Lab 5.1
Barilla Pasta Box

Using industry standard animation software create:

- Textured 3D box
- 1 Ground plane
- 1 Target camera
- 4 Omni lights

Learner Outcomes:

1. Gain practice at texture and light settings in the 3D work environment
2. Experiment with simple object and procedural texture creation using keyboard entry
3. Utilize basic transform tools such as Move, Rotate, and Scale
4. Alternative UVW mapping using Channels
5. Rendering from camera view and Title Safe

Begin:

1. Download and unzip: Barilla start and Textures.
2. Change your units: Customize > Units Setup. Choose: US Standard and Decimal Inches.
3. Change Noodle from Green to Tan:
4. Open the Material Editor (M on keyboard)
5. Select an empty Material Slot
6. Click eye dropper in Material Editor
7. Pick the Noodle in the viewport, this pulls the material from the noodle into the material editor.
8. Click Diffuse and Change the Color to a Light Tan Color.
9. Create Box: Activate the camera view by click in it. Using keyboard entry, create a box with the following dimensions: Barilla Box Dimensions:

10. Length, Width, Height Segments: 1

L=7.25"	W=1.75"	H=3.75"
X= -.7"	Y=0"	Z=0"

1. Note: The Box gets created over the Green Noodle
2. Right Click Camera viewport label and goto Configure
3. In Viewport Configuration > Safe Frames > Check "Show Safe Frames in Active View". This Shows you the Current Rendering Width and Height Settings in your viewport.
4. Goto Rendering > Print Size Assistant. Set the following: Paper Size: A - 11 x 8.5in, Portrait, DPI: 300. Click Render Setup. New Width and Height are filled in. Note changes and close window.
5. Note: Notice how the cameras viewport changes to reflect new settings.


Diffuse_Back.jpg


Diffuse_Bottom.jpg

Diffuse_Front.jpg

Diffuse_Left.jpg

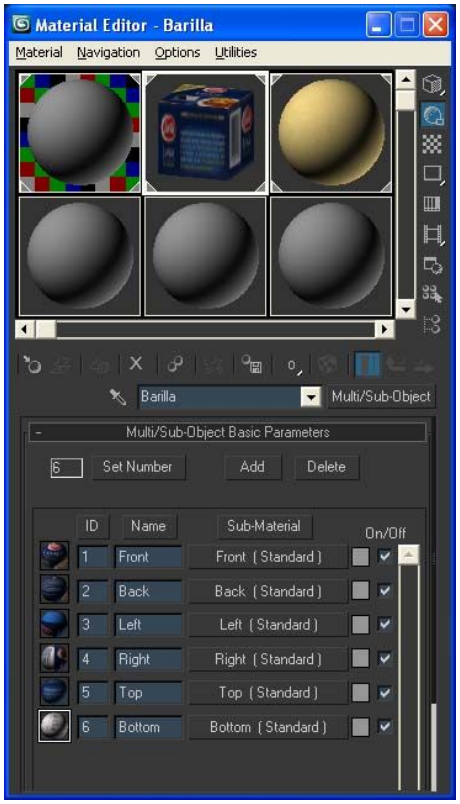
Diffuse_Right.jpg

Diffuse_Top.jpg


Opacity_Front.jpg

Box Material:

1. Bring up Material Editor (M on keyboard)
2. Click on Standard. Click on "Multi/Sub Object" Material. Click Ok.
3. Click "OK" disgard old material.
4. Click "Set Number". Input 6 and click ok.
5. Name the base material: Barilla. Name all sub materials as the following (see image at right)



Box IDs:

1. Add an edit poly modifier to the Box.
2. With the modifier selected, Press "4" on the keyboard. This selects Polygon sub-object mode.
3. Select the Polygon face of the Box's Front, set its ID to 1. This matches its ID to the Material ID for Front.
4. Repeat Step 3 for each side of the box, setting each sides ID to match the Material ID in the Material Editor.
5. Exit edit poly, polygon sub selection mode by pressing "4" on the keyboard. Or click on the polygon icon to turn it off.
6. With the box selected and the Material editor open press apply material to selection button or drag the material onto the object.

Load Bitmaps:

1. Click on front material. Open the maps rollout. Click on none next to diffuse color. Choose Pick bitmap. Load the matching diffuse image: "Diffuse_Front.jpg" Set Channel to: 1
2. Click on back material. Open the maps rollout. Click on none next to diffuse color. Choose Pick bitmap. Load the matching diffuse image: "Diffuse_Back.jpg" Set Channel to: 2
3. Click on left material. Open the maps rollout. Click on none next to diffuse color. Choose Pick bitmap. Load the matching diffuse image: "Diffuse_Left.jpg" Set Channel to: 3
4. Click on right material. Open the maps rollout. Click on none next to diffuse color. Choose Pick bitmap. Load the matching diffuse image: "Diffuse_Right.jpg" Set Channel to: 4
5. Click on top material. Open the maps rollout. Click on none next to diffuse color. Choose Pick bitmap. Load the matching diffuse image: "Diffuse_Top.jpg" Set Channel to: 5
6. Click on bottom material. Open the maps rollout. Click on none next to diffuse color. Choose Pick bitmap. Load the matching diffuse image: "Diffuse_Bottom.jpg" Set Channel to: 6

Show Maps in Viewport:

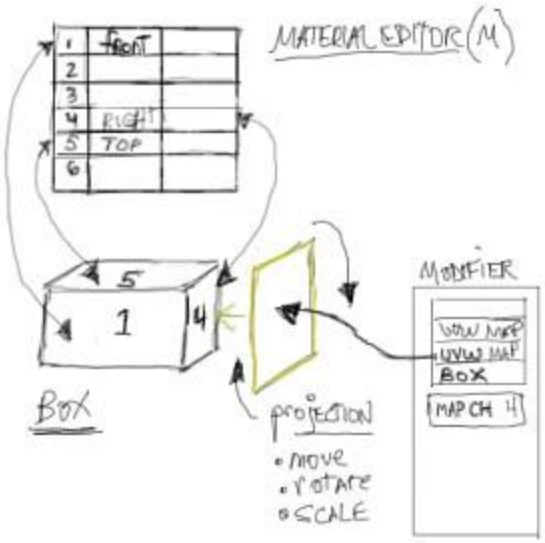
- In order for you to adjust the mapping you'll need to show the bitmaps in the viewport. Click on the Front, Back, Left, Right, Top, and Bottom Materials and press the "Show Map in Viewport" button. This shows the Image Mapping in the viewport

Adjust Mapping:

1. Add a UVW Mapping Modifier to the box for each Channel of your texture. Six total. Set each Channel ID (1-6) for each modifier. These are planar maps**(See image to Right)**
2. Using the viewport click on each UVW Mapping modifier and press: "Fit", to scale the image to fit the Polygon face. Also you may have to open the UVW Mapping modifier and use the Move, Rotate, and Scale gizmo to adjust images to fit the box.

Note: If the images are inverted try to rotate the gizmo 180 degrees.

Notes: The material editor, the object and the UVW Mapping work together through the use of the Channel IDs.



Add a Window for noodle:

1. Open the Material editor (M)
2. Click on front material again. Open the maps rollout. Click on none next to opacity color. Choose Pick bitmap. Load the matching diffuse image: "Opacity_Front.jpg" Set Channel to: 1
3. Set Channel ID to: 1 (matching Diffuse Map)

Note:

By loading an image into the Opacity slot you can control how transparent an object is. Black is transparent. White is solid. Black conceals (surfaces) White reveals (surfaces). Degrees of gray allow semi transparency.

Primitive Plane:

1. Add a primitive plane. Segments set to 1 for Length and Width. Place this below your Barilla box. Add a raytrace map to the reflection slot of a material. Call it Plane. Apply this to your plane.

Adjust Camera and Render:

1. Set Camera Target Absolute World Position to: X= 0", Y= 0", Z=0"
2. Set Camera Absolute World Position to: X= -11", Y= -11", Z= 6"

Turntable Animation
(Quicktime)

Turntable Animation:

1. Use Select and Link to join noodle to box.
2. Render Setup. Set Width and Height to 800x600.
3. Select Rotate. Change Transform dropdown to World.
4. Press AutoKey (bottom of 3dsmax window)
5. Move Time slider to frame 100
6. Using angle snap rotate -360 on Z axis.
7. Move Time slider to frame 0
8. Preview by clicking playback button next to AutoKey
9. Turn off AutoKey
10. Render Setup. Choose Active Time Segment (0-100)
11. Click files under render output. Save as avi. Name and Save.
12. Render.

Deliverables:

1. Render out a 8.5x11 300 DPI (suitable for printing) from the camera's perspective. See step 8 under Begin. Label it as follows: firstinitial.lastname_Barilla.jpg.
2. Render a 800 x 600, 100 frame animation. firstinitial.lastname_BarillaA.avi
3. 3dsmax file named as firstinitial.lastname_Barilla.max