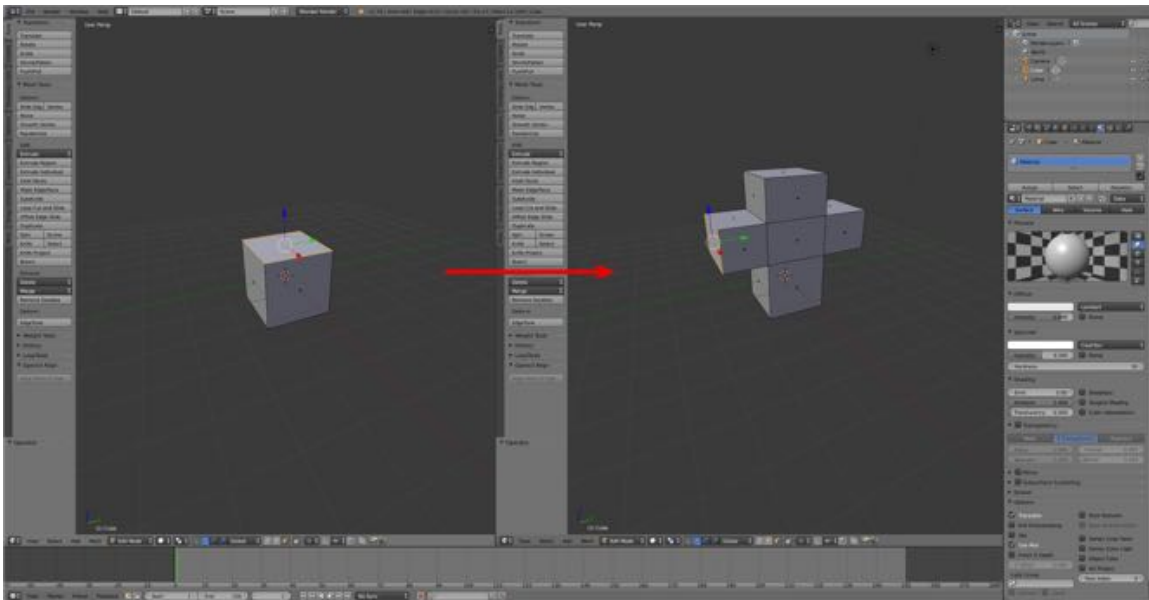


Modeling Methods

There is more than one way you can approach constructing a model in Blender. All require beginning with one of the pre-formed Primitives, as Blender does not come with a way to start from just a single vertex (although you can start by reducing a primitive to a single vertex and there are add-ons can be installed to add this capability).

Face Extrusion (Box)

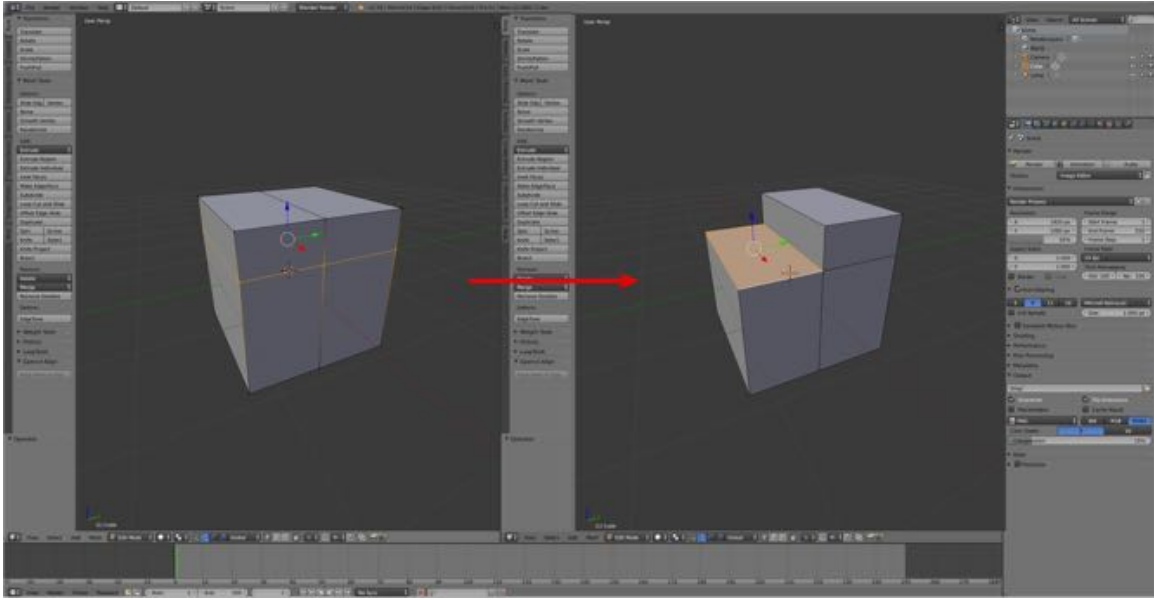
Perhaps the most common method of modeling is Face Extrusion (also know as Box Modeling). Selecting a face and extruding extends the Primitive. The Extrude Tool is used to repeatedly along with other tools to shape the model.



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Loop Subdivide

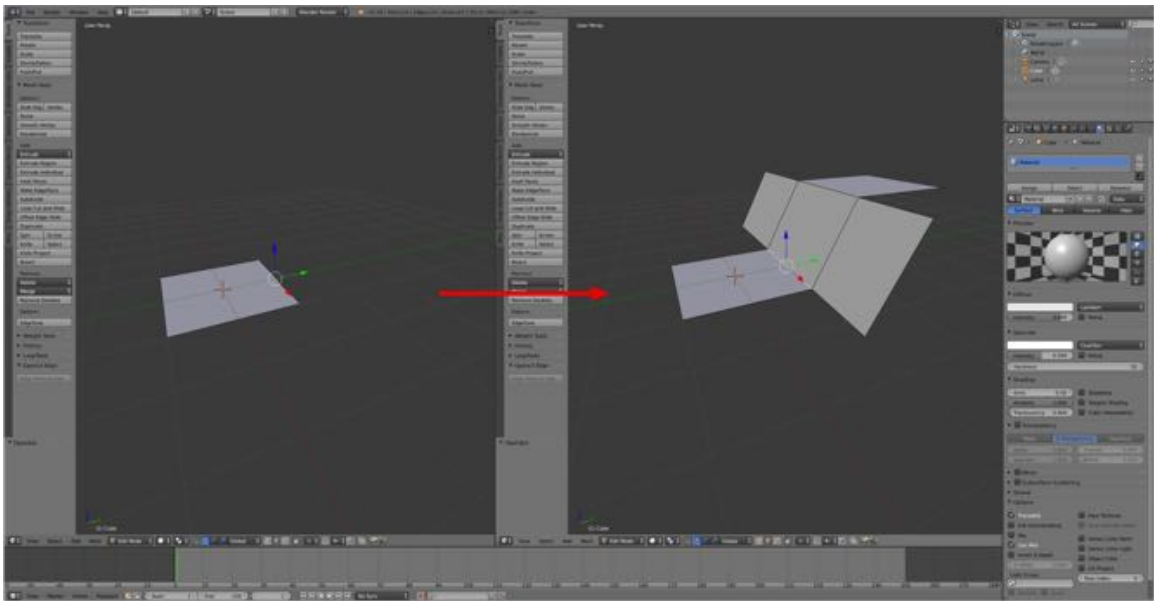
The Loop Subdivide method starts with a Primitive, usually the Default Cube that is scaled large enough to encompass the whole model or, at least, most of it. The Loop Cut and Slide Tool is used to mark out major features of the model and then sections of the original Primitive that are not going to be part of the finished model are removed.



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Edge Extrusion (Poly-to-Poly)

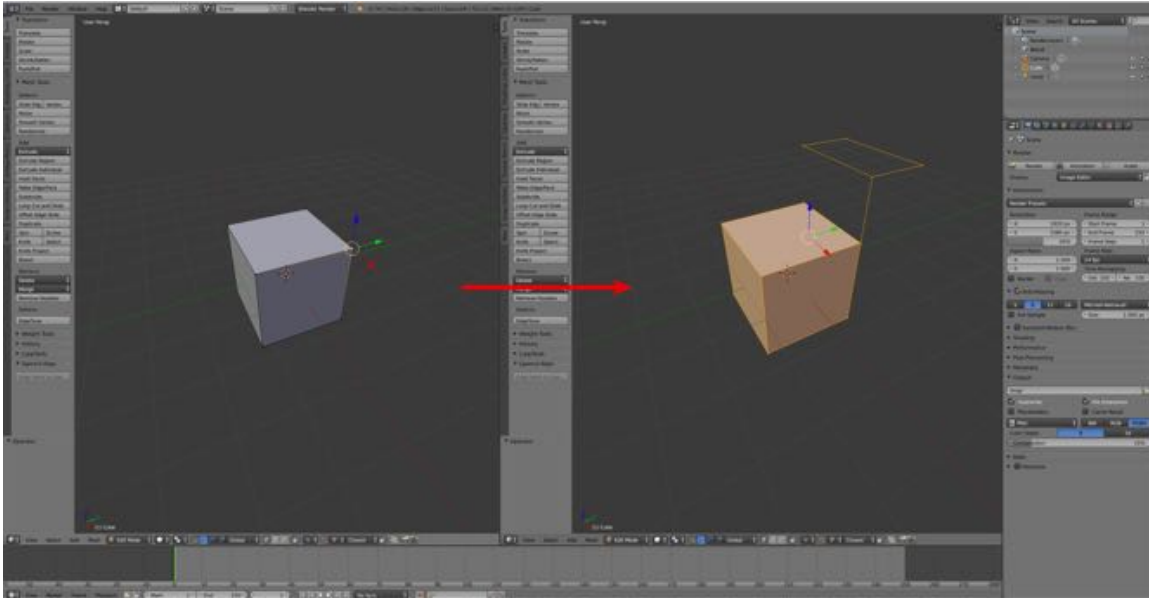
The Edge Extrusion method (also known as Face or Poly-to-Poly Modeling) starts with a Primitive, often just a plane, and extends an edge by extrusion to form the surface of the model. This method is used to model organic forms with curved surfaces, such as people, animals, cars and trucks.



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Stick Build

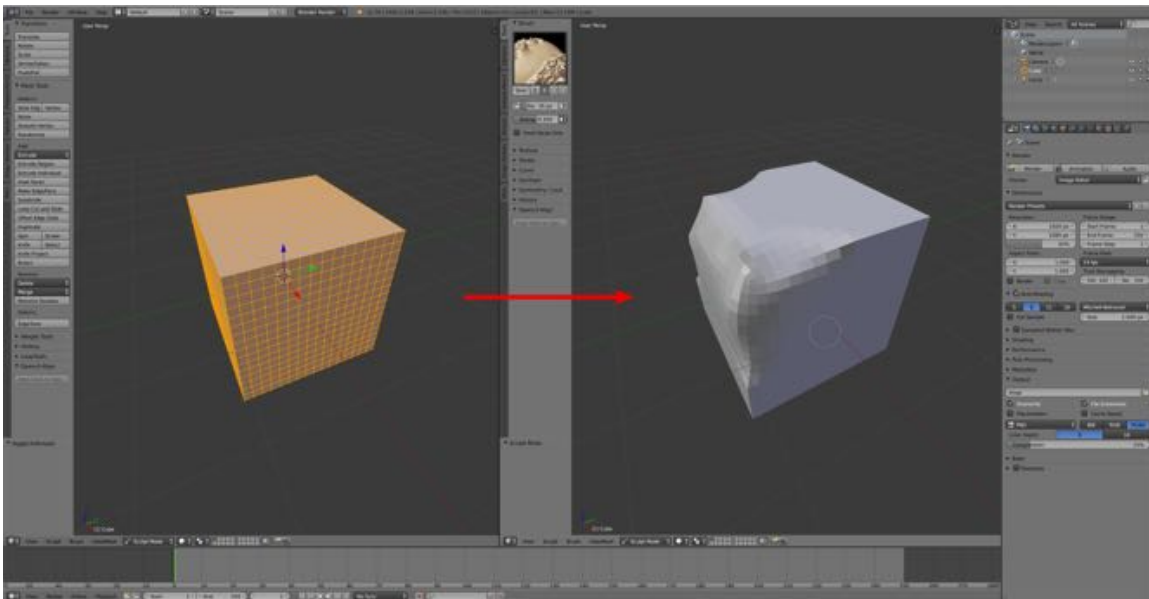
The Stick Extension method is perhaps rarely used in and of itself. Instead of extending a faces or edges, vertices are extended instead.



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Sculpt

The Sculpt method is based on Blender's built in Sculpting Mode. It initially can create models with very high poly counts. But techniques for reducing the poly count, such as shrink wrapping, make it a viable method for creating Trainz assets.



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None of these methods are used in and of themselves. Rather, modeling is a combination of methods, particularly Face- and Edge Extension and Loop Subdivision.

MakeHuman

MakeHuman is an open source 3D modeling program. An auxiliary program, Make Clothes, is an add-on for Blender. Clothing can be made in Blender with Make Clothes and then exported to the MakeHuman program. In MakeHuman a human figure is generated by selecting age, sex, weight, height, etc., clothed, rigged for animation, then the clothed and rigged figure is exported back into Blender. In Blender the figure can be posed and poly count reduced to less than 500 triangles suitable for Trainz.

MakeHuman is a sculpting method where the work is taken out of creating the detailed mesh. It further facilitates making human figures for Trainz in that for any one figure the texture files for the clothing can be changed and different poses captured in Blender.



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