ORACLE ACADEMY

Tutorial 2: Add and Position Objects

Overview	In this tutorial, you will add objects and position them using precise and imprecise techniques. You will create an underwater scene that will form the initial scene for a future animation.
Key Concepts Learned	• Add multiple objects to a scene • Describe the difference between precise positioning and drag-and-drop positioning • Use a one-shot procedure to precisely position an object in a scene • Edit properties of an object in the Scene editor • Describe three-dimensional positioning axes • Position the sub-parts of an object in the Scene editor
Difficulty Level	Beginner: This tutorial is appropriate for someone who has used Alice 3 to: • Create and save a new project • Add an object to a scene • Code a simple programming instruction • Use the copy and undo command • Run the animation to test and revise programming statements
Duration	30-40 minutes
Notes	This tutorial was built using Alice 3.1.81.

Part 1: Define the Scenario

Review the scenario and corresponding animation. In this tutorial, you are going to create an animation from the scenario defined below.

Scenario	**Animation (Initial Scene)**
Two fish are having a conversation and do not know a shark is hiding behind them in a cave.	Two fish face each other, engaging in conversation. A shark hides in a cave ready to surprise them at any moment.

Part 2: Add Objects to the Scene

1.	Open Alice 3. Select the **SEA FLOOR** template, then click **OK**.
2.	In the **File** menu, select **Save As...** Open the folder where you store all of your Alice 3 projects. Name the project **Tutorial 2**. Click **Save**.

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	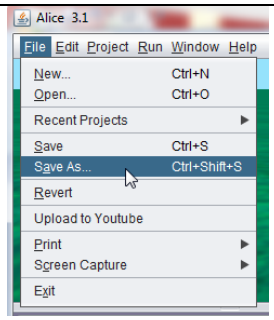 *Save projects frequently to avoid losing your work.*
3.	Add the following fish objects to the scene. ***Note:*** *At this point, do not move any of the objects with your cursor. Leave them where they are. In the next section, you will precisely position these objects using procedures.* • Clown Fish • Shark • Blue Tang
4.	Add the following prop objects to the scene. ***Note:*** *At this point, do not move any of the objects with your cursor. Leave them where they are. In the next section, you will precisely position these objects using procedures.* • Cave • 5 seaweed • Treasure chest

Part 3: Position Objects in the Scene Using Procedures

1.	In the **object tree**, right-click on the cave.
2.	From the menu, select **Procedures.**

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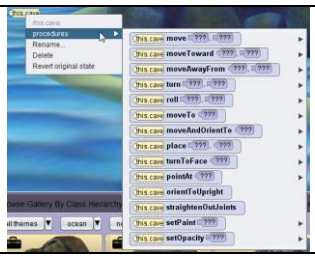
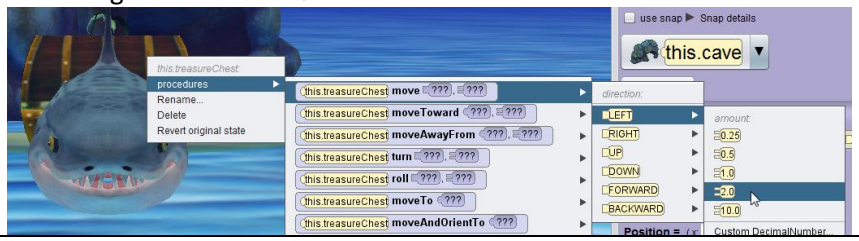
	
3.	Select the **move** procedure. Select arguments: **BACKWARD**, then **CustomDecimalNumber…** Enter **4** in the calculator that appears. Click **OK**.
4.	Right-click on the Treasure Chest and select **Procedures**. Select the **move** procedure. Select arguments: **LEFT → 2.0**. 
5.	Right-click on the **Shark**. Select **Procedures**. Select the **moveAndOrientTo** procedure. Select the **cave**. *The shark will move inside of the cave and appear to sink into the ground. Leave the shark in this position. You will reposition the shark in future steps.*
6.	In the object tree, right-click on the Clown Fish. Select **Procedures**. Select the **move** procedure. Select arguments: **FORWARD → 2.0**.
7.	In the object tree, right-click on the Clown Fish. Select **Procedures**. Select the **move** procedure. Select arguments: **RIGHT → 2.0**.

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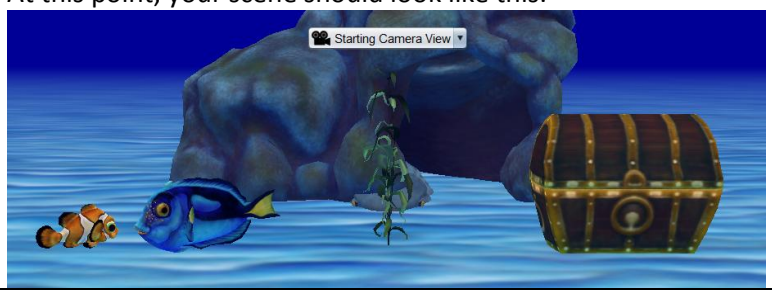
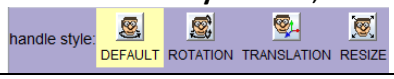
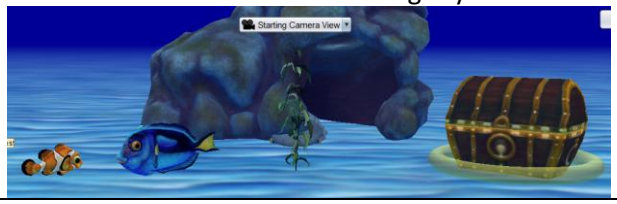
8.	Right-click on the Blue Tang. Select **Procedures**. Select the **moveToward** procedure. Select arguments: **ClownFish** → **2.0**.
9.	Right-click on the Blue Tang. Select **Procedures**. Select the **turnToFace** procedure. Select the **ClownFish**.
10.	Right-click on the Clown Fish. Select **Procedures**. Select the **turnToFace** procedure. Select the **BlueTang**.
11.	At this point, your scene should look like this: 

Part 4: Position Objects Using Handle Styles

Now you will position the objects using the four handle styles to fine-tune where the objects are positioned in the scene.

1.	In the **Handle Style** menu, select the **Default** handle style. 
2.	Click on the Clown Fish with your cursor. Drag the Clown Fish slightly backwards, away from the Blue Tang, so they aren't so close to each other's faces.
3.	Click the **CTRL key** on your keyboard while clicking on the Treasure Chest with your mouse. This will allow you to rotate the Treasure Chest with your mouse. Turn the Treasure Chest so it is slightly turned to the right, facing the camera. 
4.	Select the Treasure Chest from the instance menu on the right. Click the arrow next to the Treasure Chest to display the list of its subparts. Select the **Treasure Chest Lid** subpart.

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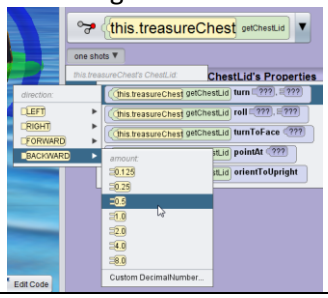
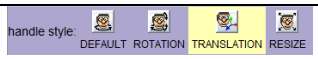
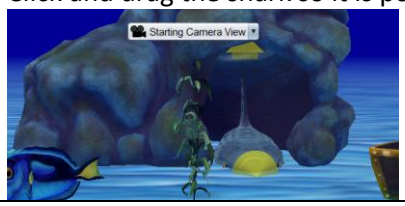
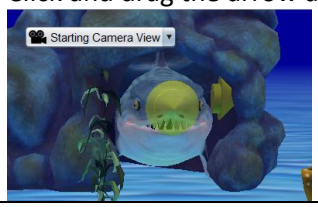
5.	In the one-shots menu, select **Procedures**. Select the **turn** procedure. Select arguments: **BACKWARD** → **0.5**. 
6.	Select the Translation handle style. 
7.	Click and drag the shark so it is positioned inside of the cave entrance. 
8.	Click and drag the arrow above the shark's head to move the shark up so his entire body is visible. 
9.	Click and drag the arrow in front of the shark's face to move the shark slightly backward into the cave.
10.	Click and drag the seaweed so they are to the left of the cave. Position the seaweed as you wish.
11.	At this point, your scene should look like this:

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Note: You can use the camera arrows to reposition the camera so you have a different view of the scene.

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