



The Edit Mesh Menu

This will be the key to your polygon modeling success. Most of them are pretty straightforward, but I will explain the most useful and commonly used tools. If you are using an interactive tool, make sure you select the mesh before using it. For the * Tools, make sure you select a valid component before using the tool.

***Extrude** will take any component (vertex, edge, face) and duplicate an attached component that can be transformed, scaled, and rotated away from the original. This is very useful for creating more mesh.

Append to Polygon Tool will allow you to fill any holes in a single mesh by selecting edges to sew a new face onto. Be careful not to create n-gons (faces with more than 4 sides). This will give you messy deformation and normals.

Cut Faces Tool is tricky. It will slice through your model by creating an edge based on a line that you can rotate by LMB+hold and drag. You can hold Shift to snap its rotation vertically or horizontally. This should usually be used in your Orthographic views.

Interactive Split Tool is VERY useful for cleaning up topology. It creates an edge where you specify the connecting vertices. When you use it, it will automatically snap to the middle of an edge or to a vertex. You may turn snap off in your Tool Settings to place your connecting vertices anywhere on the model.

Insert Edge Loop Tool is pretty self explanatory. It will create a string of edges perpendicular to the edge you LMB drag on. Keep in mind that it only works well with a clean mesh of quad polys.

The next 5 tools in the list are pretty easy to experiment with and are used for very specific tasks.

***Poke face** will put an X of edges in your selected face, so you have a vertex in the center. Duplicate face will make a detached mesh of your selected faces.

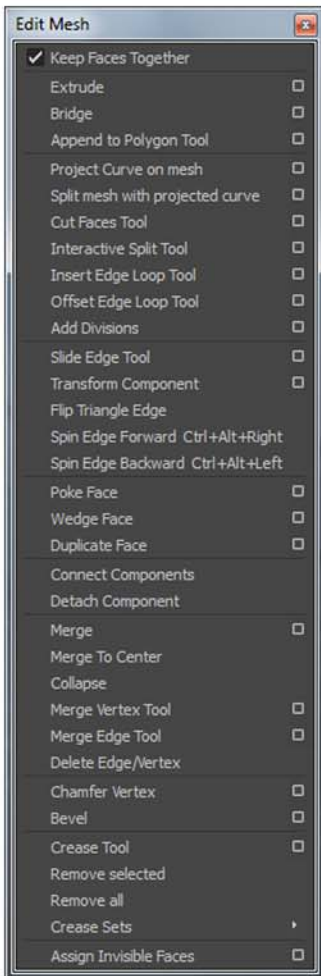
Detach Component will take a selected vertex or edge and separate the mesh at that point, creating a hole. If you detach a single vertex with four outgoing edges, it will create 4 new vertices that can move away from each other.

***Merge** will only merge two of the same component. *Merge to Center will take multiple of the same components and bring them to a calculated average point in space and connect them.

Merge Vertex and **Merge Edge Tool** are interactive tools in which you select the components you'd like to merge. With Merge Vertex you LMB drag one vertex to another. When you merge edges, you will be given pink edges as valid selections.

***Chamfer Vertex** will make a triangle poly out of a selected vertex.

***Bevel** will take an edge (or vertex) and divide it into one or more faces along the edge, making it look rounded. Always open your option box to get the number of divisions and size you want.



By the way, if you go to Maya Help it will open a new window in your browser and has an extensive guide to every single thing in the program. The Contents menu on the left is organized and user friendly- there are tutorials on how to do some common techniques using the tools available. Use this to your advantage.

Also, here are some important tools from the Mesh Menu.

Combine will take two separate polygon meshes and make them a single selection. It becomes one item in your outliner.

Separate will do the opposite of combine. This is useful to edit OBJ files that have combined all mesh objects.

Quadrangulate will make all faces four-sided on your mesh. This will not get rid of all triangles but is good for mesh cleanup.

Fill Hole will create polygons to make your mesh solid.

Sculpt Geometry Tool is an interactive tool that can smooth, pull out, push in, relax, and pinch your geometry. It moves all vertices within the Sculpt brush. You can interactively size the brush by holding down Alt+RMB on top of the selected mesh and drag left or right. Look in your Tool Settings for more options.

Mirror Geometry will take a selected mesh and duplicate a mirrored version over a specified axis. This is a good way to get your mesh to be symmetrical. There will be a separate tutorial on how to use this properly.