

Product Modeling and Display



This is a basic skill project for beginning modelers/animators. Knowing how to wrap a set of materials onto a box, light and animate the camera for a product display is commonly used.

STAGE I - Preparing the Textures

PhotoShop

1. Right click on the scan of the Fruit Loops box on our class website. Make a master folder in your filing system and call it "Product Presentation". Inside this folder make a second folder, name it "Images". (*Organization is critical. Don't save time by having a sloppy filing system!*)



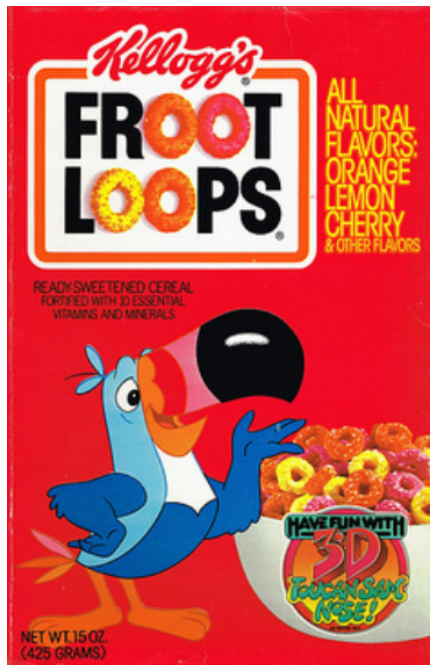
2. Name the image, save it and open it in PhotoShop. The first task is to clean up the image.
3. After cleaning the image, separately select, copy and paste the front, back, sides and top into individual files (see next page)

4. Rotate the top to read properly.



5. Save the files and name them; Front Back, Top , Right Side, and Left Side.

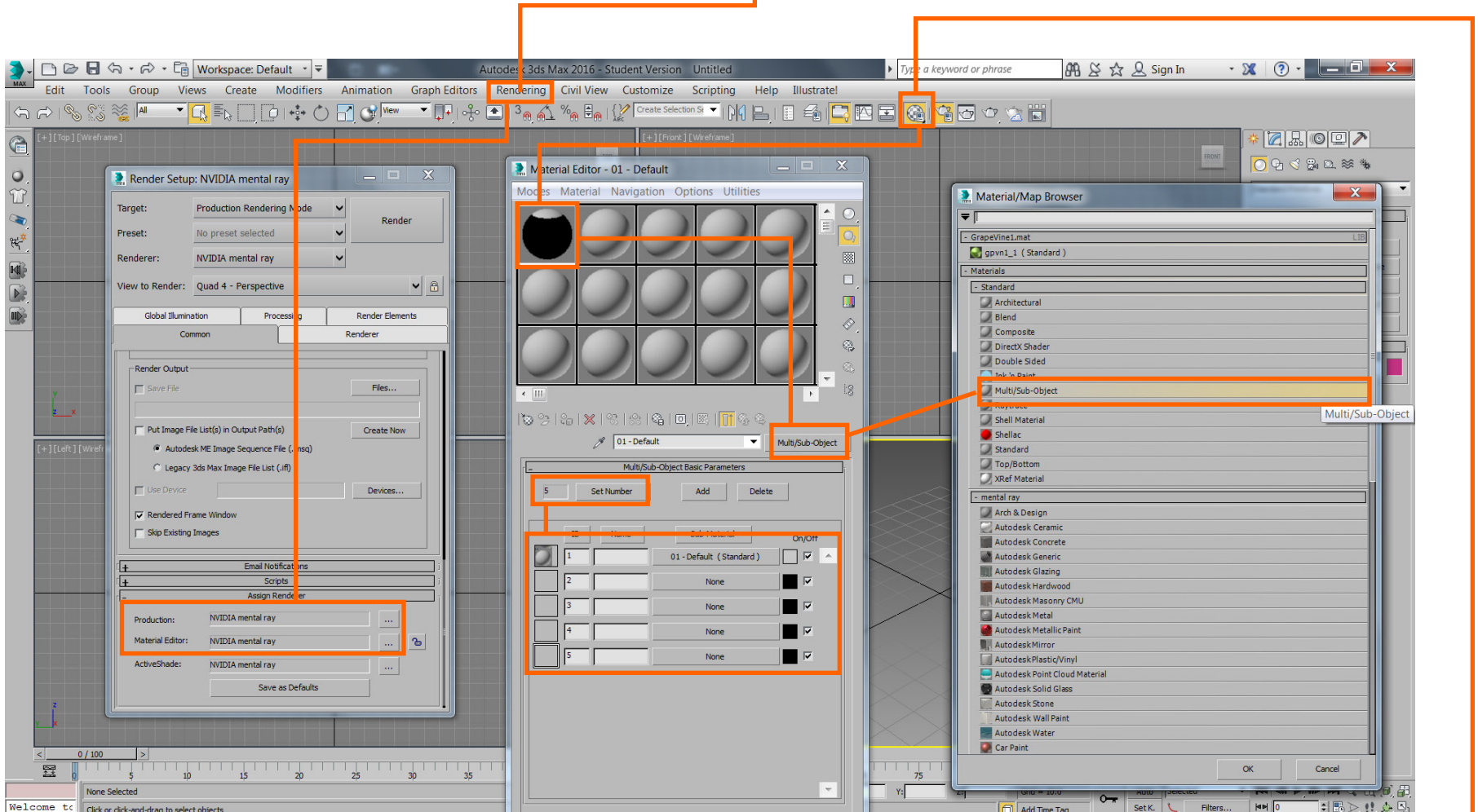
Save them as Tif files. Tif files are a common file type used by graphic designers.



STAGE II - 3D Max - Creating & Applying Materials

SETTING 3D MAX - You'll want to make sure that 3D Max is set to:

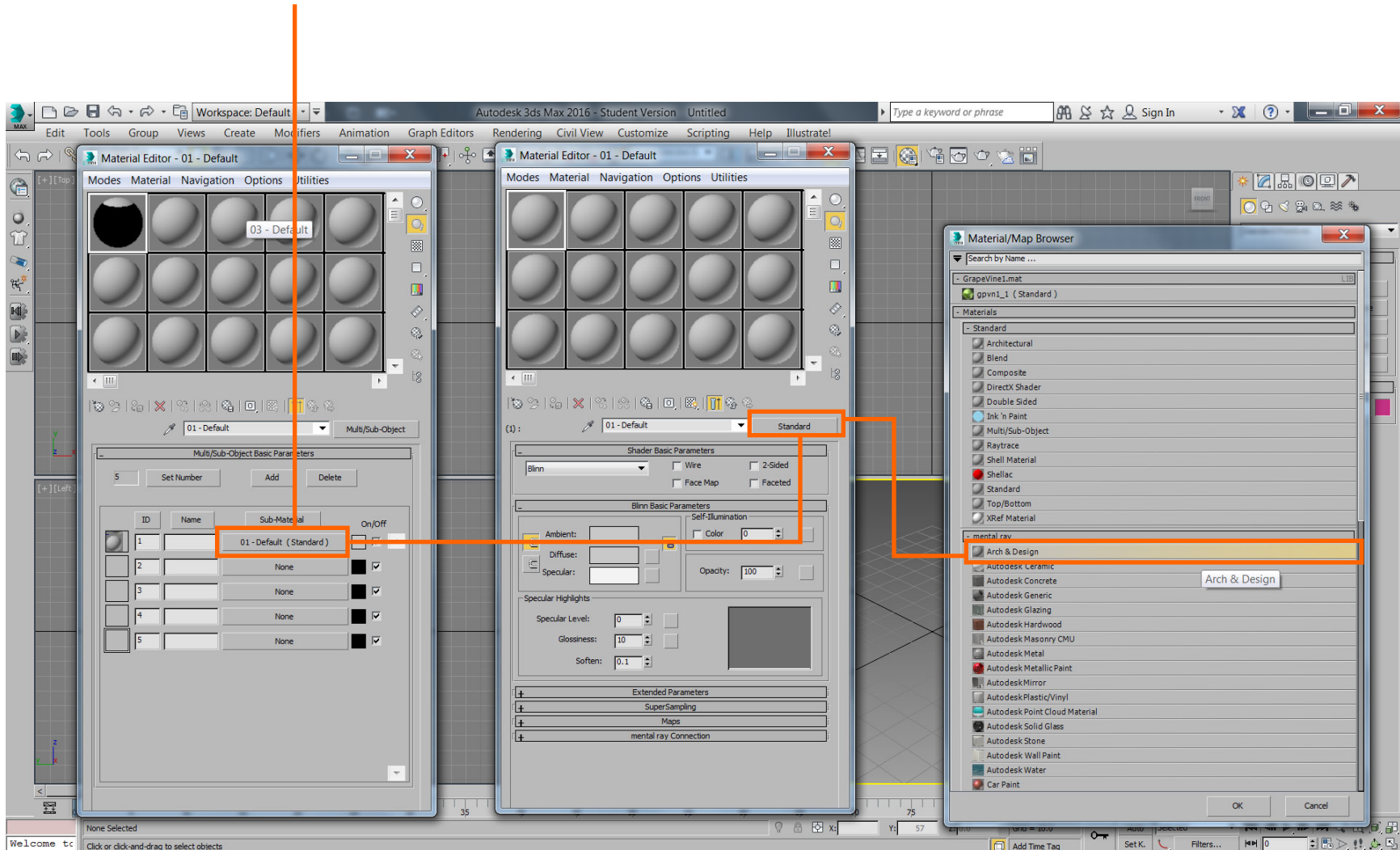
- a. Set the renderer to Nvidia Mental Ray - This will allow you to use Mental Ray/Arch&Design materials. These materials offer a high degree of realism.



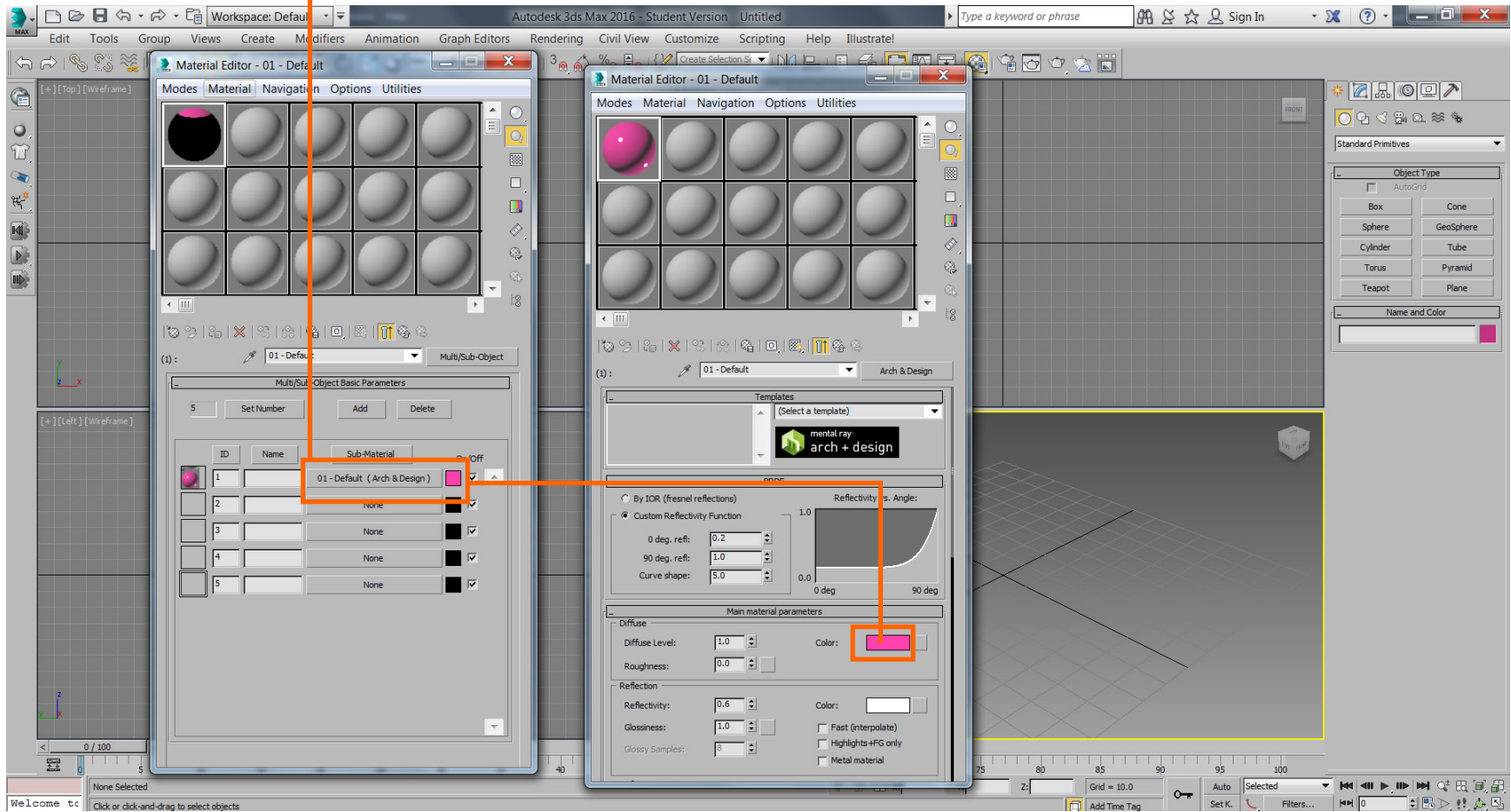
- b. Open the Material Editor and make sure the first material sphere is set to "Multi-sub-object. Since the box will use 5 different materials adjust the number as shown.

CREATING THE MATERIALS - You'll want to make sure that 3D Max is set to:

1. Select each Sub-Object slot and assign a Arch&Design material.



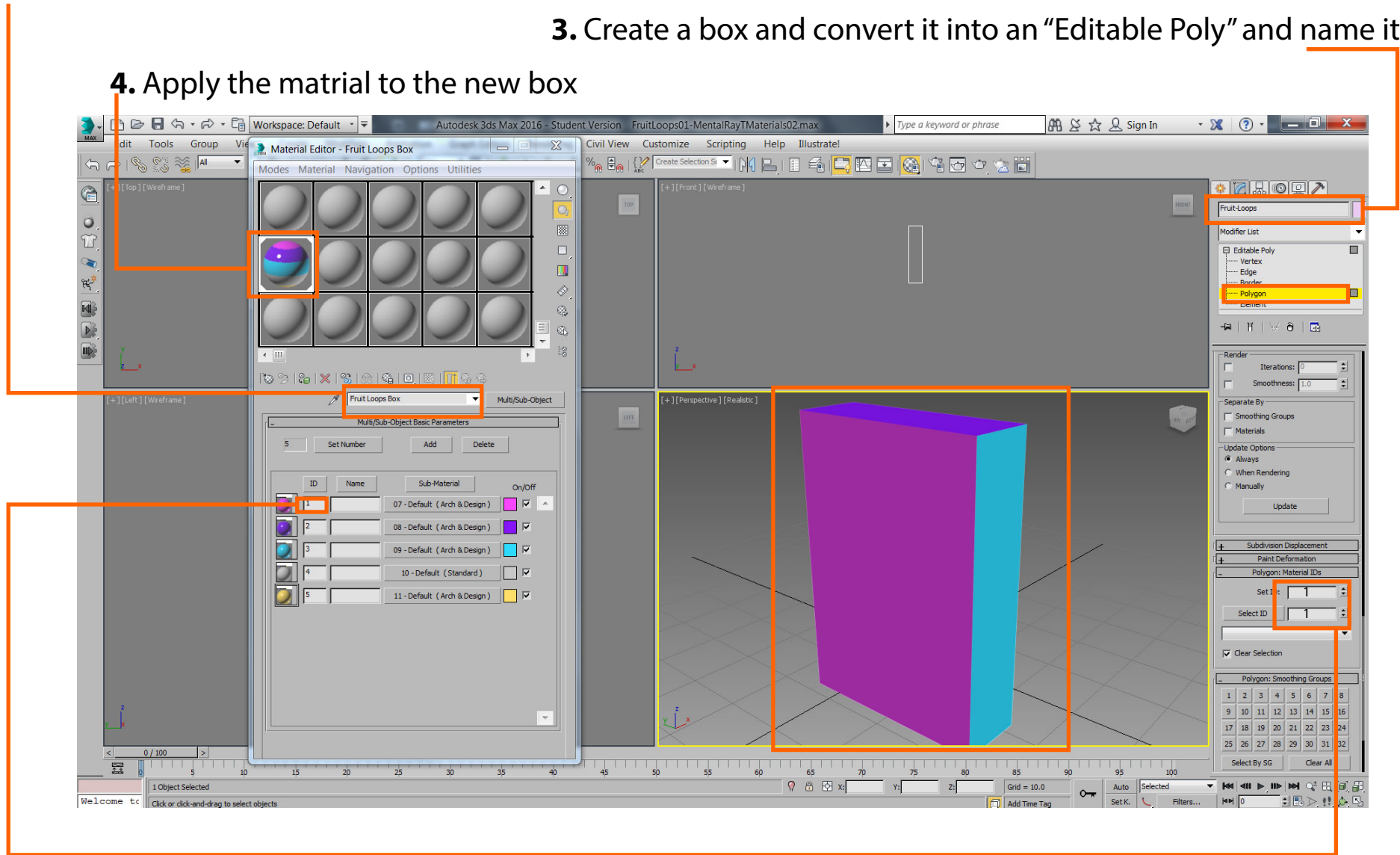
2. Give each of the 5 slots a unique color. This is set in the "Difuse" color picker. Later we will swap out each color for one of the images of the cereal box.



Don't forget to name your material!

3. Create a box and convert it into an "Editable Poly" and name it!

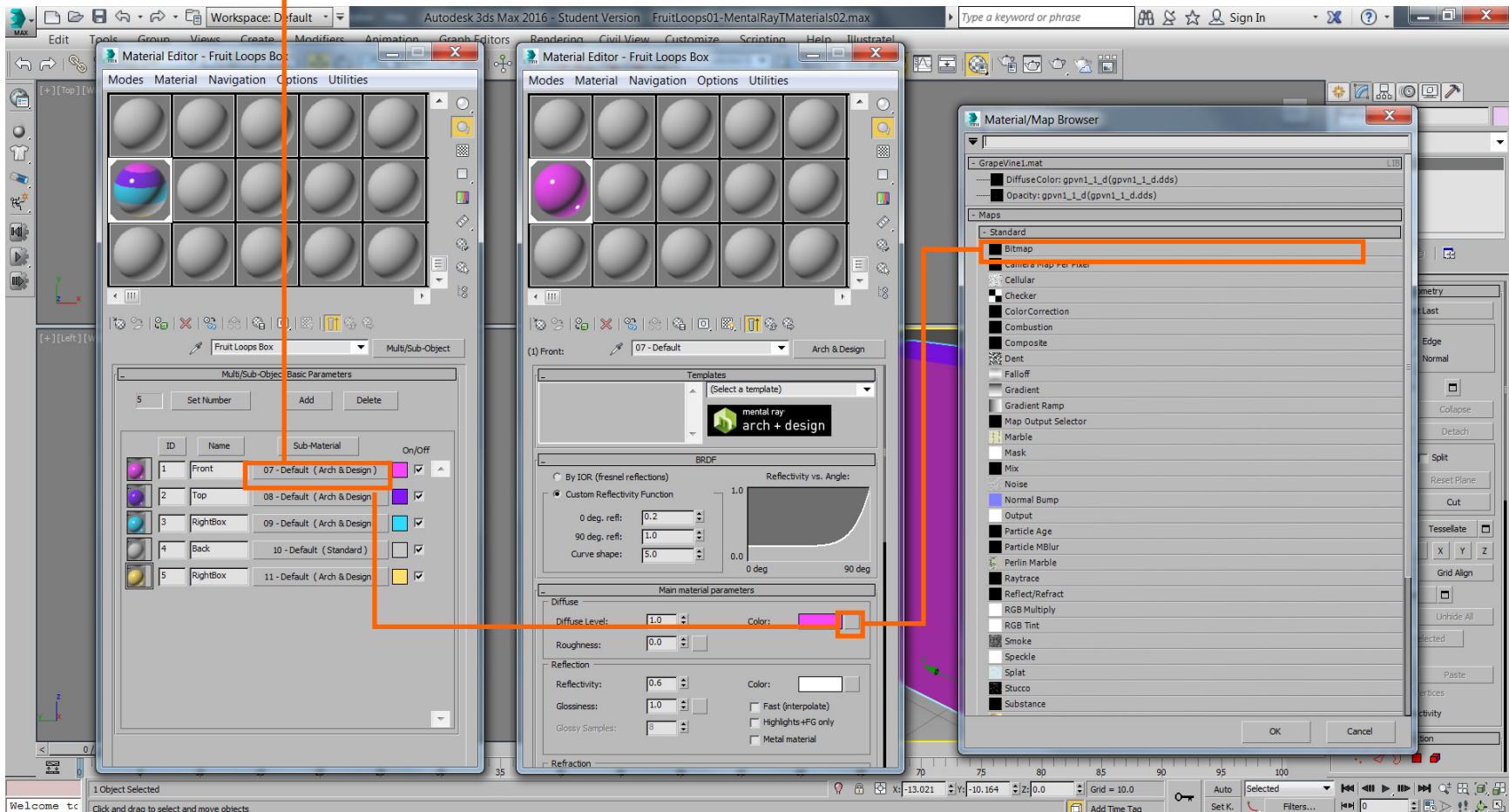
4. Apply the material to the new box



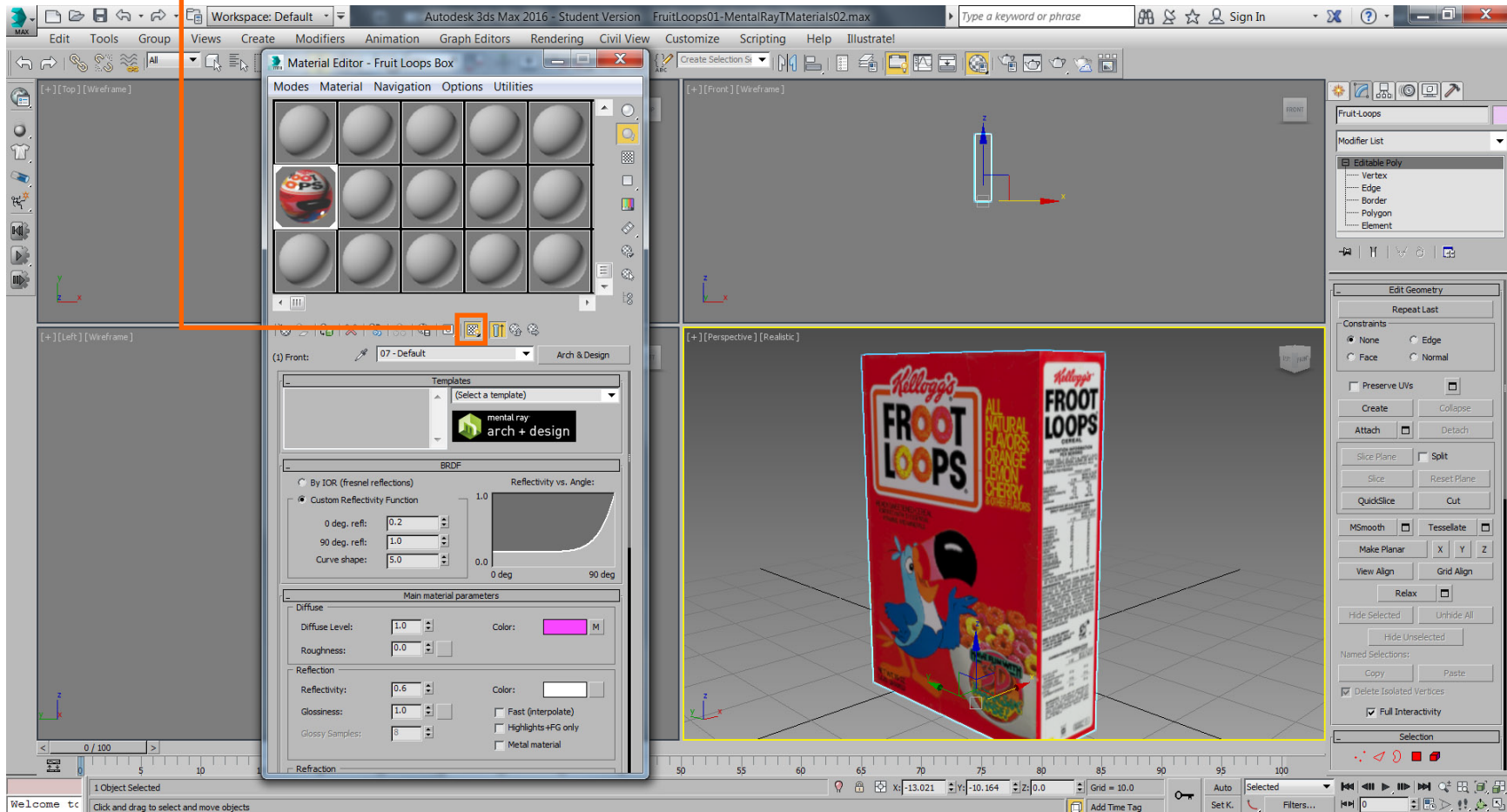
5. At the Polygon level, select each polygon and set its' ID number to match the number in the Material Editor. Each side of the box should now match the color on the material.

Now you'll swap out each color for the appropriate cereal box image.

6. Select the sub object material. Click the button next to the color and click on Bitmap. Tif files are a type of Bitmap. Find the appropriate file and load it into the slot.

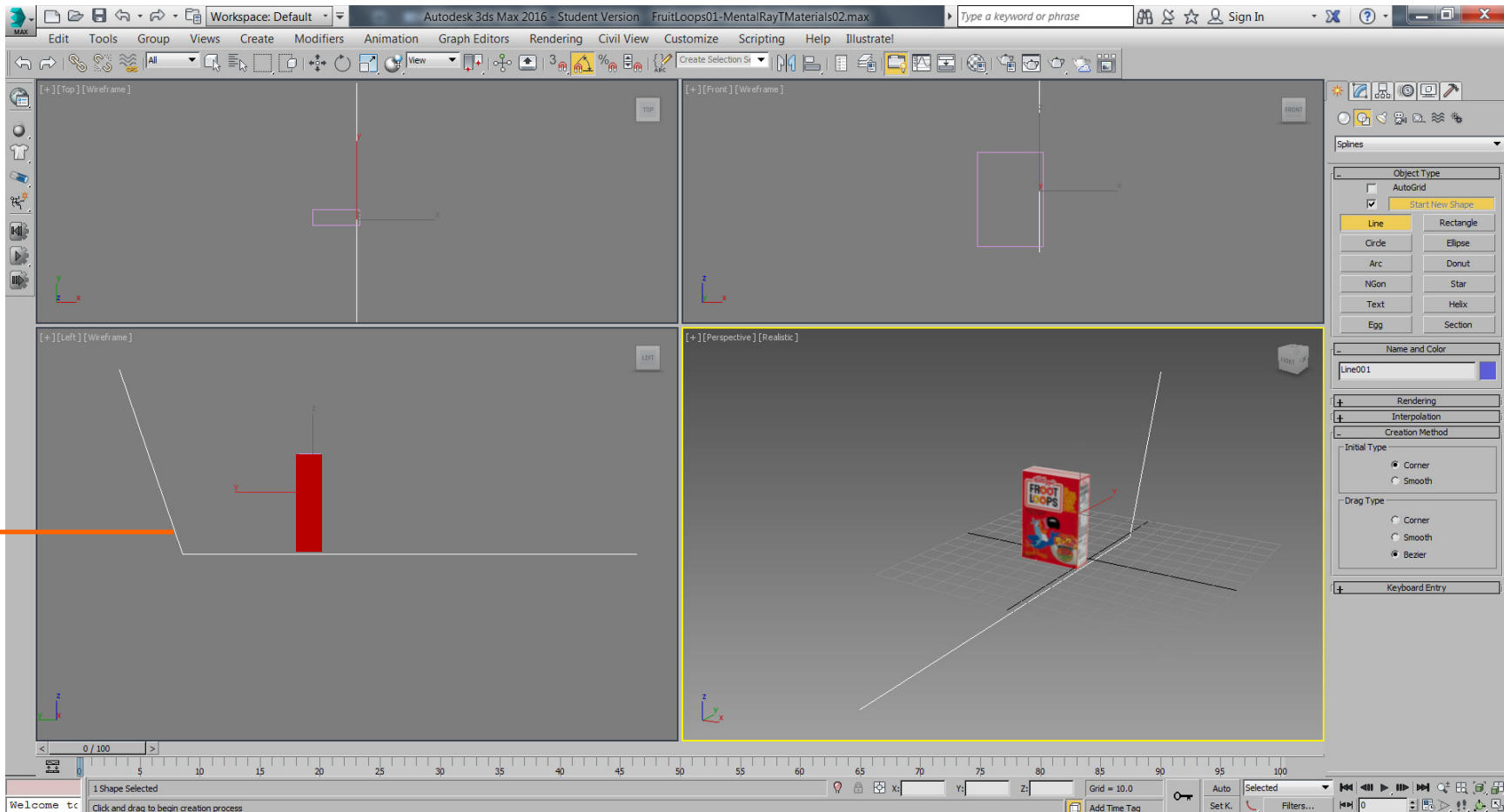


7. Make ure to press the :Show in Viewport” button. This makes the maaterials be seen in the viewport

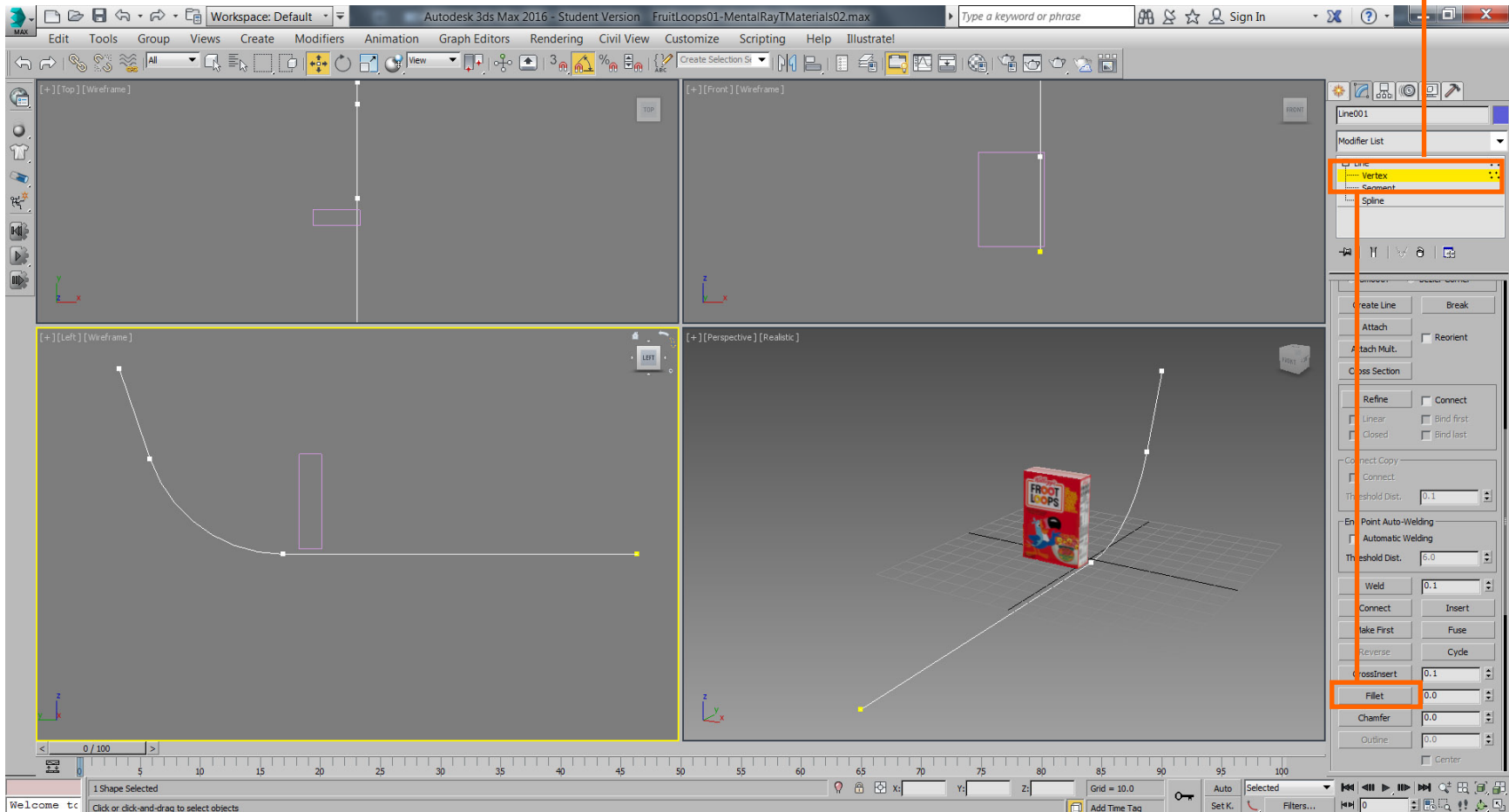


STAGE III - 3D Max - Modeling the Background

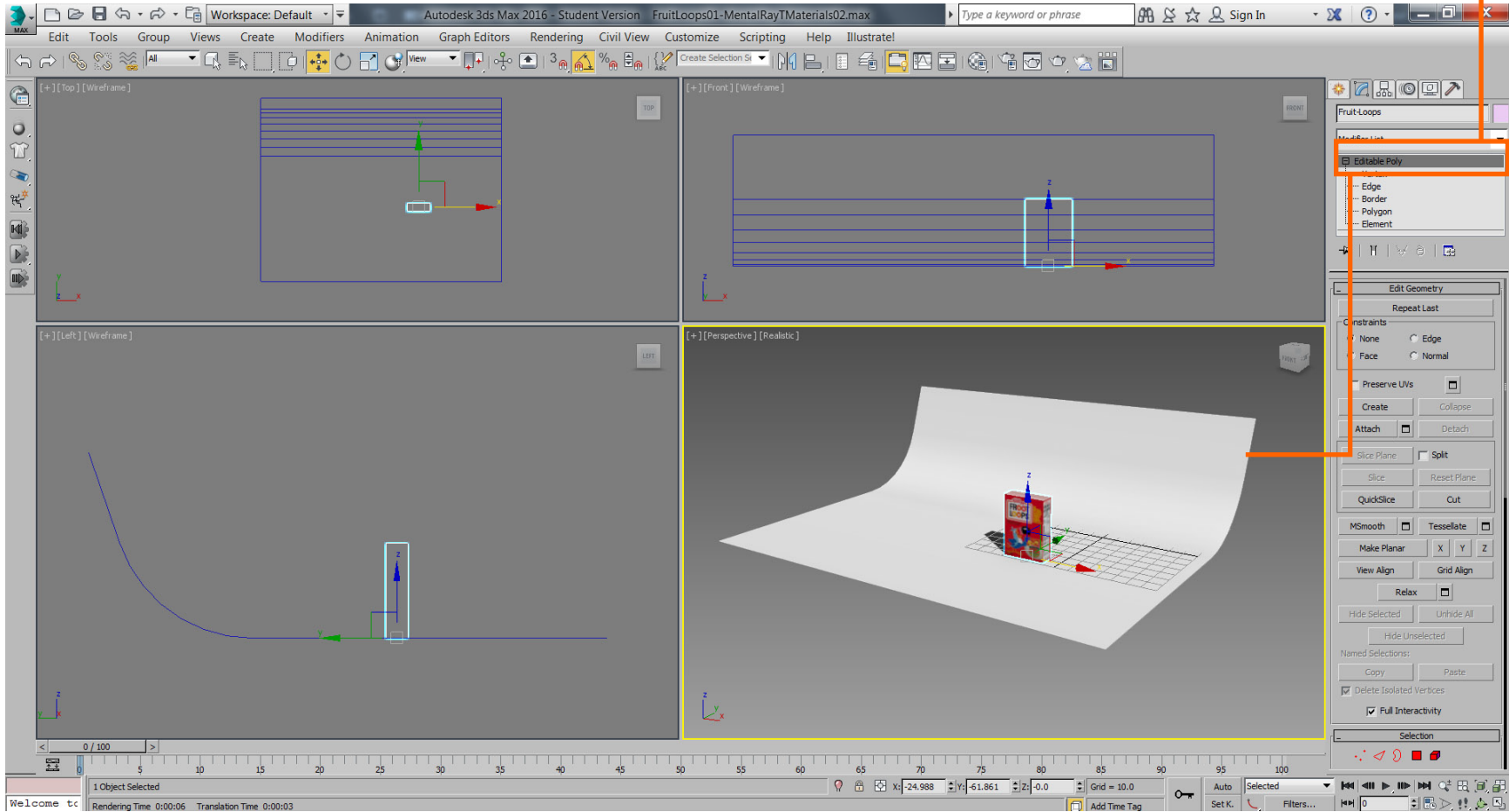
Draw a line in the Side Viewport as shown in the diagram.



Select "Vertex" in the sub object panel and "Fillet" the line into a curve

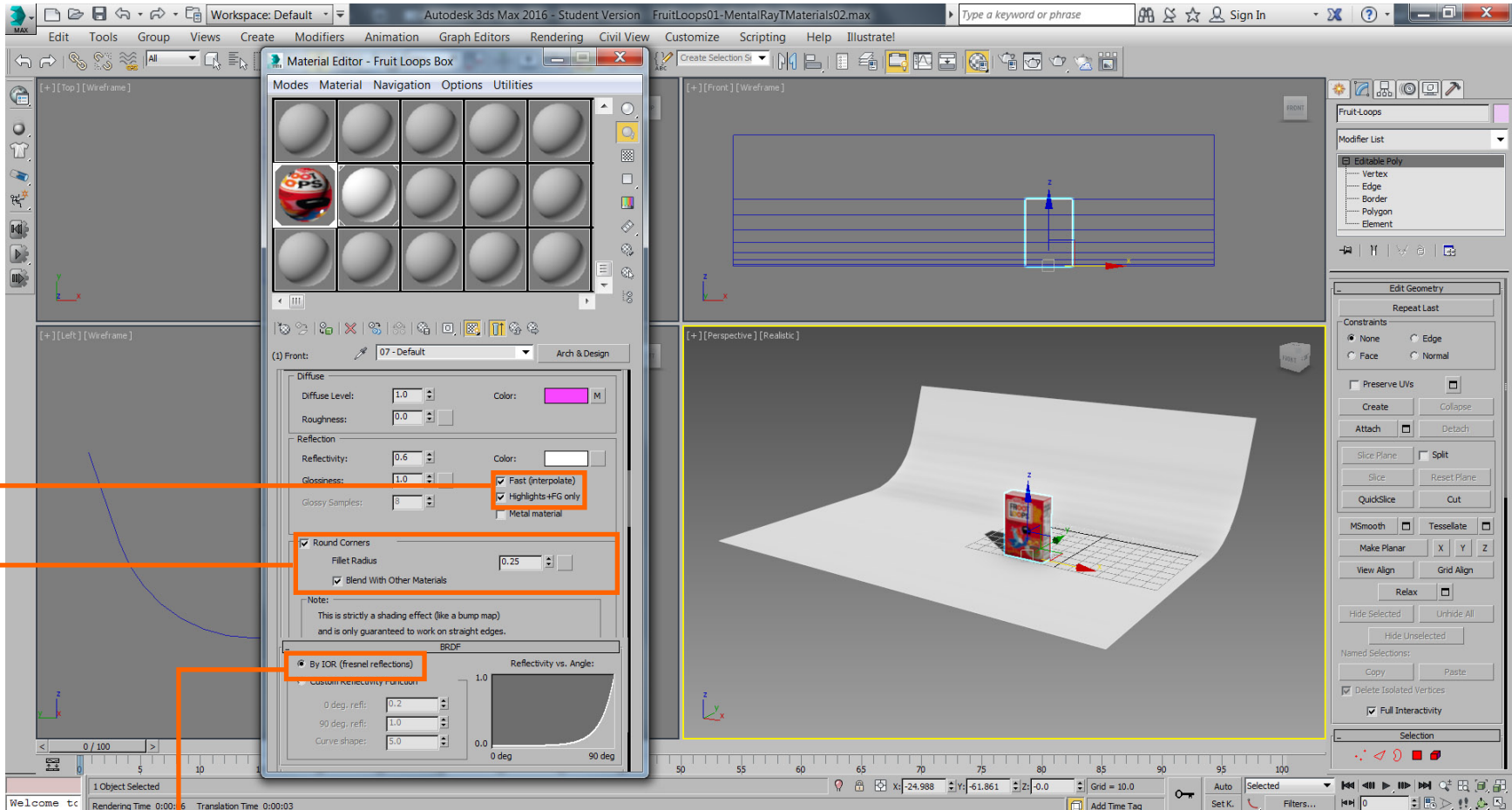


Add the "Extrude" modifier to the line and create a background



Now you'll make a few important changes to all of the sub materials.

Check of both of these buttons. Fast will speed up the rendering time and Highlights will prevent the white stage from reflecting onto the cereal box.



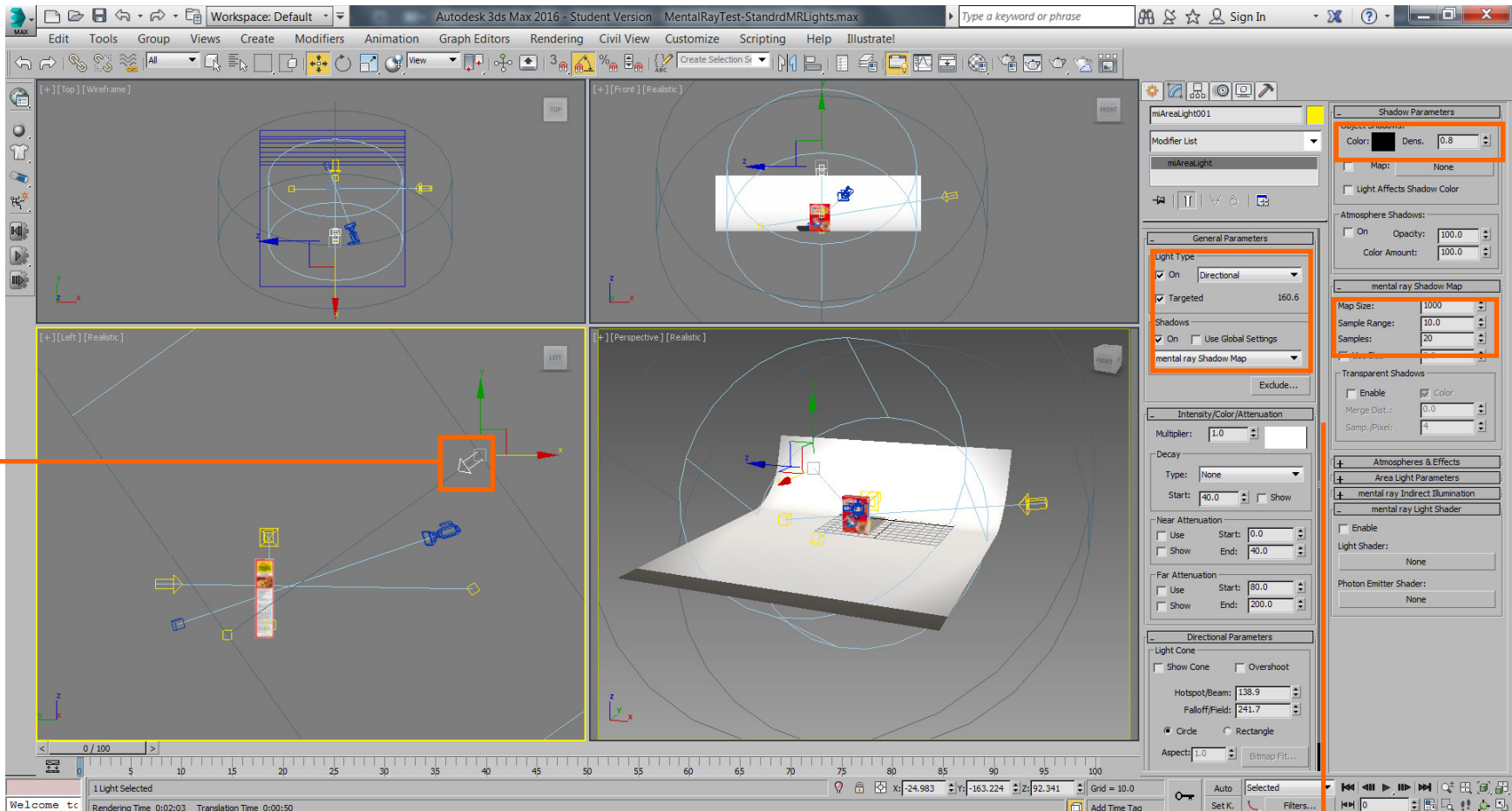
Further helps with cutting down the reflection of the white background.

Setting the "rounded corners" effect will add a degree of realism to your scene by giving the illusion that the edge of the box has a radius that reflect light back to the viewers eye.

STAGE IV - 3D Max - Setting the Lights

You will use three “mr (Mental Ray) Area Spotlights” to light the scene

1. Make your key light first. The Key light is the primary source for lighting the scene typically it behind the viewer (camera) and slightly higher.

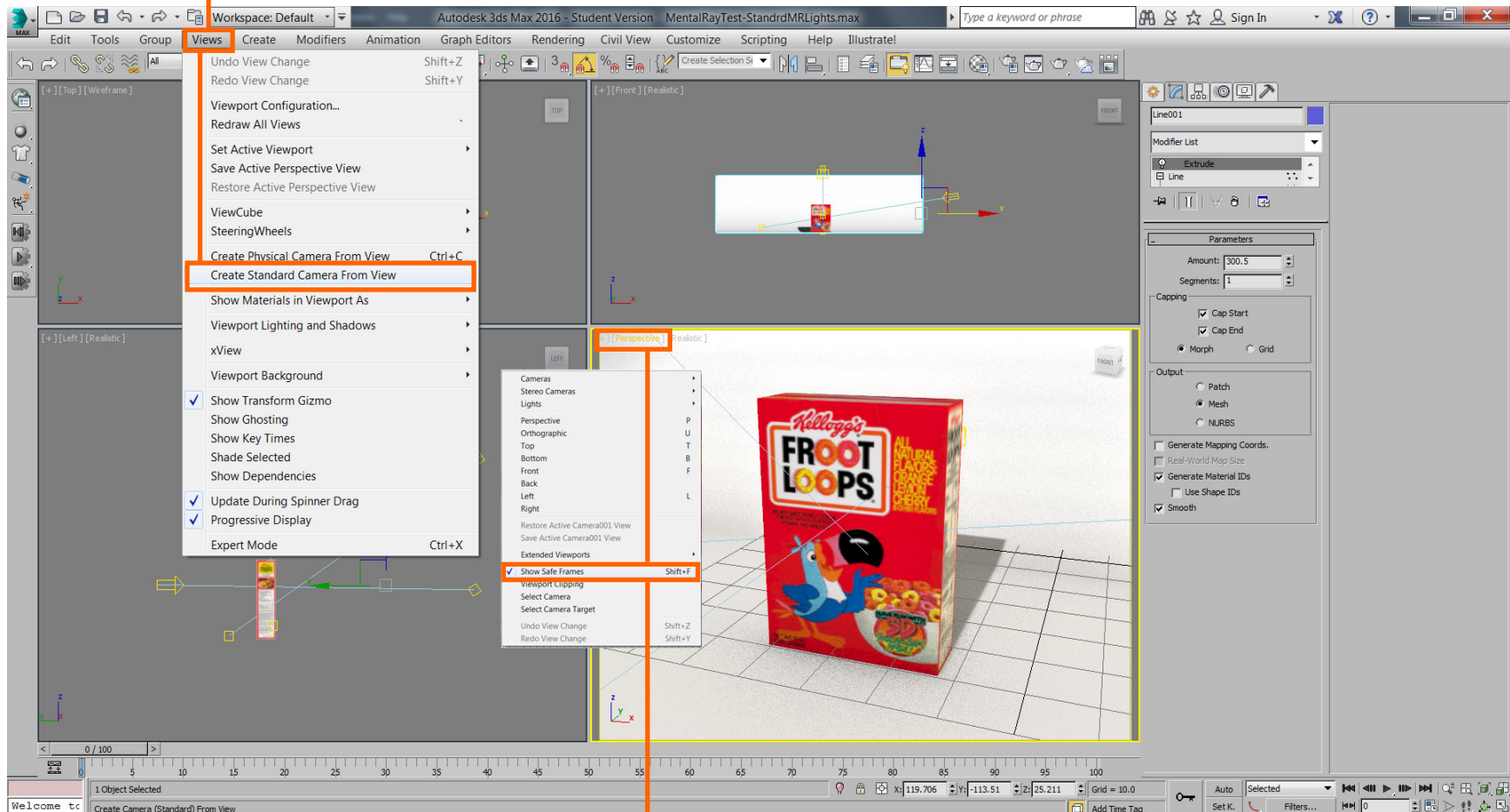


2. Set the parameters for the Key light as shown.

3. Make two more lights - Fill and Backlight. The only difference between these and the Key will be turning off their shadows. Position them as shown.

STAGE V - 3D Max - Positioning a Camera

1. Position the cereal box in the perspective viewport. Then create a Standard Camera.



2. turn on "Show Safe Frames".

STAGE VI - 3D Max - Rendering

1. Open the "Print Size Assistant" and set the parameters as shown. Click Render.

