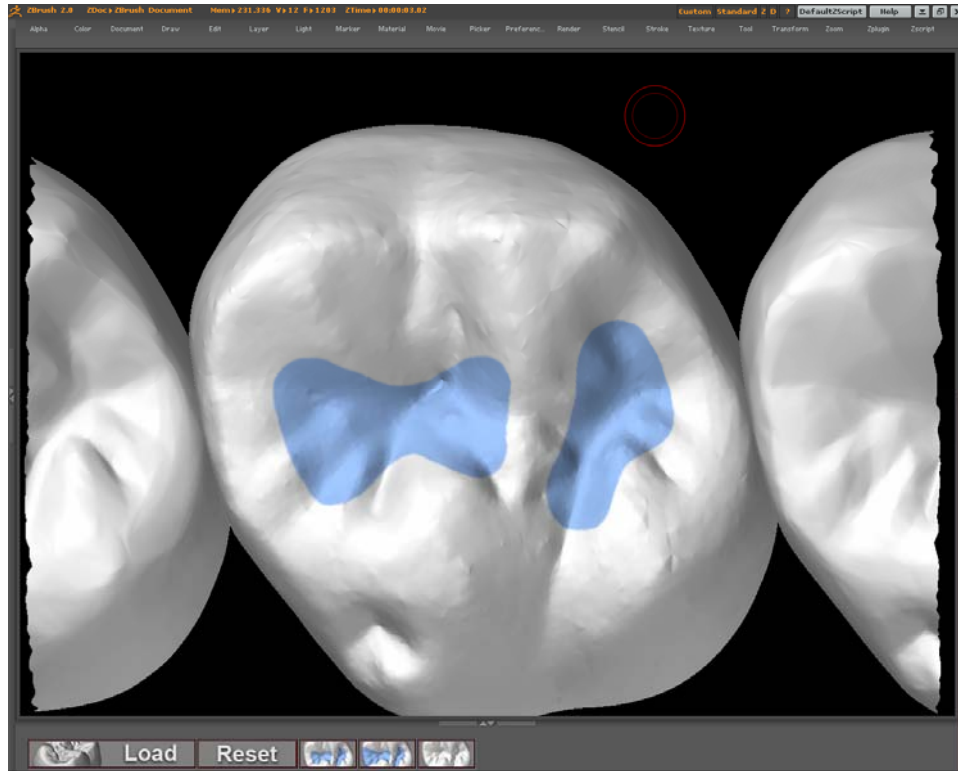




Quick Tips for Using ZBrush (Workshop Scripts)



A Simulation Tool for Preclinical Instruction



ZBrush 3D Tooth Scripts: You must purchase/install the full copy of the ZBrush software to run the scripts pictured above. If you install the trial demo version please refer to Quick Tips for Using ZBrush (Basic) handout for a step-by-step “how to guide.” With the trial version, you will be able to practice using the model but will not be able to activate the blue prep overlays. To download a trial version of ZBrush go to the **Pixologic** website at www.pixologic.com/zbrush/

Load the Script

1. Download the script and associated files from the UM3D website (<http://um3d.dc.umich.edu>) to your computer. All files must reside in a single folder/directory. The files you need are:
 - event.zlt
 - outline_01.jpg
 - outline_02.jpg
 - VRDent_LoadTooth.psd
 - VRDent_LoadTooth.txt
 - VRDent_LoadTooth.zsc
 - VRDent_Outline0.psd
 - VRDent_Outline1.psd
 - VRDent_Outline2.psd
 - VRDent_ResetTooth.psd
2. Open ZBrush and go to Zscripts in the upper right-hand corner. Click Load from the menu and browse to the folder/directory you have saved the files noted above.
3. Click on the file VRDent_LoadTooth.zsc. The buttons (see above) at the bottom of the screen will load.
4. Click on the Load button to insert the 3D tooth model.



Rotating the Model

1. Remember, this is a 3D model and you can view it from any angle.
2. To rotate the model, place the stylus in empty space (black area around the tooth), press and drag in the direction you wish to rotate the model.

To rotate the model in 45° increments drag the stylus and hold the Shift key while dragging. Be sure to release the stylus before releasing the Shift key when done rotating.

To **Pan** the tooth, hold down the **ALT Key** and click-and-drag the stylus in empty space.

To **Zoom/Scale** the tooth, hold down the **ALT Key** and click-and-drag the stylus in empty space. While still dragging the stylus, release the **ALT Key** and drag the stylus up/down.

Creating a Prep

1. Hover over the tooth with your stylus until you see a red circle within a circle. The inner red circle defines the width of the bur.
2. Press the stylus on the tooth surface and drag it along as if you were “cutting” a prep.
3. Use smooth continuous strokes. For best results work from the center toward the edge.



Prep Overlays

1. Two prep overlays (in blue) are provided--representing Class I and Class II preps.
2. To view an overlay, click on the button representing the prep guide you would like to view.
3. To clear the overlay, click the right-hand button. Adding or clearing an overlay does not alter the prep you have cut.



Reset

1. If you don't like the prep you have created, click on the reset button and the original model will refresh.
2. You may reset the model as many times as you wish.



Saving / Sharing your Work:

1. To Save an Image of your prep.
 - First, rotate the tooth so you have a clear view of your prep.
 - Click on Document->Export at the top of the screen.
 - From the drop-down list next to “save as type” choose BMP.
 - Navigate to where you would like to save the image, name it, and click Save.
2. To Save a 3D Model of your prep.
 - Click on Tools on the left side of the screen >Click on Save As
 - Navigate to where you want the file to be save, name it, and click Save.
(note: if need to save as an OBJ file, choose “Export” instead of “Save As”)