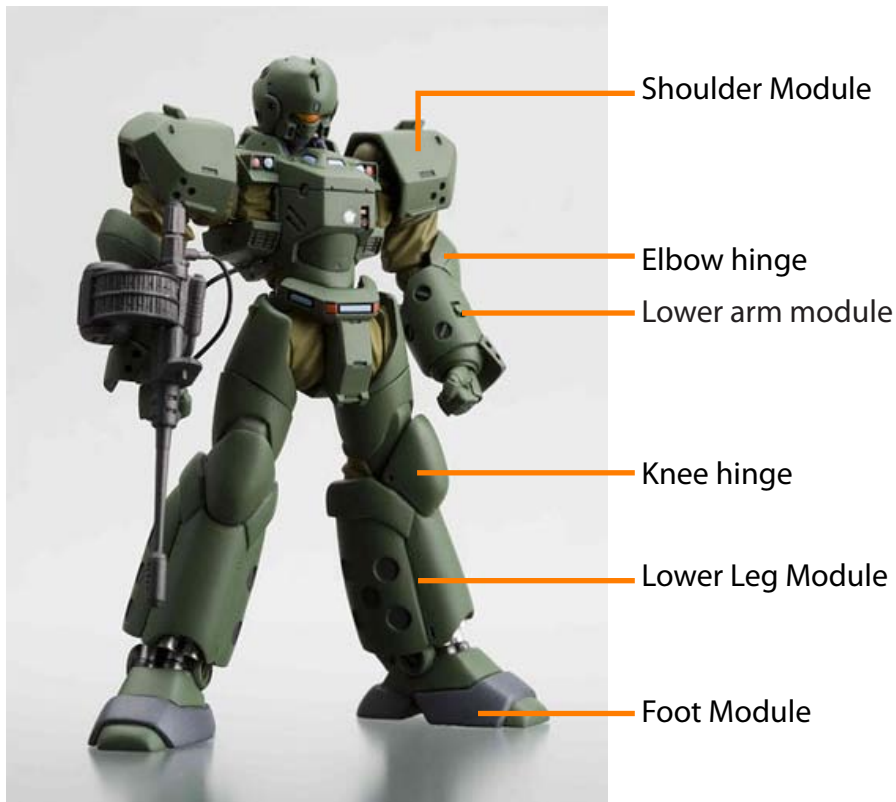The Mecha is constructed in modules (upper leg module, lower leg module, chestmodule, head module, etc.). You will use box modeling to ceate most of the Mecha. If you aren't familiar with box modeling you shold go backand do some beginning or intermediate projects before attempting this project.

The modules are then connected together by designing hinge-like elements that indicate that this is where the Mecha articulates (bends).

You may also use other primitives as required by your design. Cylinders, springs, dampers, torus' etc. are all useful for this advanced project.


Shoulder Module

Elbow hinge

Lower arm module

Knee hinge

Lower Leg Module

Foot Module

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The"Mecha" or "Gundum" project is meant to teach you several things. First and importantly, the parts of the Mecha mimic the parts of the human skeleton and for that matter most vertebrates. This is called "The Basic Vertebral Structure". You use it in designing and modeling almost all characters that have a backbone.

Second, and also extremely important, are the proportions of the Mecha. IT IS A NINE HEAD PROPORTION! This means that theheight of the mecha is equal to nine of its heads stacked one on top of the other (see to diagram). This is called a "Heroic" proportion. It is used in characters that show dominance and strength.
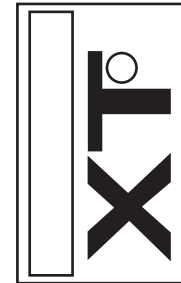
Modeling the Mecha
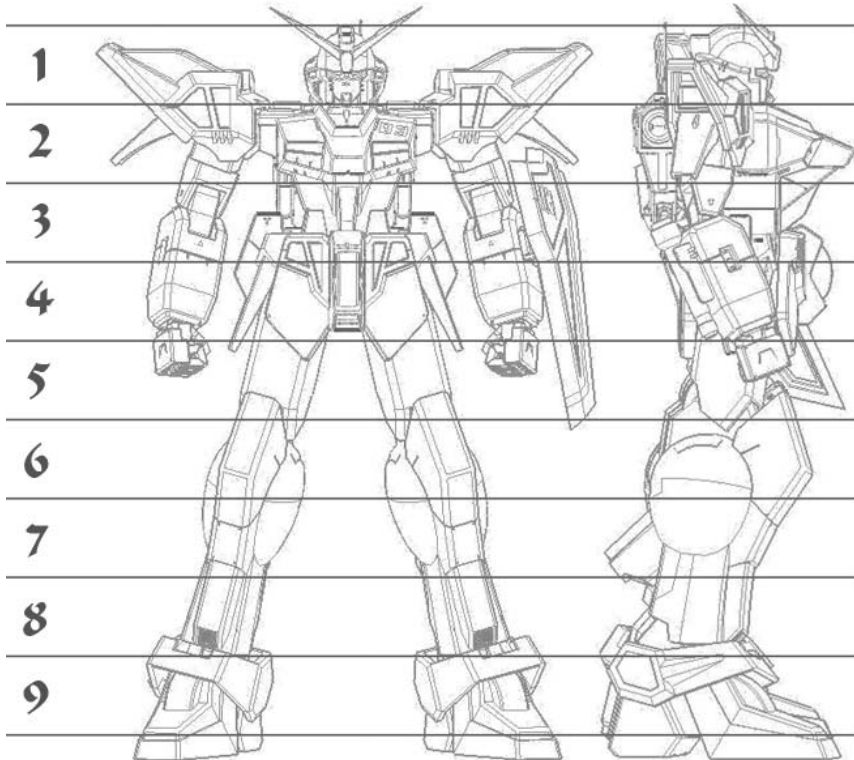
Modular Structure with Curved Surfaces

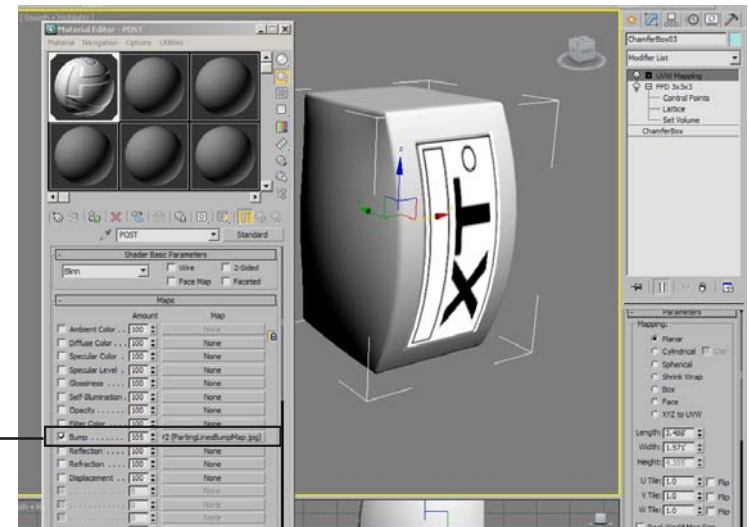Chamfered Box

3x3x3 FFD Applied
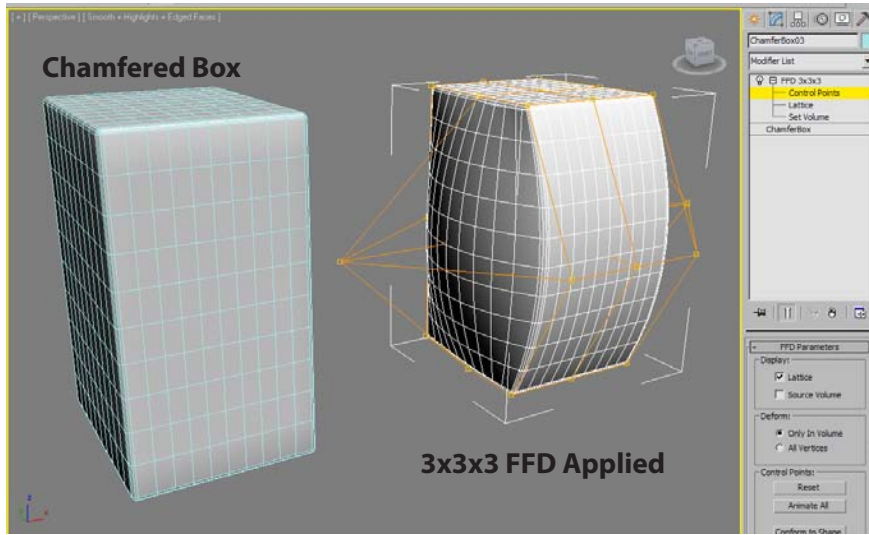
Curved surface can be created using FFD modifiers.

Text & Parting Lines

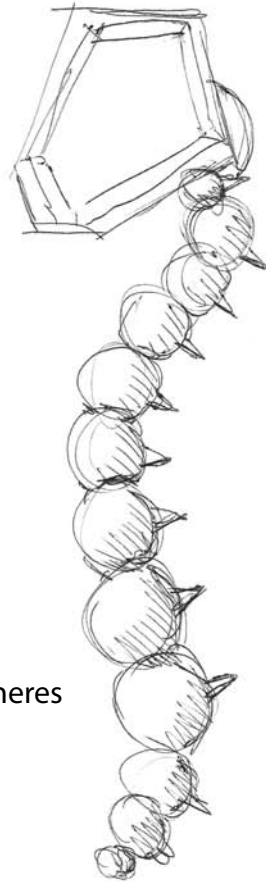Text and thin lines (called "parting lines") can be made with bump maps.

Design made in Adobe Illustrator & saved as a JPEG.
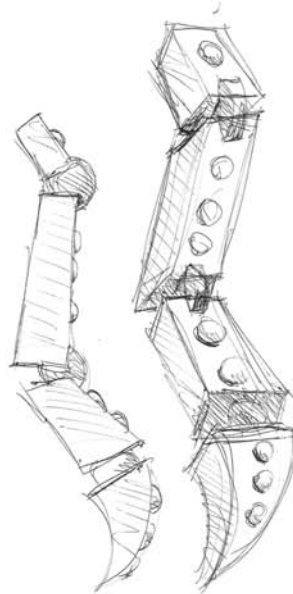

Rendered in 3D Max as a "Bump Map"

Modeling the Mecha

Here is an artists' sketch ideas for the spine of the Mecha

SPHERES

3 BOXES

3D Max Hose and FFD distortion

3D Max spheres