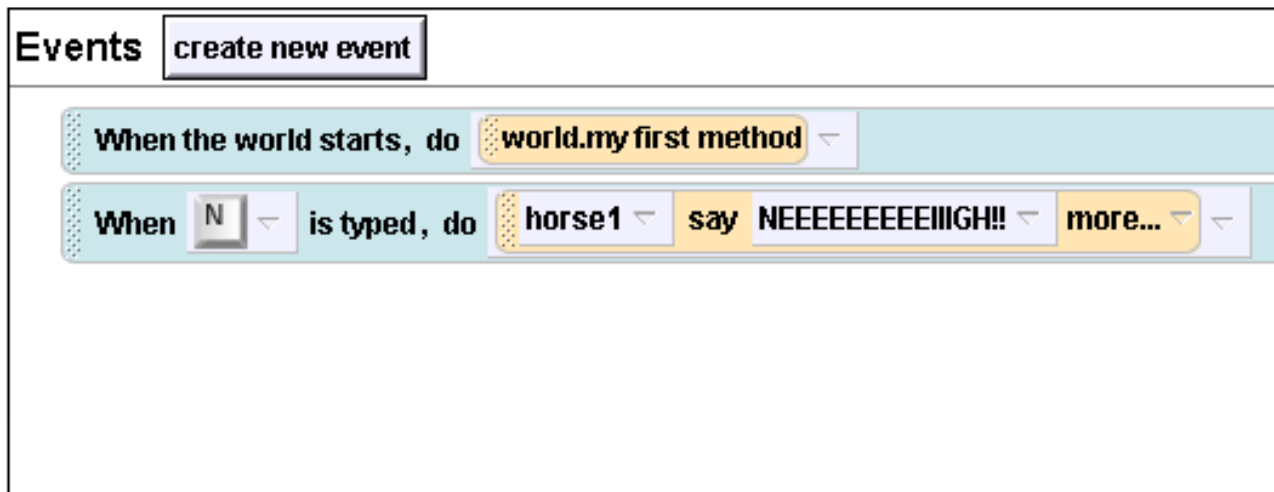
The screenshot displays a game development environment with several panels:

- Top Left Panel:** A list of objects including 'world', 'camera', 'light', 'ground', 'horse1', and 'Dummy Objects'.
- Top Center Panel:** A 3D preview window showing a brown horse on a green field under a blue sky, with a yellow wireframe bounding box around it.
- Top Right Panel:** An 'Events' editor with a 'create new event' button. It contains two event triggers: 'When the world starts, do' followed by a dropdown menu showing 'world.my first method', and 'When N is typed, do' followed by a dropdown menu showing 'Nothing'.
- Bottom Left Panel:** A 'horse1's details' panel with tabs for 'properties', 'methods', and 'functions'. The 'methods' tab is active, showing a list of methods: 'horse1 move', 'horse1 turn', 'horse1 roll', 'horse1 resize', 'horse1 say', 'horse1 think', and 'horse1 play sound'. The 'horse1 say' method is circled in black.
- Bottom Center Panel:** A 'world.my first method' editor showing 'No parameters', 'No variables', and a 'Do Nothing' button.

A large black arrow originates from the circled 'horse1 say' method in the bottom left panel and points towards the 'Nothing' dropdown menu in the 'Events' editor, indicating the intended drag-and-drop action.

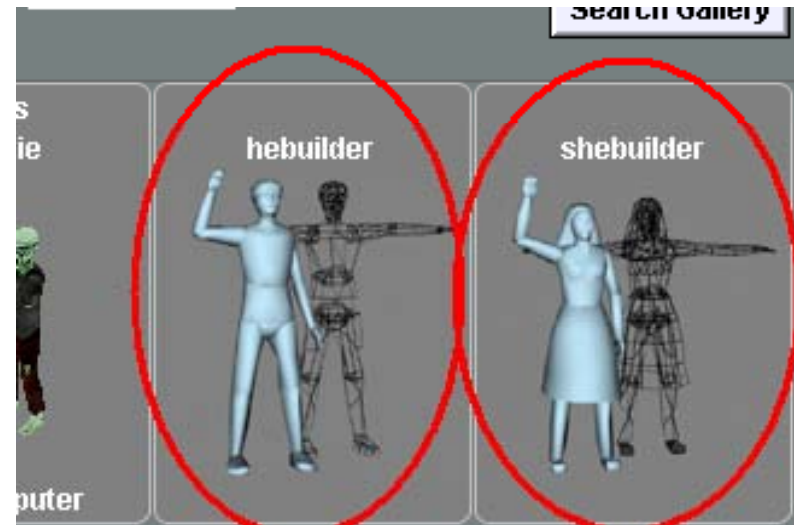
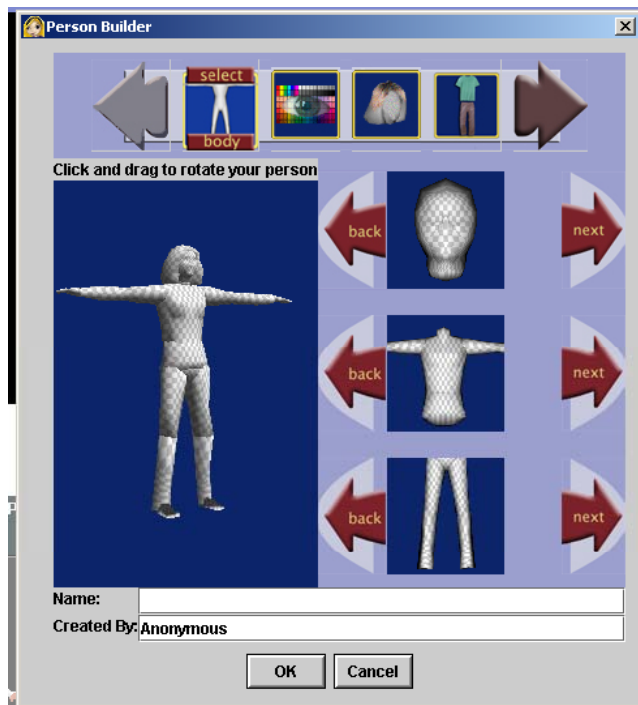
When you drop the **say** command, you will need to type in something for the horse to say, like “NEEEEEEEEEIIIGH!” Your events editor will now look like this:

Play your world, and try pressing **N**. Whenever you press it, your horse should neigh.



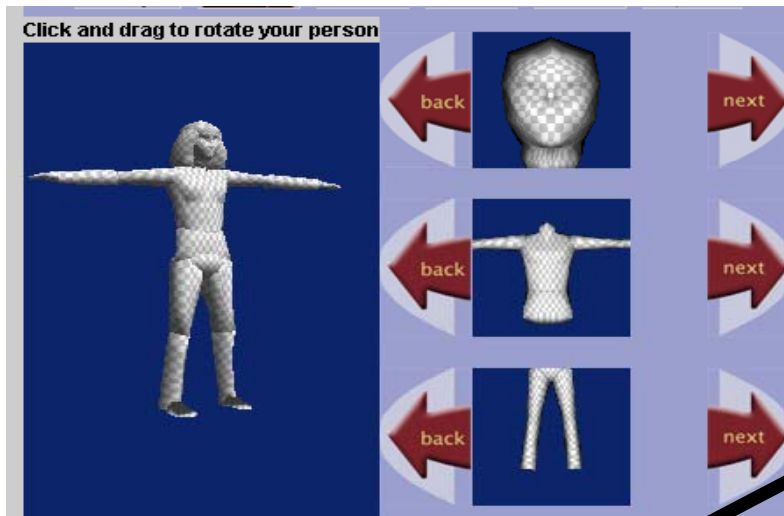
Now we are going to use the he-builder and she-builder objects in Alice.

- The he/builder and she/builder are for creating your own characters in a world.
- You can find it under the “people” folder of your Local Gallery



- Lets start with the She/builder
- When you open the she/builder folder, this screen will appear

Getting started



- You can change the leg, upper body and head shape of your person, using the arrows.



- Select the “hair color”. You can change the shape and color of your hair, using arrows.

Choosing the Details



- Now, select the tab labeled “skin/eyes”. You should have three options: skin color, eyes and lips. The skin color is controlled by a dial on the top.
- The eyes and lips can be selected by the arrows.
- All of the changes you make will appear on your person, to the left.

Choosing the Details



- Now, select the tab labeled “skin/eyes”. You should have three options: skin color, eyes and lips. The skin color is controlled by a dial on the top.
- The eyes and lips can be selected by the arrows.
- All of the changes you make will appear on your person, to the left.

Choosing the Details (continued)

- By selecting the “clothing” tab, you can choose shirts, pants and shoes for your person.
- Finally, you can give your person a name at the bottom of the “person builder”.



Now its your turn



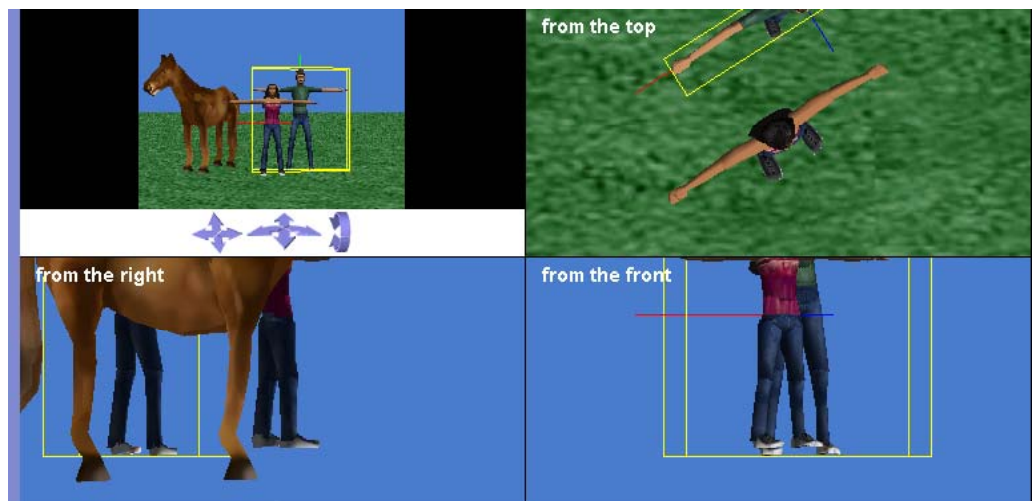
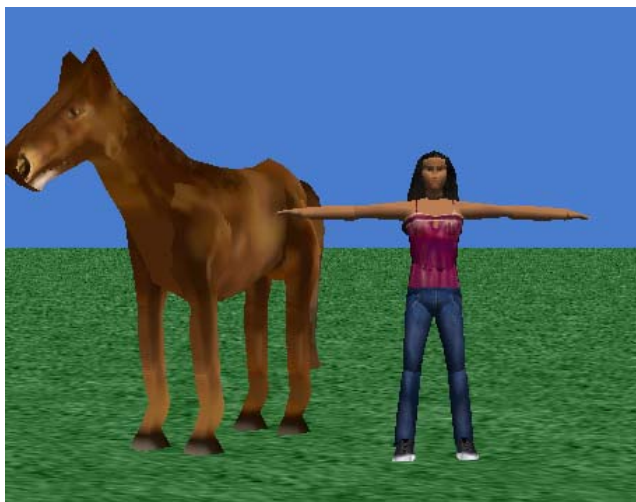
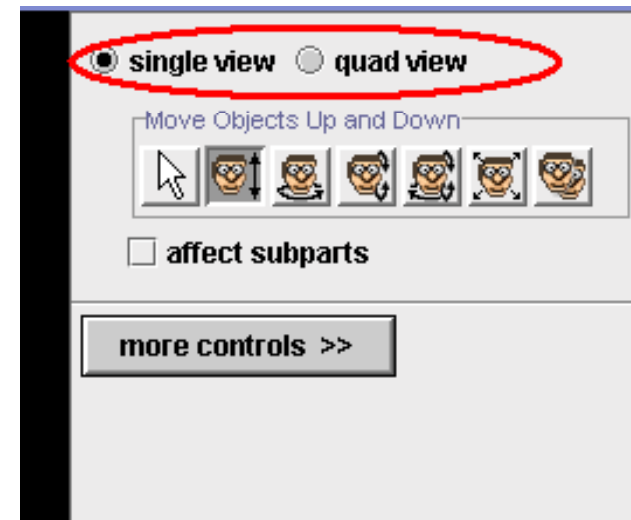
- Try creating another character
- If you want to use the He/builder, it works the same way

- Try experimenting with the buttons that move objects to move your people around in your world.



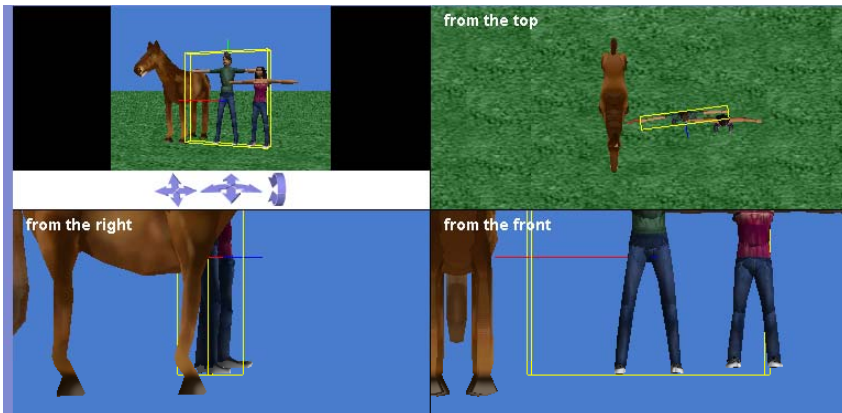
Now we'll use quad view to position our characters. Click the **add Objects** button to get back to the object moving screen.

- Look over on the right side of your screen.
- There should be two types of camera views
- Single view (bottom left) and Quad view (bottom right)



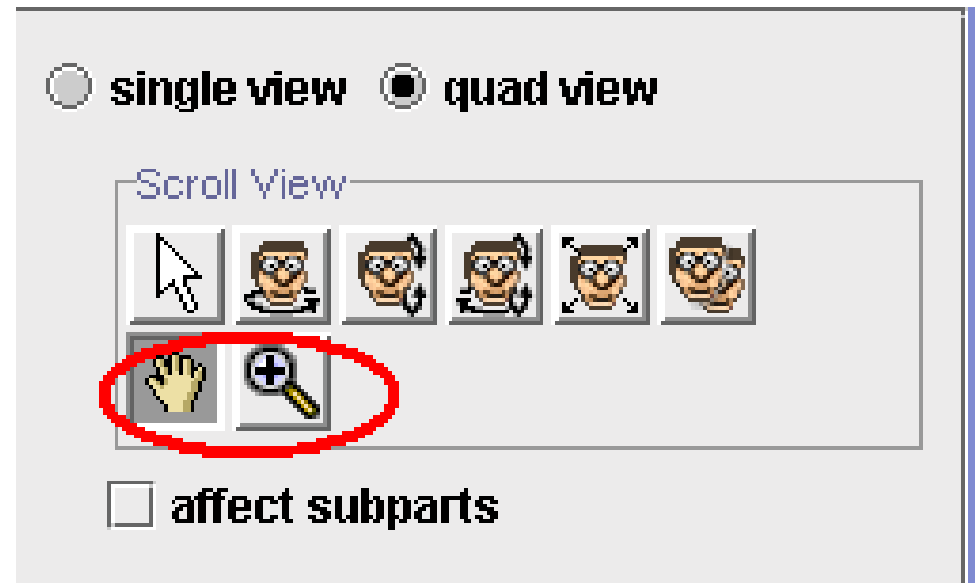
Quad View

- Quad view is good for fixing the positioning of your characters in the world
- Try to position your characters so that they appear in all four screens of your world.
- This helps to make sure that your characters aren't up in the air, or far apart.



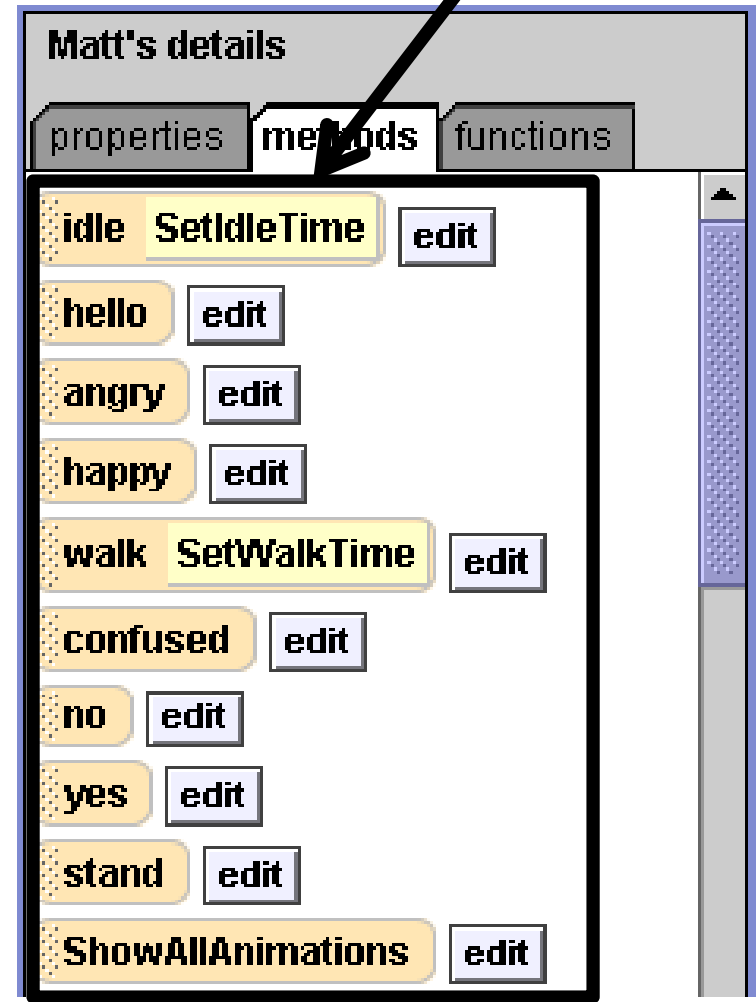
Quad View (Continued)

- Look over on the right, under quad view.
- Note the button that looks like a hand
- This allows you to move around the camera in Quad View
- The Magnifying glass allows you to zoom in while in quad view, to better position your characters
- You'll need to click and drag on your viewing windows when using both of these buttons.
- Try them out now to center your characters in each view.



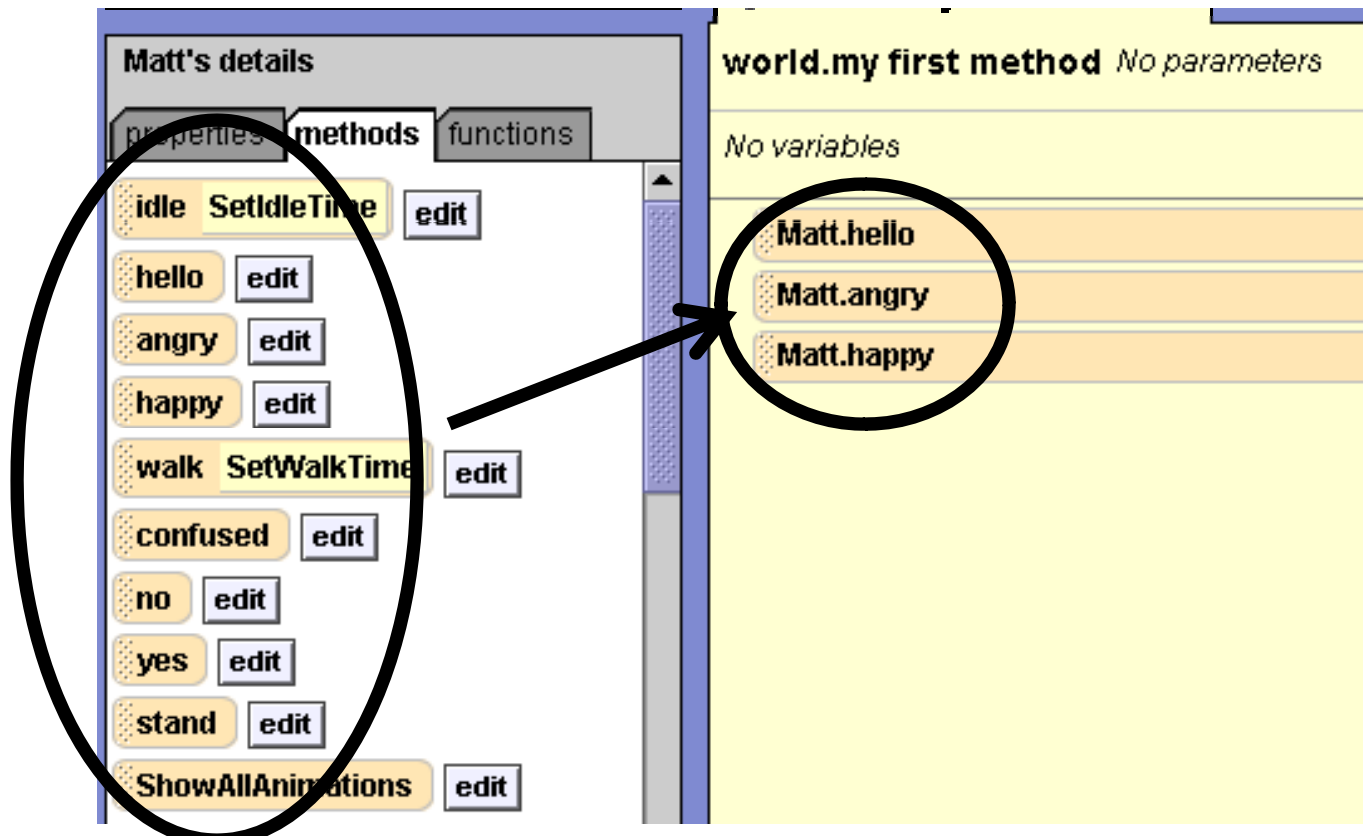
Animating your Characters

Once you have your characters in your world you can start to animate them. Click on one of your characters in the object list. For us it is Matt. Look on the left of your screen under Matt's details. There should be a list of methods. This is the list of actions that your person can already do.



Starting your Own Method

- You can click and drag any of these methods into the main section called “world.my first method”. Try this with a few of them.
- Now click “play” in the top left hand corner.
- Your character should animate however you have coded him.



Move one of your characters around in your world using quad view until they are standing right next to the horse, something like this:



Nice job! Now we are ready to move on to Part 2.