

Tutorial 15 – Noah’s Chain

A few weeks ago Noah did a quick little experiment with making a chain and then applying some forces to it. Let me see if I can recreate what he did....

First let’s build a chain.

Create a polygonal **Torus**.

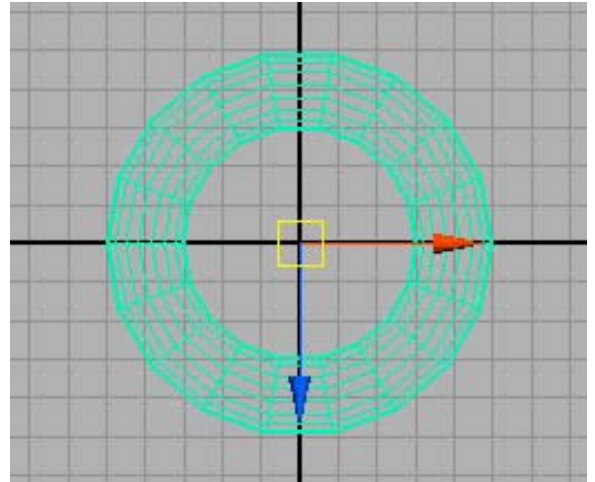
In the **Channel** box name it **chain**.

Also in the **Channel** box, set the **Radius** to **4** and the **Section Radius** to **1**.

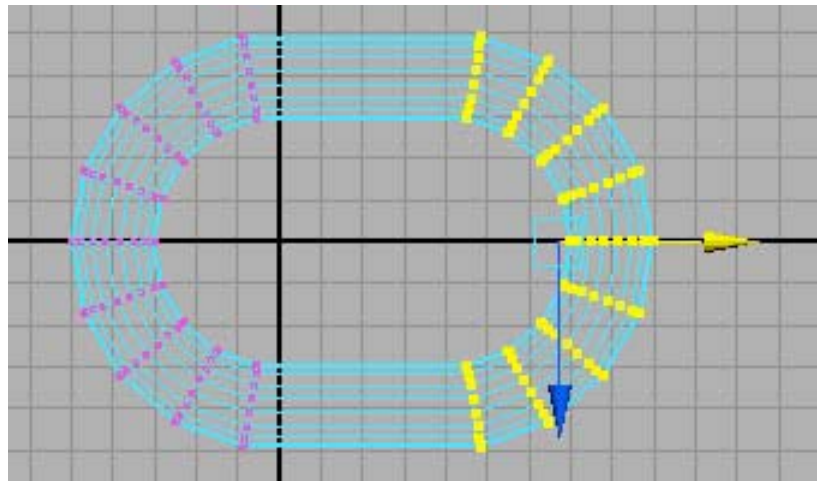
Set the **Subdivisions Axis** and **Height** to **18**.

Set the **Translate X, Y, and Z** to **0**.

Switch to the **Top Orthographic** viewport.

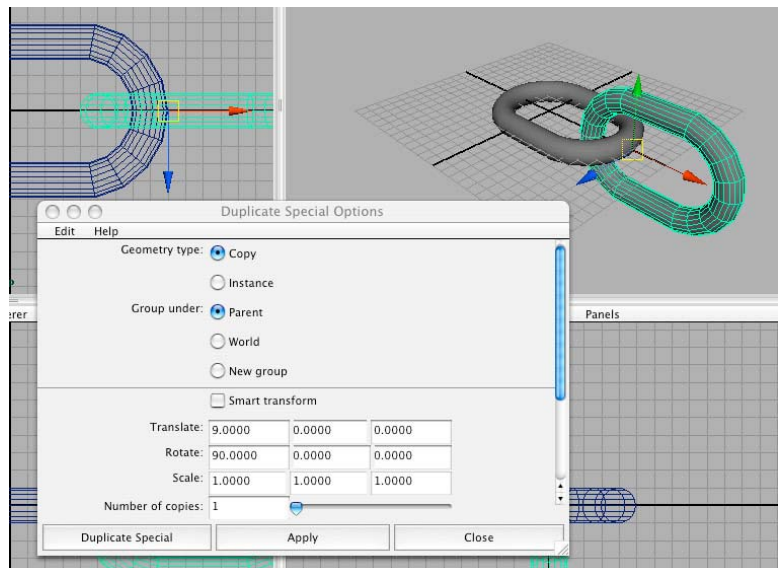


In order to make the Torus look like a chain link we need to move one half of the Torus, Using the **Marking Menu** select **Vertex**. **Drag-select** one half of the Torus and stretch your Torus with the **Move** tool.



Switch back to Object Mode and select the chain link.

Choose **Edit > Duplicate Special** 



In the Duplicate Special menu choose **Edit > Reset Settings**

Your settings in this menu will differ from mine depending upon how large you made your Torus. I INTENTIONALLY did this in order for you to better understand how to use the menu. You will need to experiment to find the exact numbers.

To make the chain we need to **Translate** and **Rotate** the duplications.

Enter the number of grid spaces you want each chain to move in the X direction – **be careful not to let any of the chain links touch.**

We also want to **Rotate** each successive link **90°** - enter the value of **90** in the **Rotate box for X.**

After you enter your values, click **Apply**. If it's not right, **Undo** it and keep trying.

These values worked for me:

Translate: 9 0 0

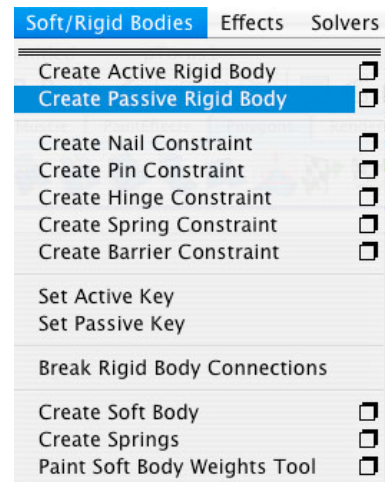
Rotate: 90 0 0

Scale 1 1 1

If you only made one copy, then **Undo** the duplication and set the Number of Copies to a value of your choosing.

Adding Dynamics

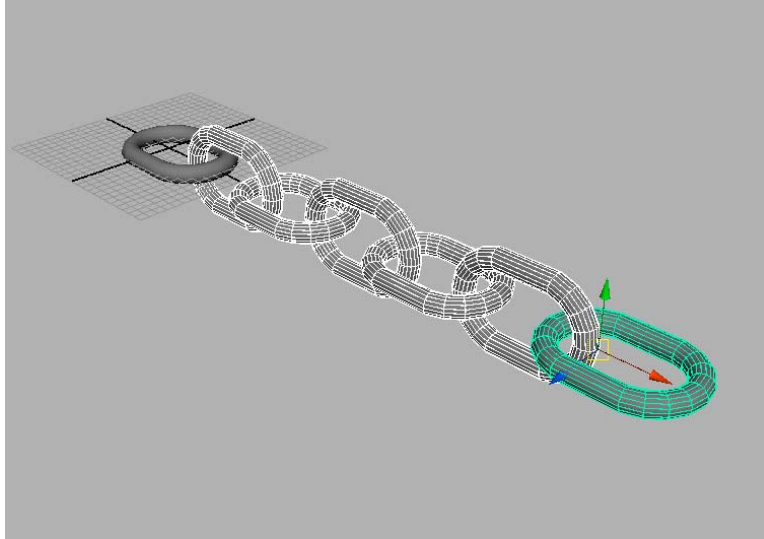
Select the first chain link and switch the **Dynamics Menu Set** (or press F5).



This first link will not move so we need to make it a "Passive Rigid Body" - Select **Soft/Rigid Bodies > Create Passive Rigid Body.**

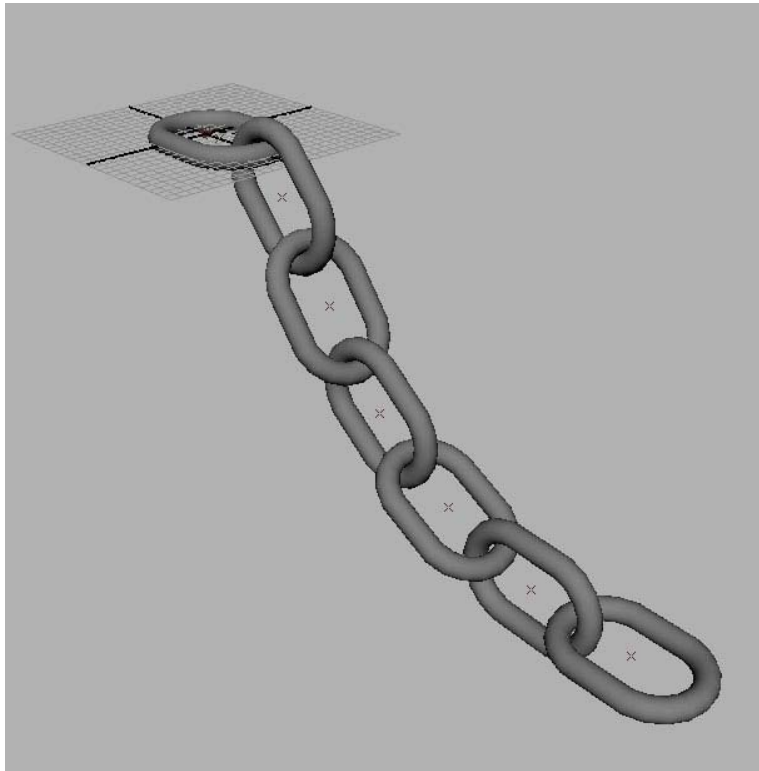
The rest of the chain will be affected by gravity.

Select the other links in the chain and make these "Active Rigid Bodies" – Select **Soft/Rigid Bodies > Create Active Rigid Body.**



With these selected go to **Fields > Gravity**

There you have it. Now your chain will be affected by gravity.



Play your animation in your timeline. You will need to add frames to your timeline.