This model introduces you to a new modeling technique called "Edge Modeling". It is similar to "Box Modeling" but instead of extruding polygons to create volumes you extrude or "pull" edges to create flat, sheet-like surfaces.
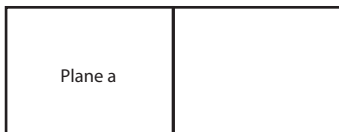
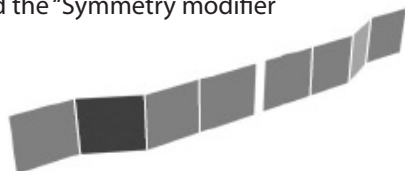**1.** Create a "Plane" (only 1x 1 x 1 segments) and add the "Edit Poly" modifier.
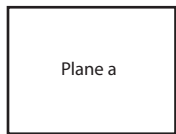
Plane a

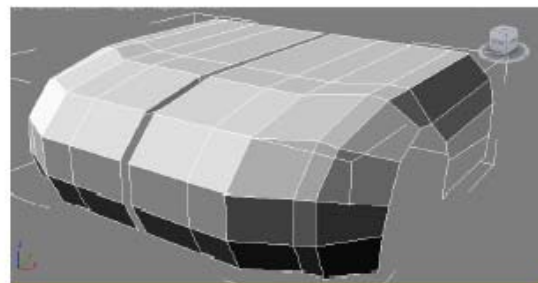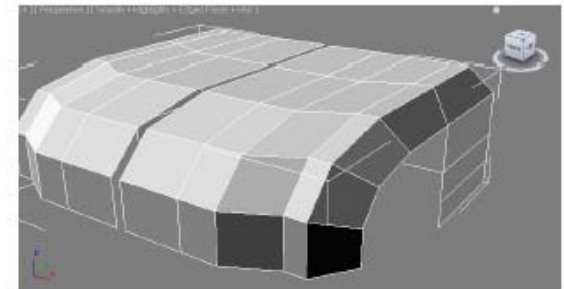**2.** Select the right edge of the plane, hold the "Shift" key down, and with the move tool.
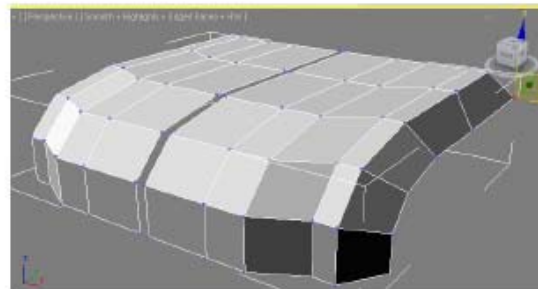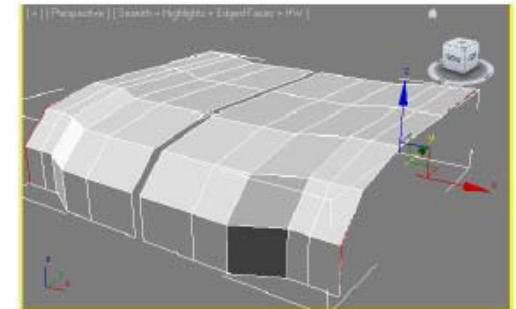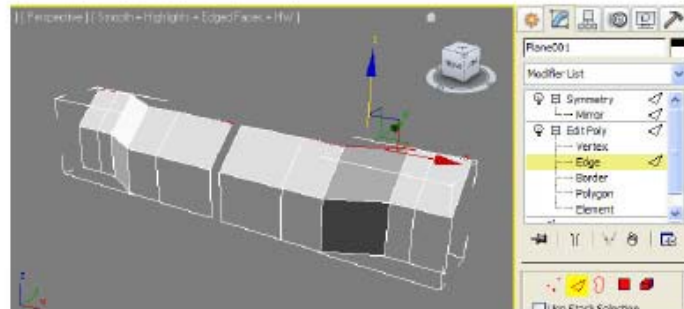
Plane a → Edge

3. Dragging the edge of Plane a creates Plane b.

Plane a

4. Add the "Symmetry modifier

5. Continue pulling edges to create the cars basic body shape.

3D Modeling & Animation

DESIGNING A CUSTOM AUTO
Advanced Level
(Point Value - 1 to 15 points)

Rims

Page 2

SoCal ROC
Career Technical Education

1. The sequence below illustrates the development of the rim.

Smooth
the tire

Spin axis

Select & Bevel

Two Tubes - 15 sides each

Add the Edit Poly to the
the large tube and "Attach"
the small tube. Select a poly
on the large tube and one
on the smal tube. Bridge the polys together.

3D Modeling & Animation

DESIGNING A CUSTOM AUTO

Advanced Level
(Point Value - 1 to 15 points)

Lathing Tires

Page 3

*Career Technical Education*
SoCal ROC

Lathing is a modeling technique where a spline (line) is spun around a central axis to create a three dimensional object.
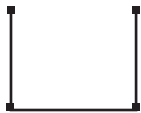
First draw the "profile" of the tire using the "Line" tool in the "Front" viewport.

Open the lines to view its' sub-object level. Fillet the corners to round them off.
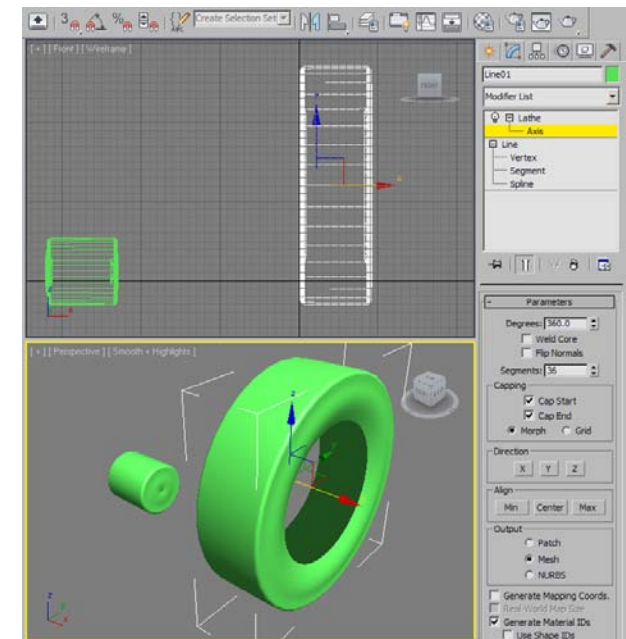
Then right click on the ends and select "Bezier Corner", this will allow you bulge out the tires sides so they look as if they are carrying the weight of the car.
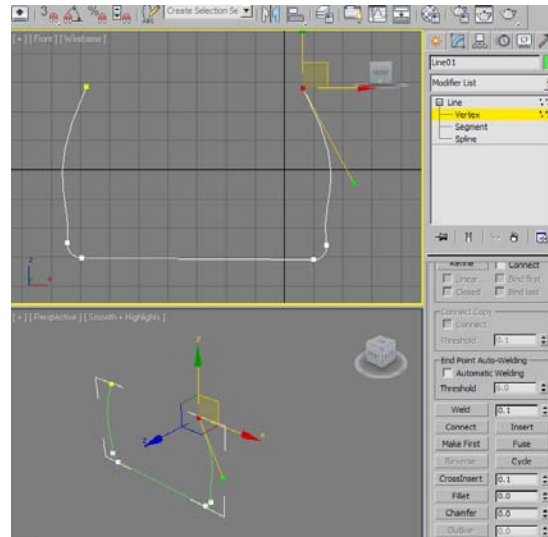
Next, add the the "Lathe" modifier.

Set the direction to "X".

Open the the Lath modifier to the Axis. Adjust the Gizmo to open the shape until it looks like a tire.

PARAMETERS
Degrees - How far around the line spins.
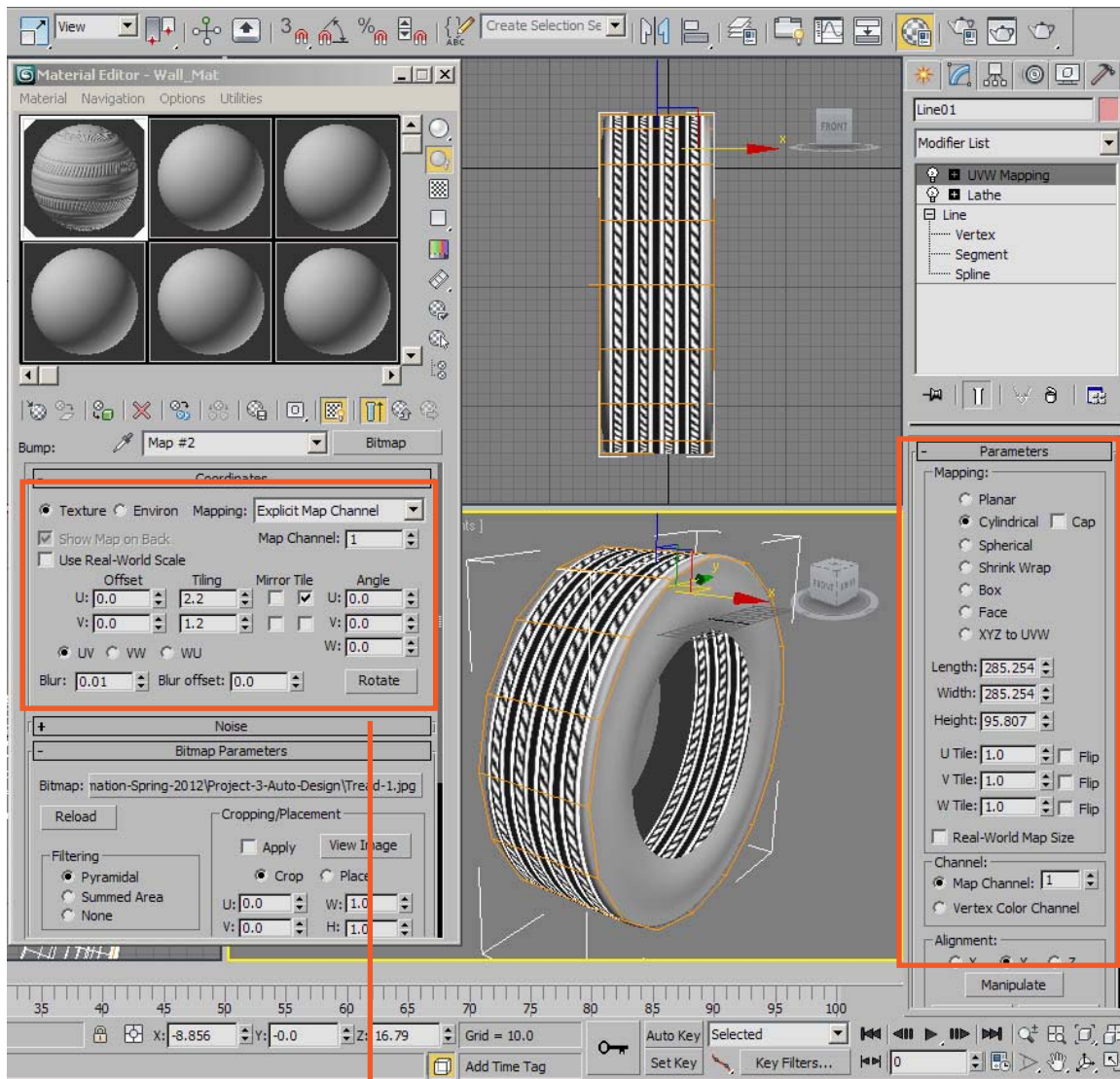
Weld Core - Removes the "pucker".

Flip Normals - Sometimes the inside needs to be flipped to the outside.

Segements - Smooths the 3D objects.

**Capping -** Covers holes if you don't set the degrees to 360.

Direction - Which way the line is lathed.
Align - Adjusts the "Axis".

DESIGNING A CUSTOM AUTO

3D Modeling & Animation

SoCal ROC
Career Technical Education

Advanced Level
(Point Value - 1 to 15 points)

Tire Treads

Page 4

Tire treads are created using a bump map texture. The class web site has several to copy.

1. Save one of the treads from our class web site to your folder.

2. Open the "Material Editor" and place the tread in the "Bump" slot.
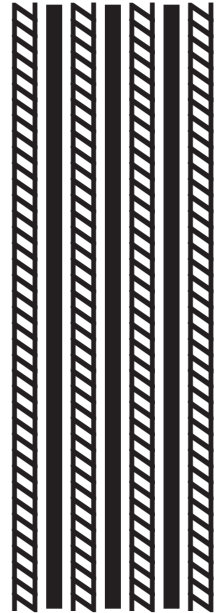
4. Place a UVW Map on the tire and set to cylindrical.

3. Adjust the parameter in the Bump panel.