

The Process of Making a Trainz Asset in Blender

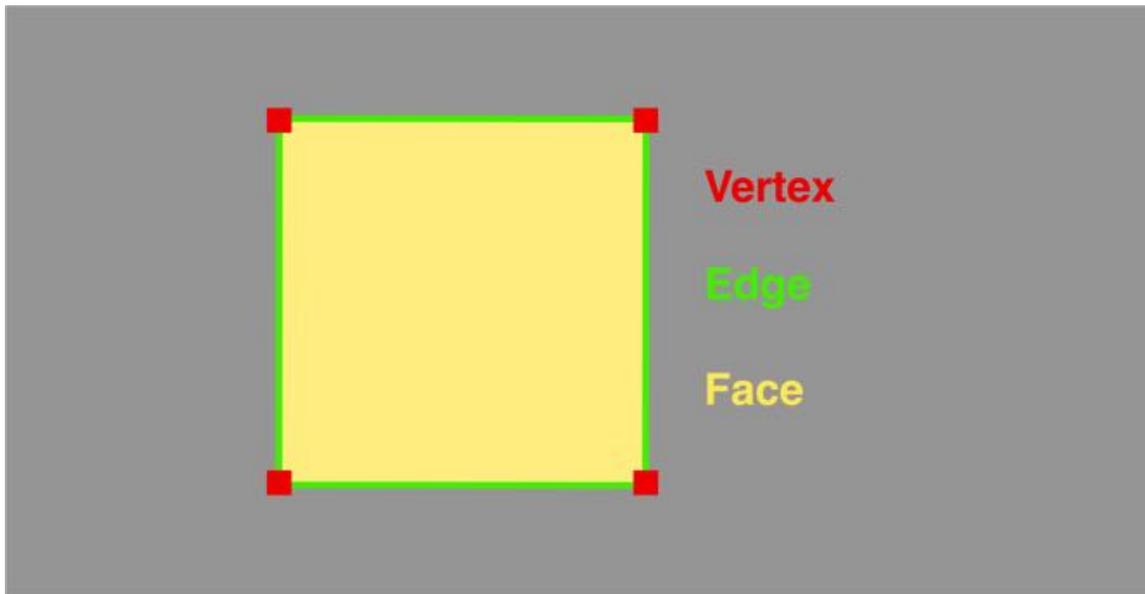
There are two parts to creating a Trainz model, creating the 3-dimensional structure, and covering the structure's surface with a material and texture to give it the desired appearance.

Creating the Model in the 3D Editor

In Blender, a three-dimensional (3D) object (also called a mesh) is created in a 3D Editor out of three elements:

- Vertices
- Edges
- Faces

A vertex is a point in space. An Edge connects two vertices. A face is the enclosed space created when three or more vertices are connected to form a loop.



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A face is basically a polygon. There are three types of faces:

- Triangles (three-sided face)
- Quads (four-sided face)
- N-Gons (faces with more than four sides)

Blender's 3D Editor has several modes for working with objects and their elements (vertices, edges and faces) but, initially, only two are needed to make Trainz assets, Object Mode and Edit Mode. Object Mode you manipulate the model. In Edit Mode you manipulate the parts (vertices, edges and faces).

Add Material and Texture in the UV/Image Editor

In Blender the material and texture is added in a UV/Image Editor. A material imparts color to a model and a texture imparts the “look and feel” (e.g., smooth or rough, glossy or flat).

While textures can be created and applied in Blender, when starting out to make Trainz assets it is easier to create a texture file using other computer graphics programs. The file is then imported into Blender and the texture applied in the UV/Image Editor using a process called “unwrapping”.

Here is a “sneak peak” of what aiming to achieve. The model with material and texture applied is in the 3D Editor on the right and the mapped texture is shown in the 2D UV/Image Editor to the left. (Note: “UV” does not refer to radiation. Rather the 3D Editor shows the model in 3D with X-, Y- and Z-axes while the UV/Image editor shows it in 2D with U and V axes.)



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Looks complicated? It’s not really. Follow along and I’ll have you making Trainz assets in no time.