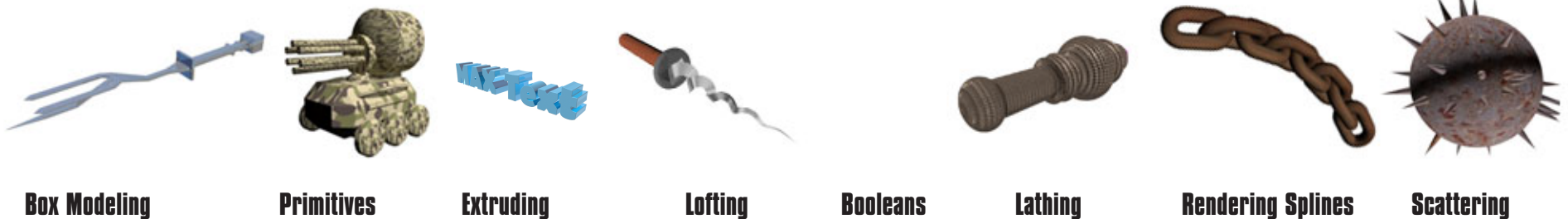# EIGHT BASIC MODELING TECHNIQUES

These are eight 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. 3D modeling requires that you first analyse the object to be modeled and disassemble it into its' basic parts. Then decide which 3D modeling technique(s) will work best to model the object.

You are required to create one example of each of the eight modeling techniques. The example can be one of those shown here or original.

| Box Modeling | Primitives | Extruding | Lofting | Booleans | Lathing | Rendering Splines | Scattering |

# Box (Poly) Modeling

Box modeling is the most powerful modeling technique. Beginning with a simple 3-D box, surfaces are extruded, resized, and manipulated into more complex shapes.
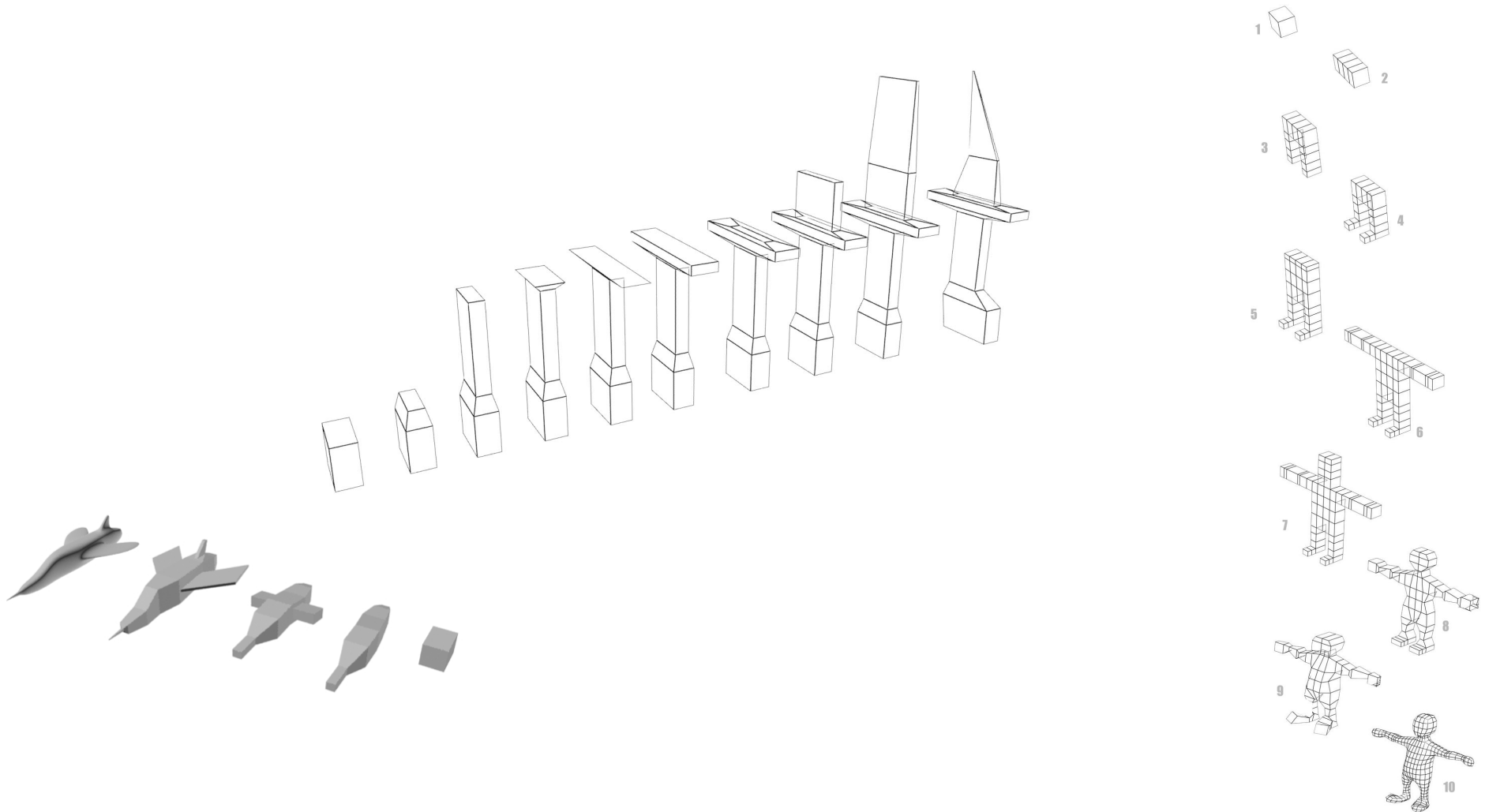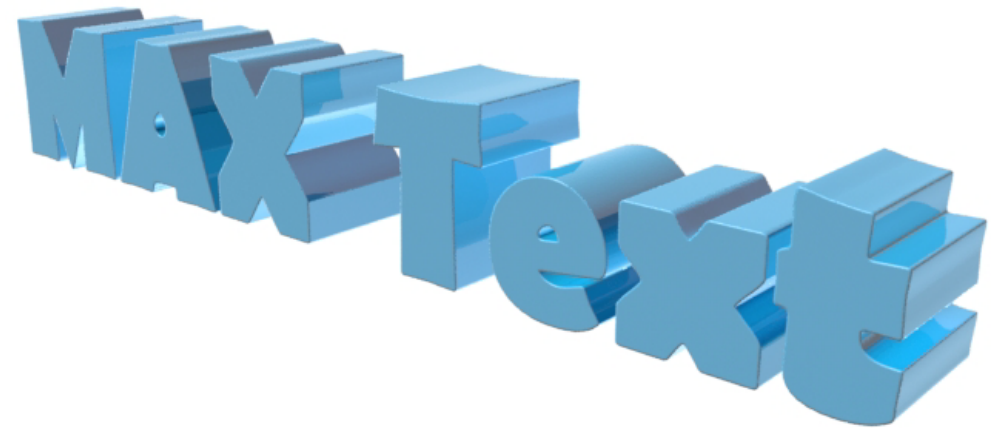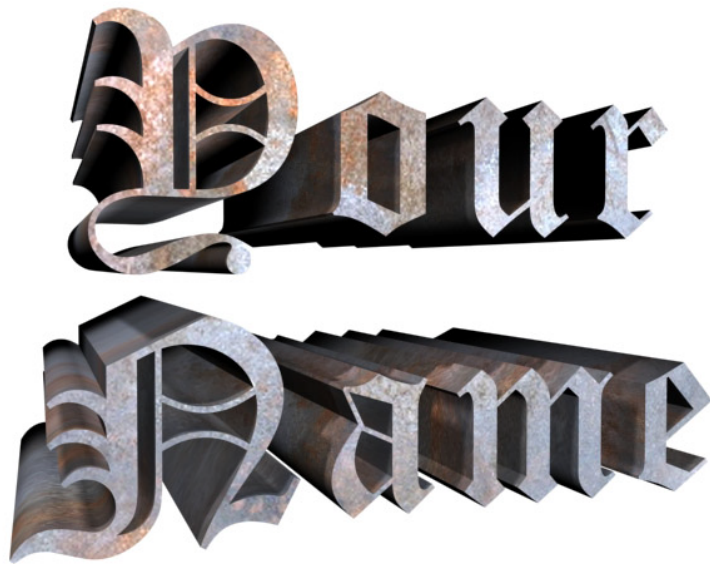
# Assembling Primitives

**(Boxes, Cylinders, Tubes, Pyramids etc.)**

Simple primitives are selected from the menu, then assembled into more complex objects.
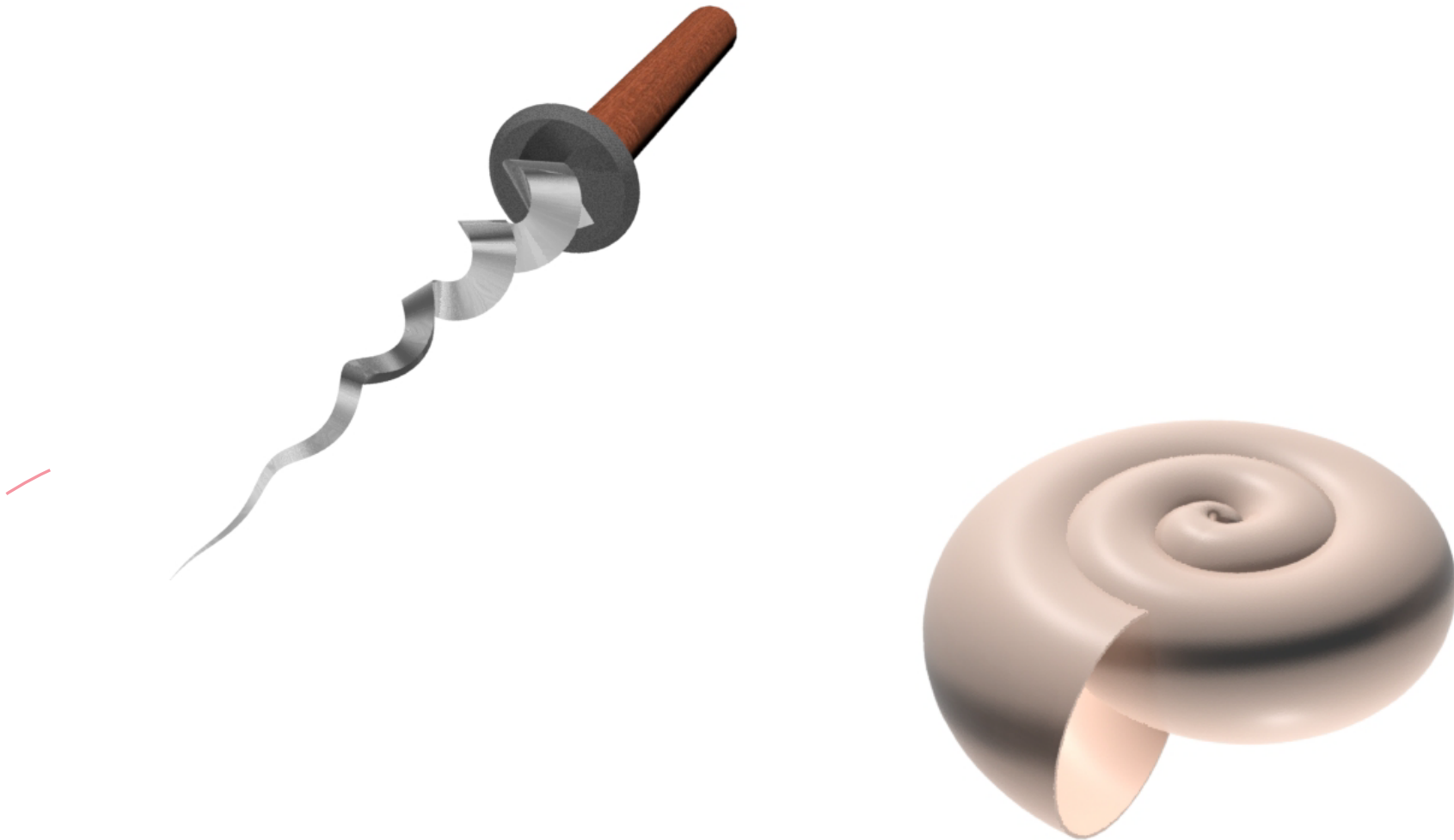
SoCal ROC
Career Technical Education
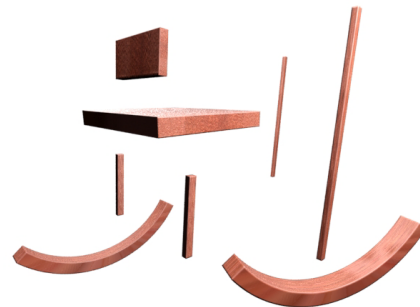
Extruding involves turning a two dimensional shape into a three dimensional shape. Extruding is commonly used to create 3D lettering.
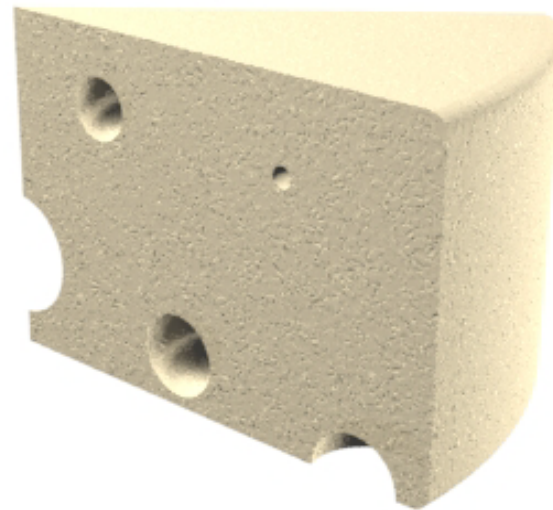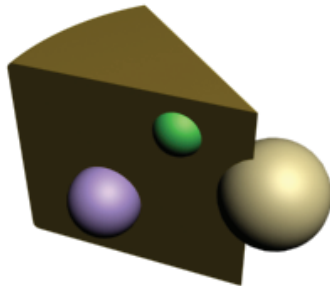
# Lofting

Lofting takes two two dimensional shapes and combines then into a three dimensional object. In the sample below a circle is "lofted" alonga spriral to create a shell form.
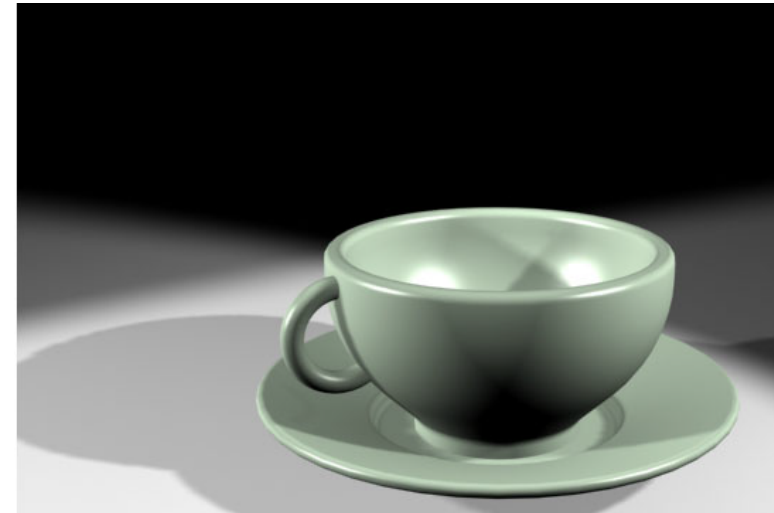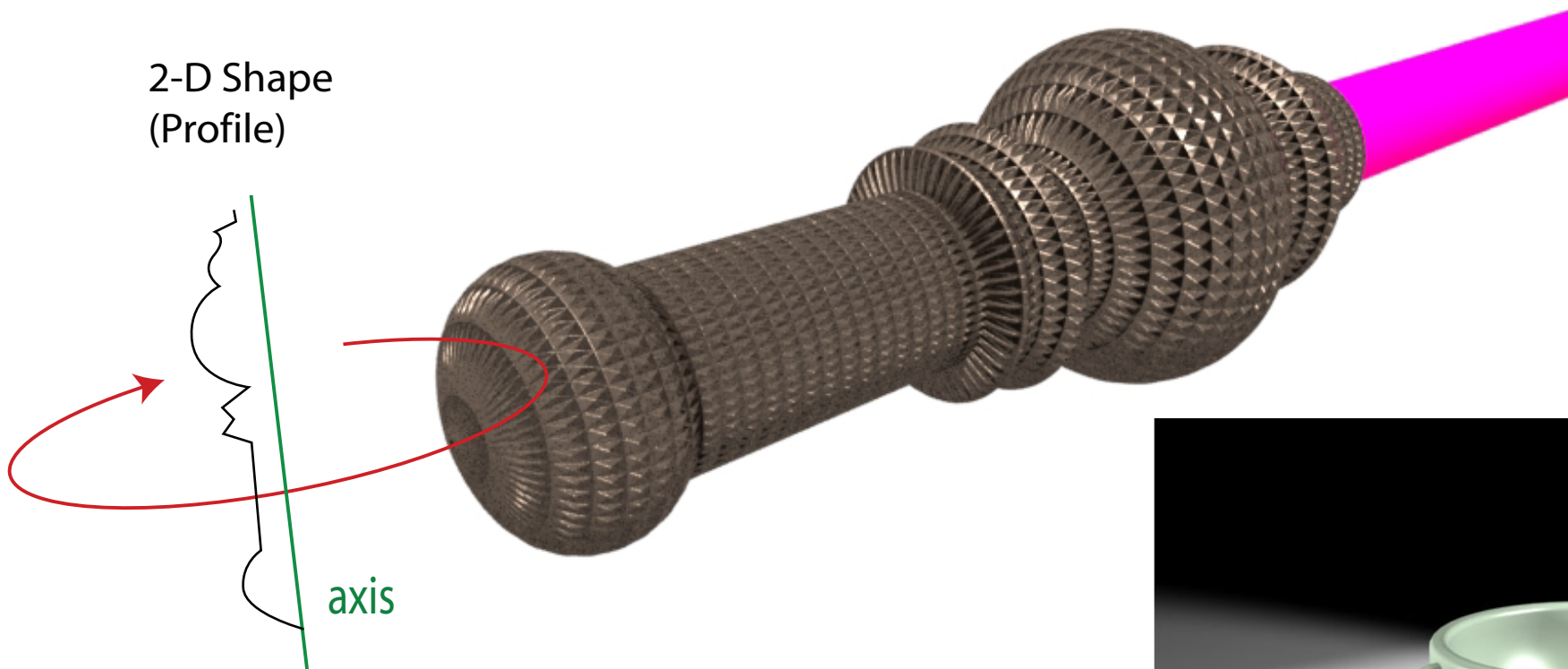
# Booleans

A Boolean (named after the mathematician " ???????" )is typically used to subtract one three dimensional shape from another.

# Lathing

Lathing takes a two dimensional shape and rotates around an axis to create a three diemensional object. Lathing is used to make bowls, cups, and such objects.

2-D Shape
(Profile)

axis

# Rendering Splines

Splines are two dimensional shapes ( circles, squares, lines, spirals ). They have no volumn and cannot be seen, they are abstractions. But in 3D Max you can make a spline  have volumn by turning on its' "Rendering" option.

The chain link below is a two dimensional rectangle with a chamfered corners. It has  it's "Rendering " option turned on to make it into a three dimensional object.
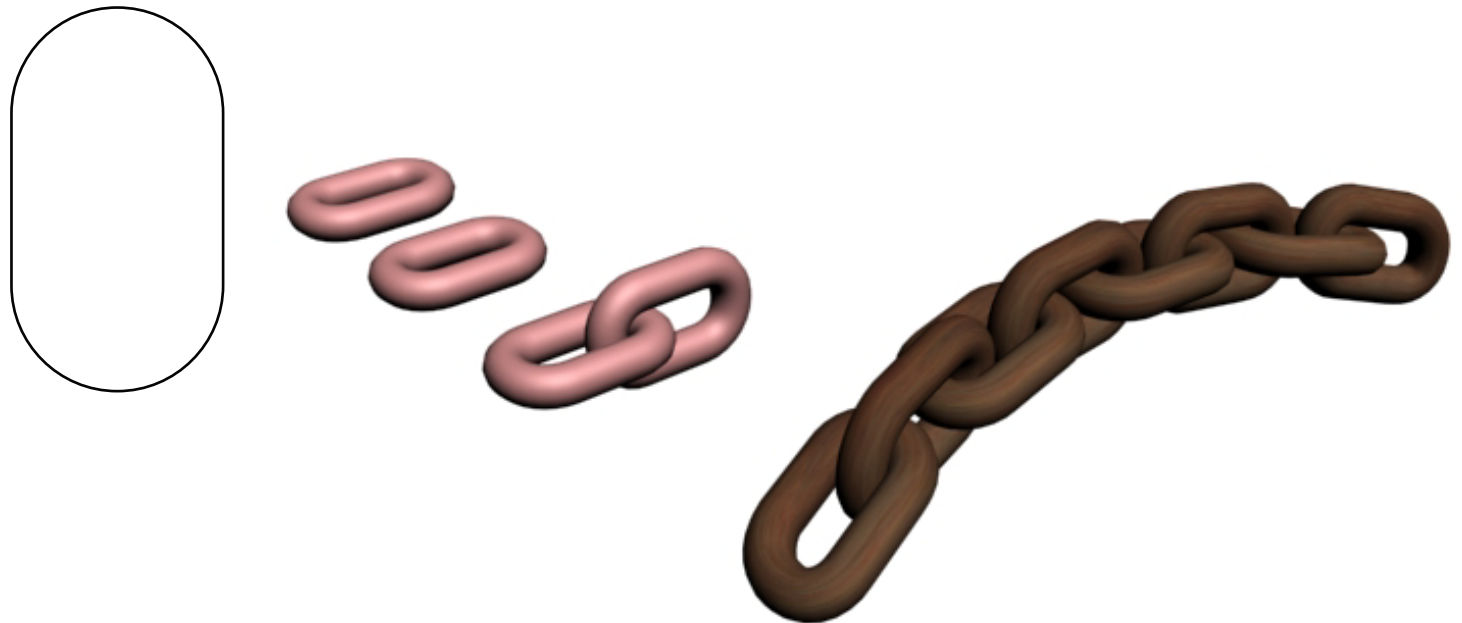
Whenever you need to take 3D object and scatter it across the surface of another 3D object, Scattering is a good technique. Below, a cone has been scattered across a sphere.