The Basic Modeling Techniques

There are approximately seven basic ways to create three dimensional models (meshes) in 3D Max. You need to be familiar with all of them if you want to become a proficient 3D artist. All of these techniques are covered in the Basic 3D Max Skills book. There is a link to this book on our classs web site.

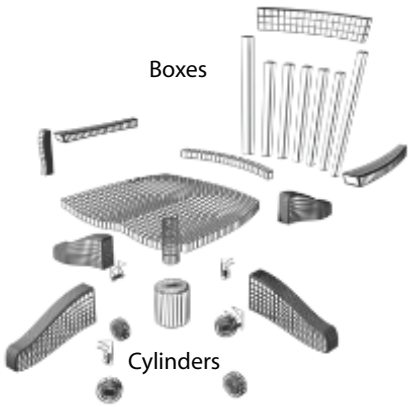
3D modeling requires that you first analyse that object you want model. Then disassemble it into basic parts. Then decide which 3D modeling technique(s) will work best.

There are two basic catagories of objects you may use: Geometry and Shapes

WORKING WITH GEOMETRY

(Boxes, Cylinders, Tubes, Pyramids etc.)

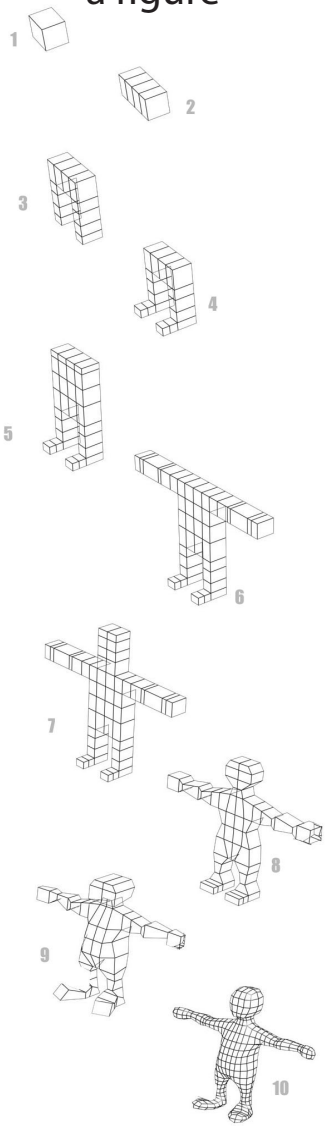
1. Assembling Primitives - Simple primitives are selected from the menu, manipulated with "modifiers", then assembled into more complex objects

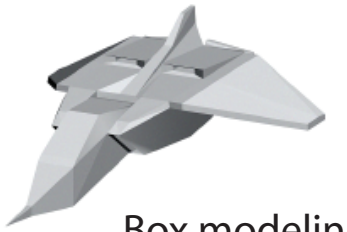


Result

2. Box Modeling - Box modeling is the most powerful modeling technique. Beginning with a simple 3-D box, surfaces are extruded and manipulated into complex shapes.

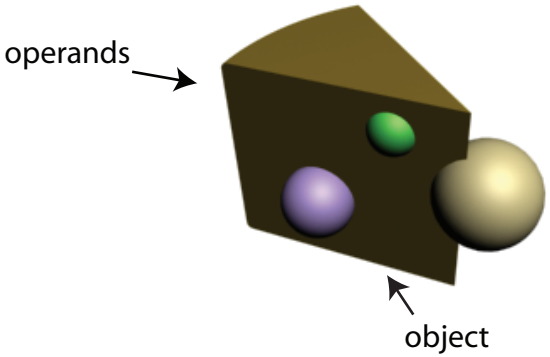
How to Box Model a figure



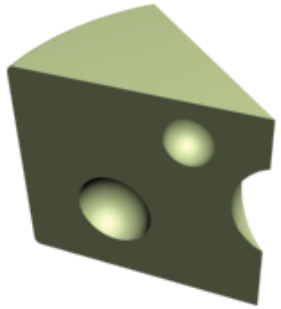


Box modeling is used to create complex shapes like this jet.

3. Compound Objects- More sophisticated than "Assembling Primitives", compoundobject modeling take two or more 3-D objects and combines them together to alter their structure. *Booleans* and *Scatter* are two common compound methods.



Result



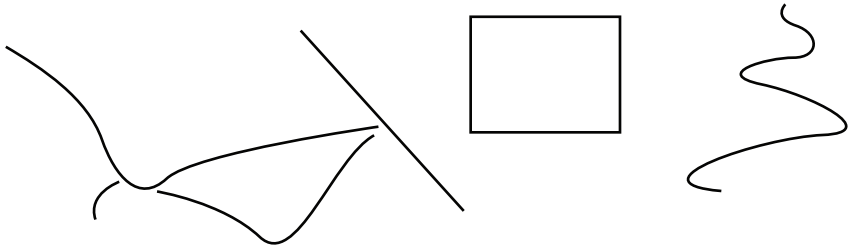
This is an example of Boolean modeling where the spheres cut into the wedge to make Swiss cheese.

WORKING WITH SHAPES

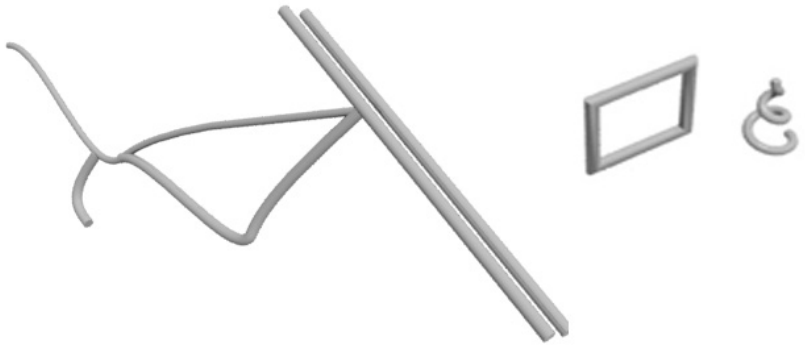
(Squares, Circles, Lines, Text etc.)

Shapes are 2-dimensional objects that have no volume, in otherwords, they're invisable. Only until you appliy a modifer, compound process or set them to "Render" will they become a 3-dimensional object.

4. Rendered Shapes- The simplest way to make a shape into a solid 3Dimensional object is to turn on the render settings in its' modifier panel. In this way you turn a line into a set of pipes welded and bent to make a chopper frame. Or you turn a square into picture frame. Maybe a helix becomes the start of a snake model.

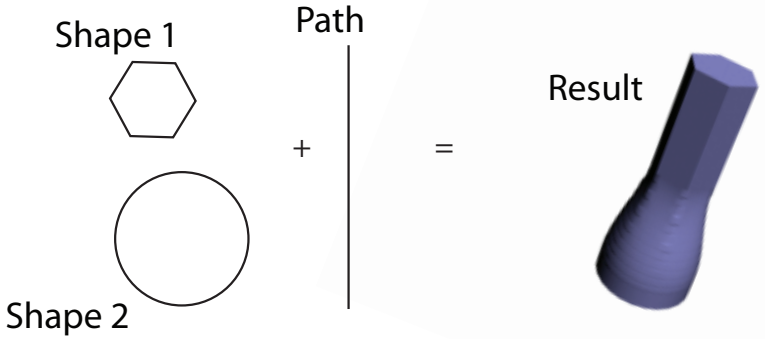


Two-Dimensional



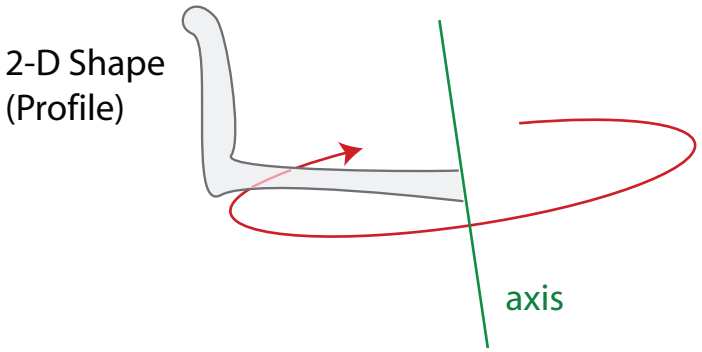
Three-Dimensional

5 Lofting - Lofting a compound process that use two dimensional shapes.

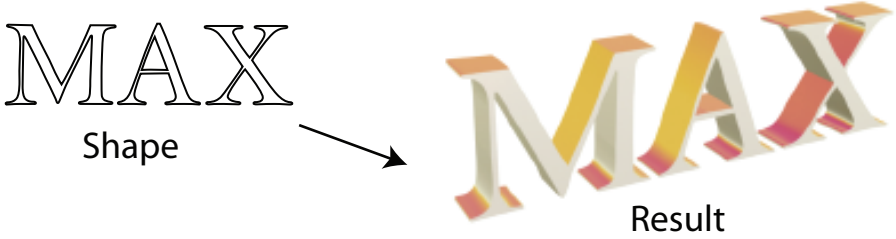


In this example, two shape (circle and hexagon) are "lofted" along the line (referred to as the "path"). The result is 3-D shape that blends cylinder into six sided polyhedra.

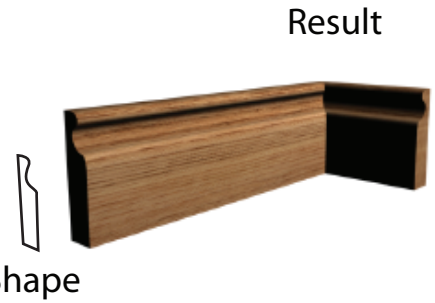
6. Lathing - Spinning a 2-D Shape around an axis to create a 3-D shape. This is a standard way to make ups, bowls etc.



7. Extruding - Similar to lofting but drags the 2-D shape in a straight line only. Extruding is often used with letters to create 3-D titles.



Extruding is a great way to make 3D text.



Or create a molding for an architectural scene.