**Zbrush Hotkeys**

|  |  |  |  |
| --- | --- | --- | --- |
| **Key** | **Function** | **Key** | **Function** |
| Comma | toggles the top menu (lightbox) | Ctl + N | clears the canvas |
| T | toggles ‘Edit’ or 3D sculpting mode | X | toggles symmetry |
| Ctrl+Z | Undo | Shift+Ctrl+Z | Redo |
| Click & drag Background | Free Rotate | Click+drag, press Shift | Constrain to 90-degree rotation |
| Alt+Click & drag Background | Move | Alt+Click, Release Alt, drag Background | Scale |
| Shift, Click, release Shift, drag | Rotate around Z-axis | W | move mesh |
| E | scale mesh | R | rotate mesh |
| S & left click | adjust size of brush | B | bring up brush menu |
| D | toggle higher resolution mesh | Shift + D | toggle lower resolution mesh |
| Spacebar | brings up brush settings | Ctrl+H | View Mask |
| Ctrl+I | Invert Mask | Ctrl+A | Mask All |
| Ctrl+Click+ drag Background | Clear Mask | Ctrl+Click on mesh | Blur mask |
| Ctrl+Alt+Click on mesh | Sharpen mask |  |  |

**Terms**

Tool – Zbrush object of different types

* Polymesh - A polymesh is a 3D model that is composed of polygons. In ZBrush, only polymeshes can be sculpted.

Subtool – Individual polygon mesh

Document – background 2D canvas

Dynamesh - base mesh generation tool

Zremesher – automatic retopology tool

Lightbox – Window that displays the content of the folders located in the root folder of ZBrush, by categories: Documents, Tool, Brushes, Material, Alphas, Textures, ZScript and Other.

**Main Brushes**



**Move Brush** (B + M + V)



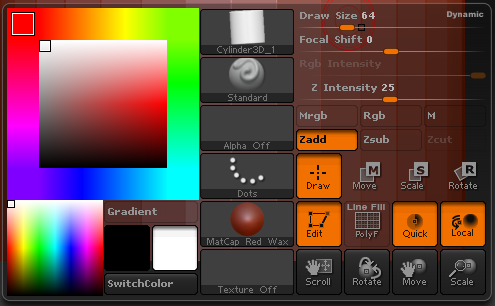
**Clay Buildup** – change alpha channel to influence shape (B + C + B)



**Dam Standard** (Bb + D + S)



**Brush Settings (Spacebar)**



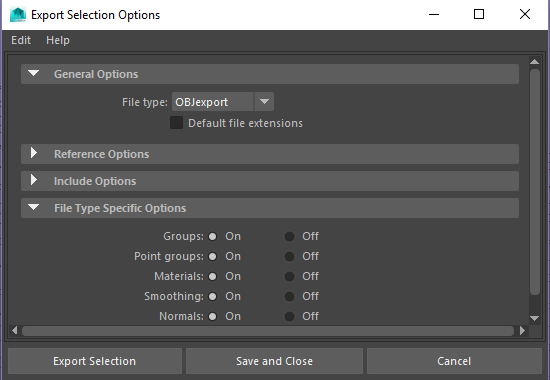
**Zbrush Demo**

Trial: https://pixologic.com/zbrush/trial/

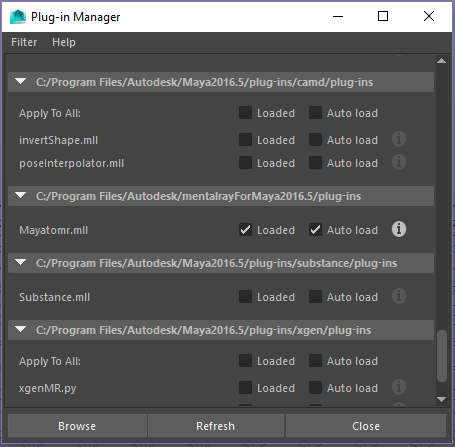
1. **Setting Up**

**1.1 Exporting an OBJ from Maya**

* Select your mesh, then go to File > Export Selection (Options)
* File type: OBJExport



* If OBJExport is not in those options, go to Windows > Settings/Preferences > Plug-in Manager
* Make sure objExport.mll is loaded



**1.2 Open Zbrush and import your model**



* Under Tool: Import
* Left-click and drag to put the mesh in the scene
* Press ‘T’ to make the object sculptable
* If you accidentally create a bunch of duplicate meshes, press ‘Control + N’ to clear the viewport

**1.3 Change material to shiny gray**



* Click the red circle on the left side of the screen
* Select new material: Basic Material 2

**1.4 Change ramp in background (range to 0)**

* Under Document, set Range to 0



**1.5 Save as PROJECT not Document**

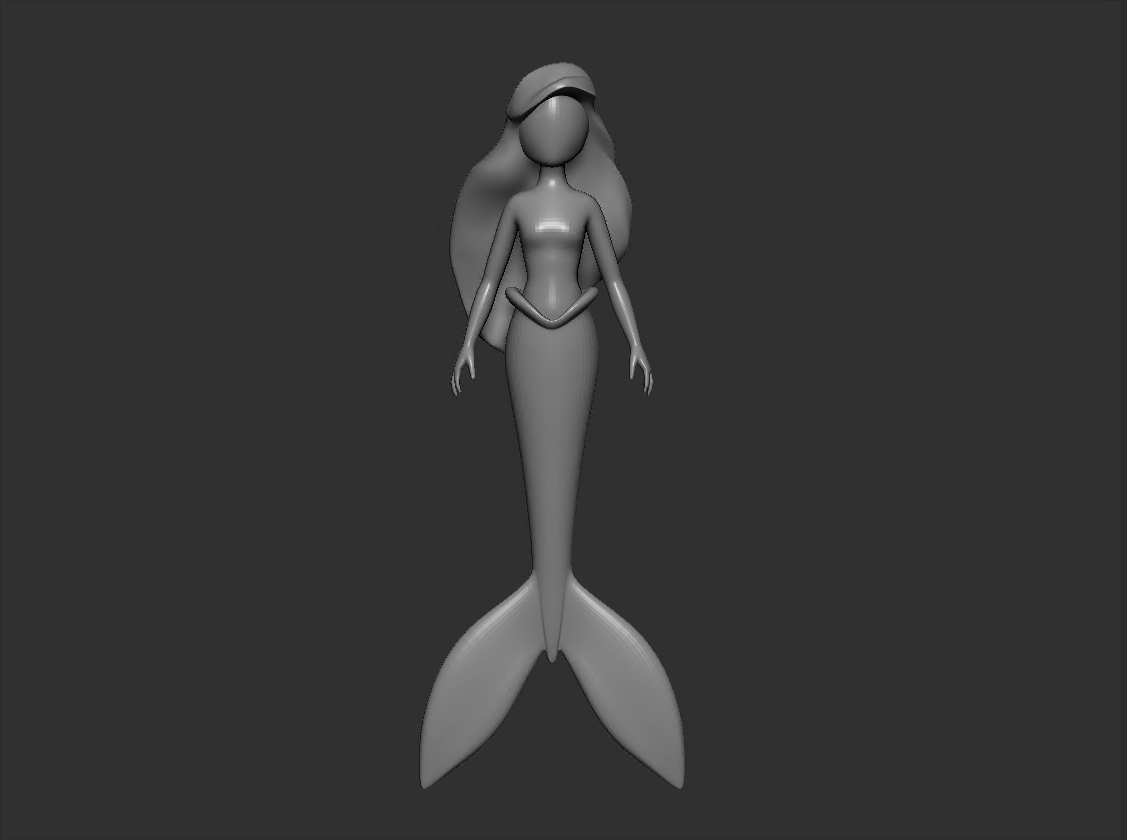
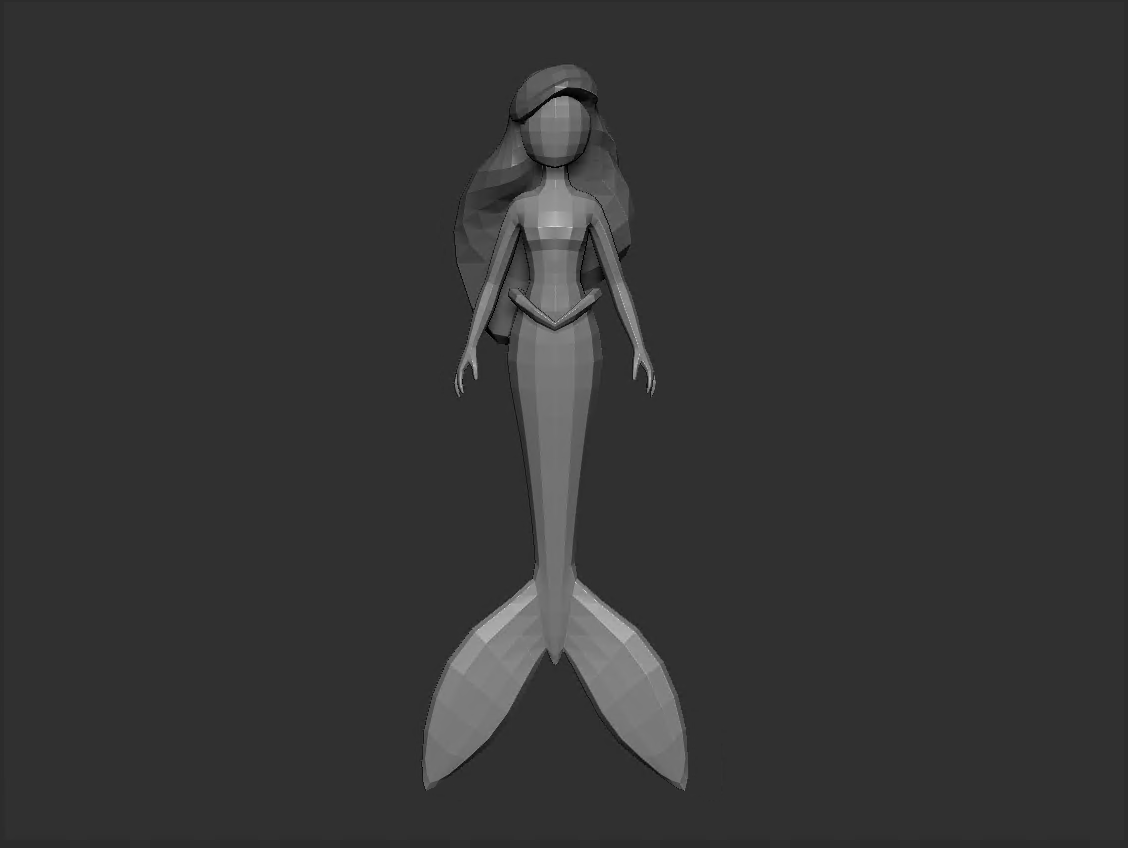
* File – Save As – Zbrush Project

1. **Sculpting**

* 1. **Activate Symmetry**
* Press ‘x’, and use symmetry to make sure your mesh is oriented well

**2.2 Sculpt on the mesh**

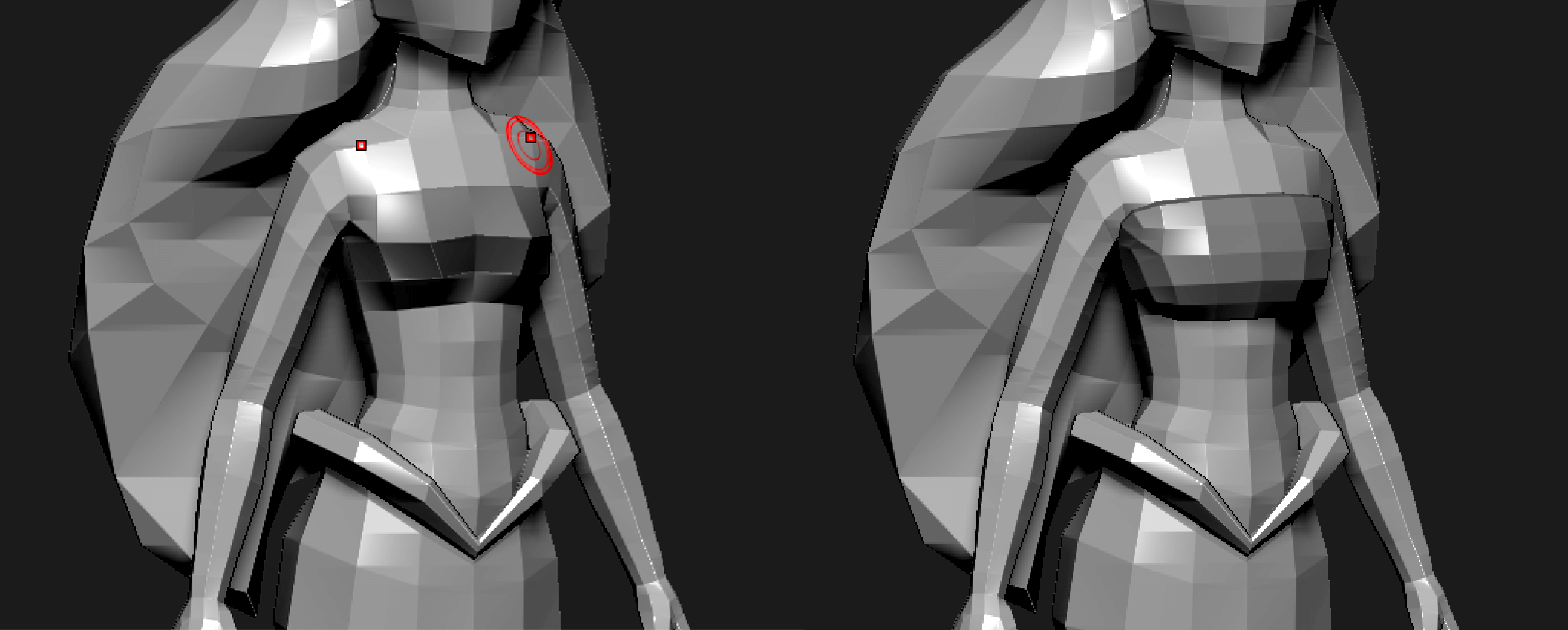
* Work in the lowest resolution for as long as possible, then step up if you need to
* Use the ‘D’ hot key to ‘smooth’ the mesh, press Shift + D to unsmooth



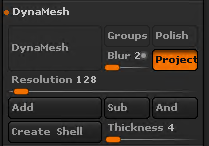
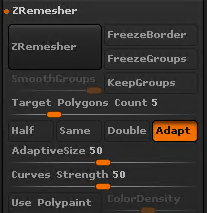
**2.3 Creating a Costume**

* Paint a mask on the geo (hold Control and paint) where you want the new mesh
* Press Tool > SubTool > **Extract** will preview a new piece of geometry based on your mask. Press Accept to create a new SubTool of this new geometry. Remember to clear the mask when you no longer need it (Ctrl+Click+ drag Background).





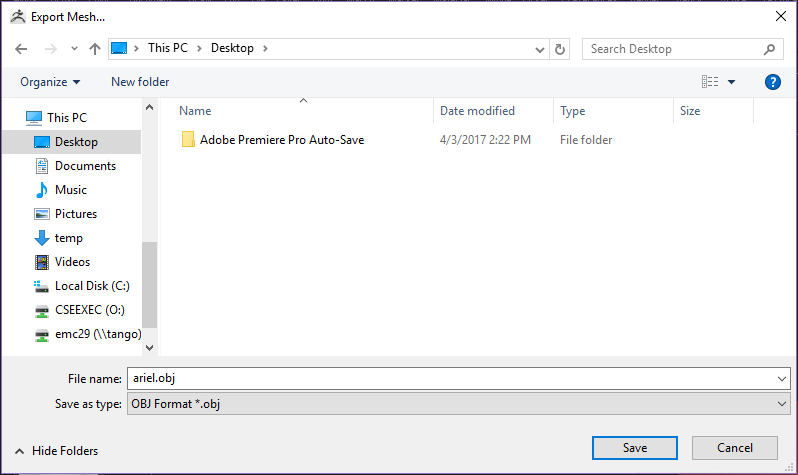
* Sculpt on new subtool
* Merge back together, similar to combining in Maya (Subtool – Merge – Merge Down with the top subtool selected)
* Geometry – Dynamesh: use this operation if you’d like to combine multiple pieces into one manifold piece of mesh
* Continue sculpting
* Geometry – Zremesher: use this operation to auto-generate new topology at adjustable resolution (Use Target Polygon Count to adjust the resolution of the new mesh)
* Continue sculpting

1. **Bring back to Maya**
   1. **Export as an OBJ**

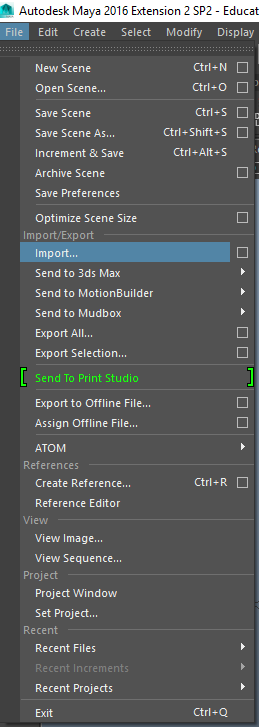
* Make sure the mesh you are exporting isn’t super high res
* Tool – Export – OBJ Format





**3.2 Import to Maya**

* File > Import



**3.3 Copy weights (if new mesh is different or higher res than previous mesh)**

* + Import your new mesh into the same file as your previous mesh
  + Bind your new mesh to the skeleton (Skin > Bind Skin)
  + Select your original mesh (source skin), then your new mesh (destination skin) and select Skin > Copy Skin Weights
  + You may need to do additional weights polishing after this step

