

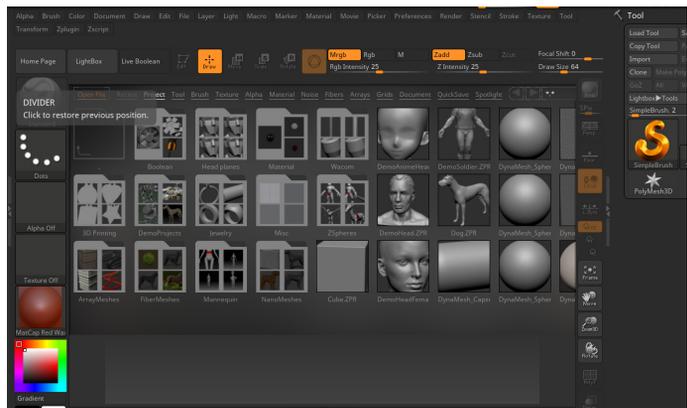
Chapter 1

Exploring ZBrush Interface

Learning Objectives

After completing this chapter, you will be able to:

- *Explore the ZBrush 4R8 interface*
- *Work with various tools available in the ZBrush interface*
- *Open and save a ZTool and ZDocument*



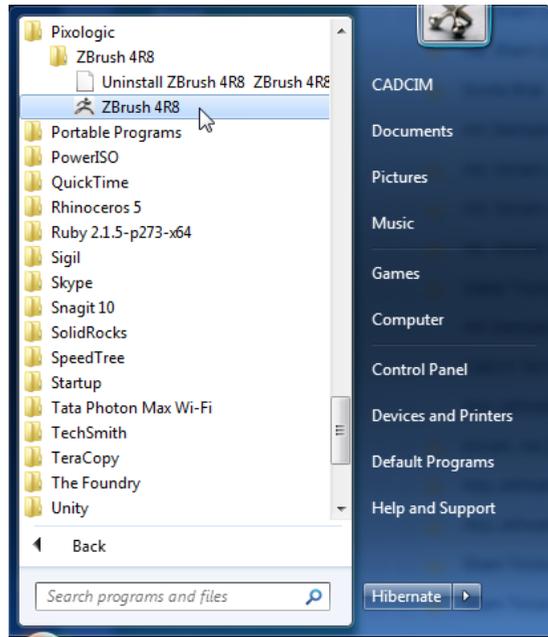


Figure 1-1 Starting Pixologic ZBrush 4R8 from the Start menu

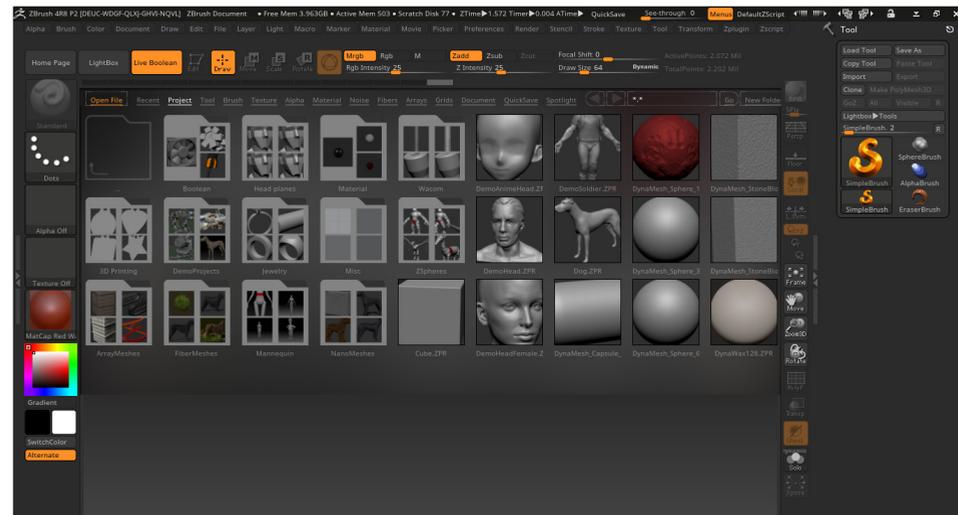


Figure 1-2 The default ZBrush 4R8 interface



Figure 1-3 The Zbrush Home Page window

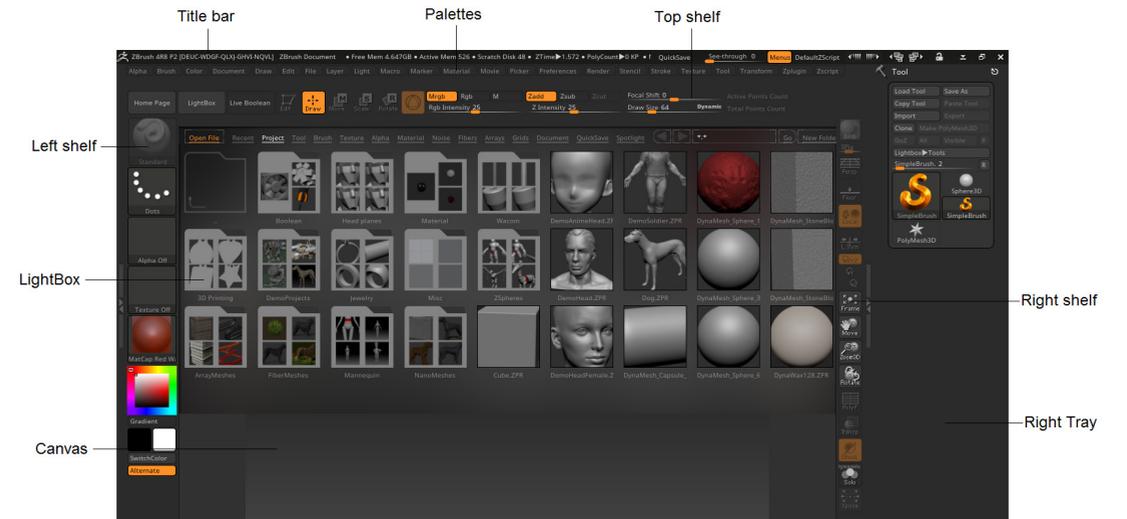


Figure 1-4 Various components of the ZBrush 4R8 interface displayed



Figure 1-5 Partial view of the left side of the Title bar

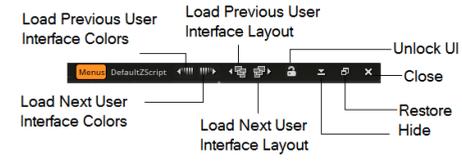


Figure 1-6 Partial view of the title bar (right side)

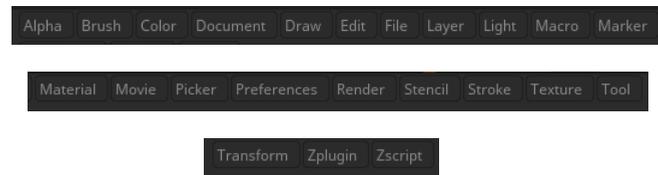


Figure 1-7 The palettes



Figure 1-8 The Make St button in the Transfer subpalette



Figure 1-9 The flyout displayed on choosing the Current Tool button from the Tool palette



Figure 1-10 The top shelf

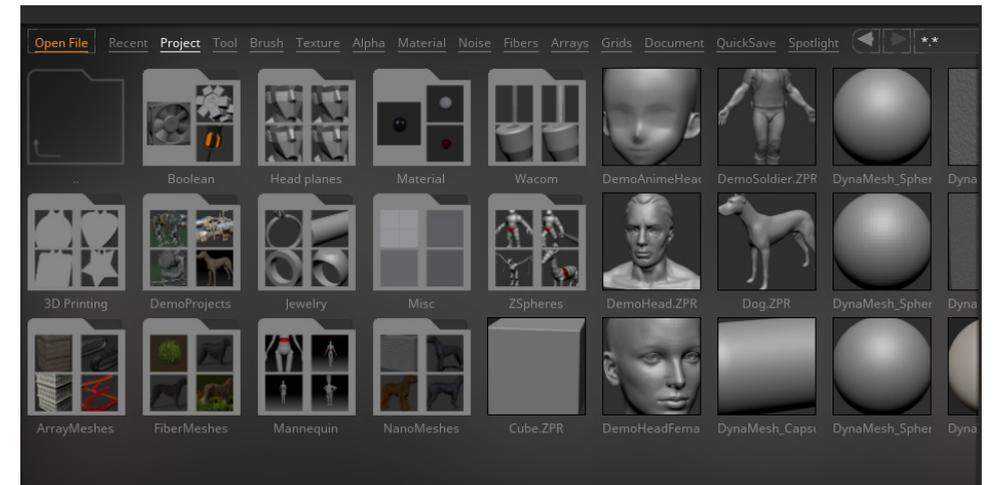


Figure 1-11 The LightBox browser

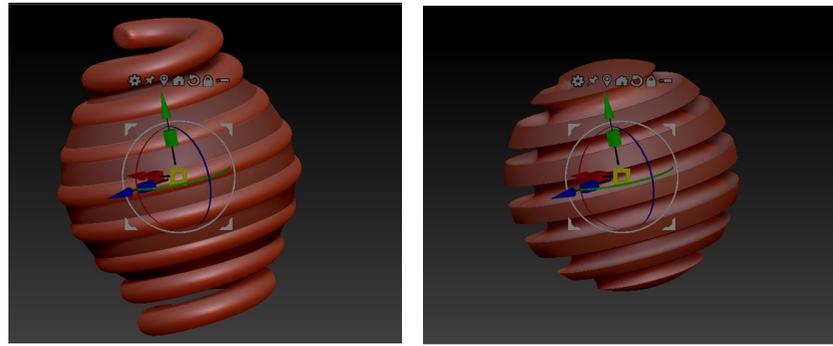


Figure 1-12 The live boolean operation

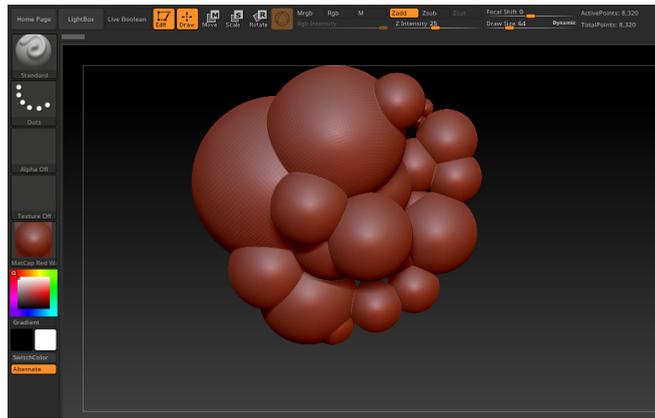


Figure 1-13 Copies of the 3D objects placed in the canvas

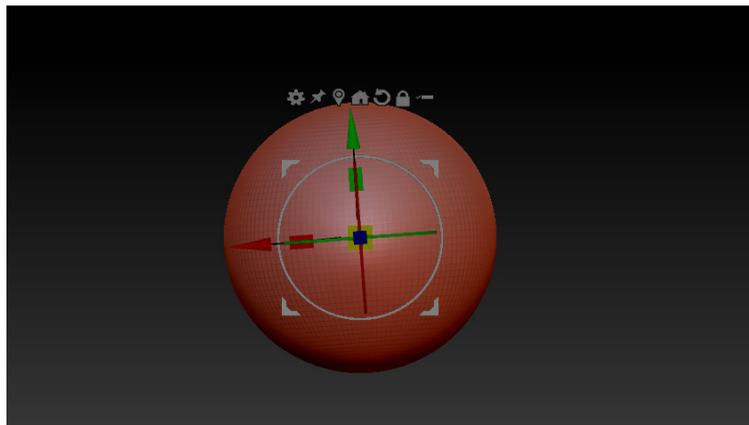


Figure 1-14 Gizmo displayed on choosing the Move button

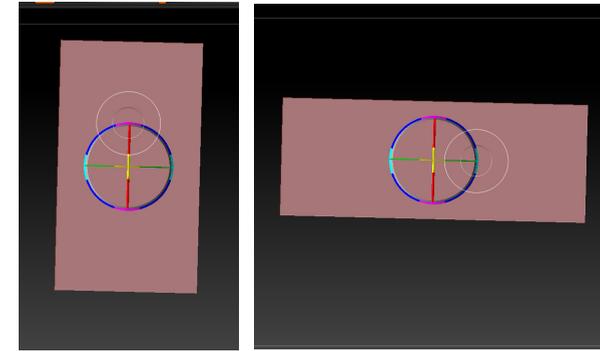


Figure 1-15 The vertical and horizontal scaling using gyro

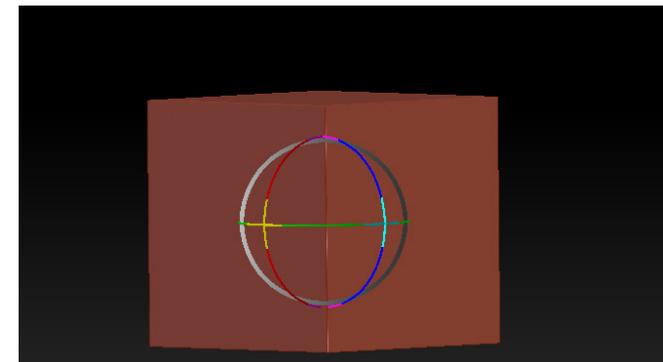


Figure 1-16 Rotating the object using gyro

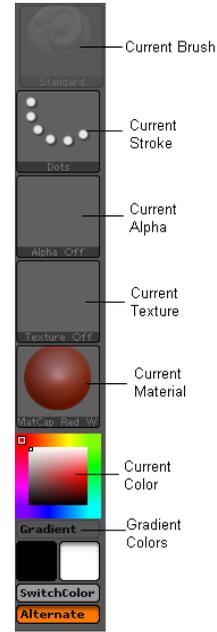


Figure 1-17 The left shelf



Figure 1-18 The flyout displayed on choosing the Current Brush button



Figure 1-19 The flyout displayed on choosing the Current Stroke button



Figure 1-20 The flyout displayed on choosing the Current Alpha button



Figure 1-21 The flyout displayed on choosing the Current Texture button

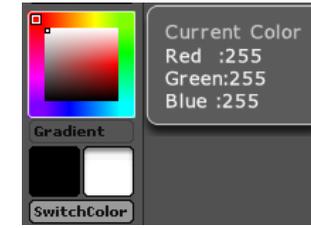


Figure 1-23 The RGB value of a color displayed



Figure 1-22 A flyout displayed on choosing the Current Material button



Figure 1-24 The right shelf

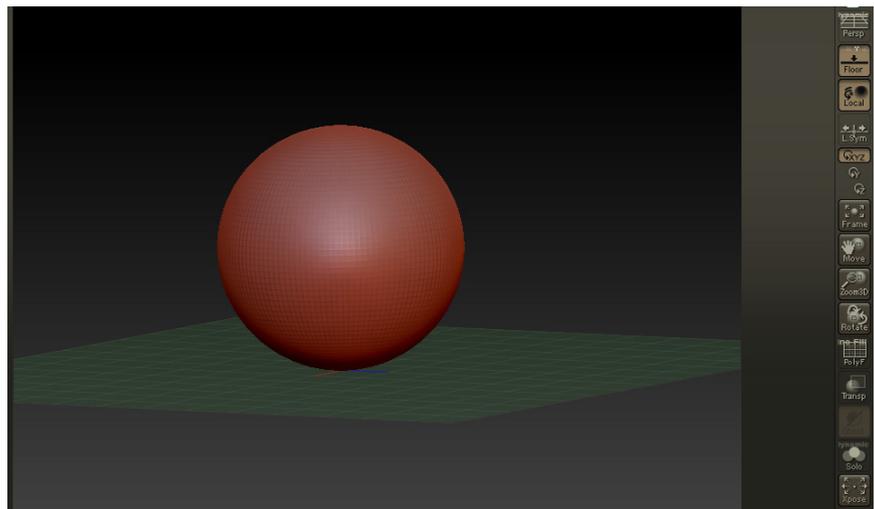


Figure 1-25 Floor grid activated in all the axes

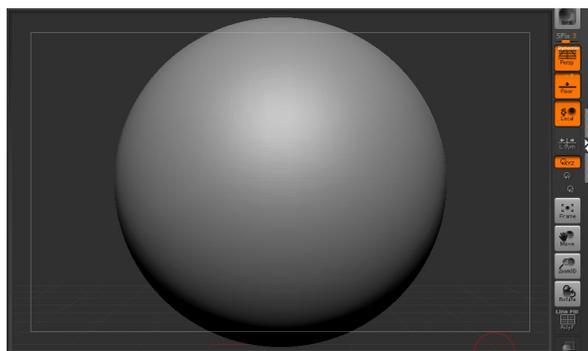


Figure 1-26 The object fitted into the canvas

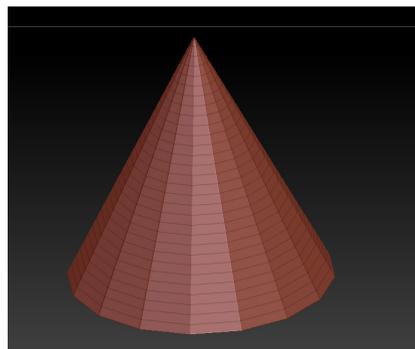


Figure 1-27 The polygon edges of a 3D object



Figure 1-28 Transparency created in the subtools



Figure 1-29 Color in transparent subtools displayed



Figure 1-30 The selected subtool displayed



Figure 1-31 The subtools separated from the model

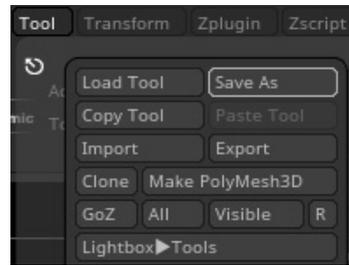


Figure 1-32 The Save As button in the Tool palette

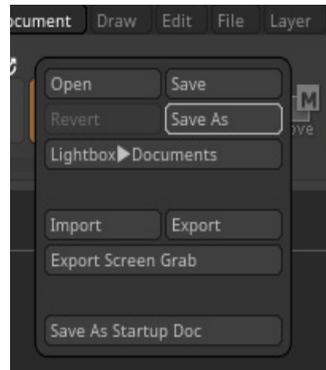


Figure 1-33 The Save As button in the Document palette

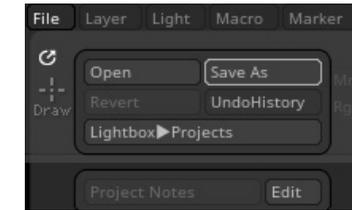


Figure 1-34 The Save As button in the File palette

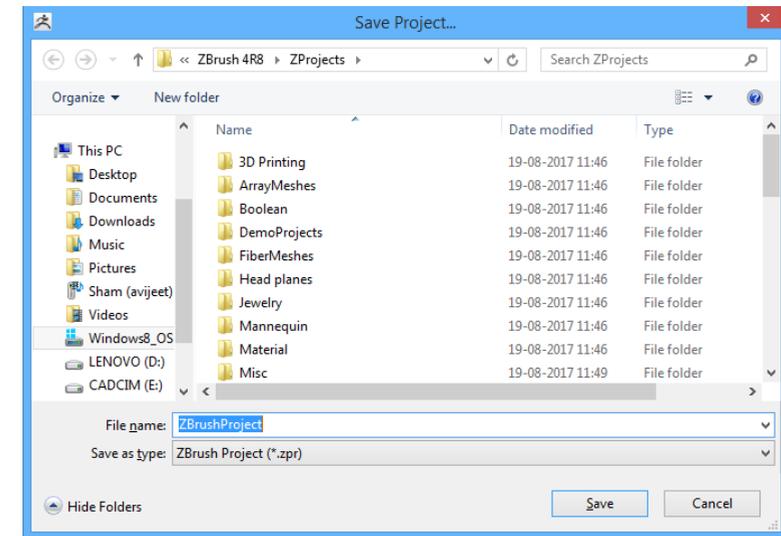


Figure 1-35 The Save Project dialog box

Chapter 2

Sculpting Brushes

Learning Objectives

After completing this chapter, you will be able to:

- *Understand digital sculpting*
- *Work with different types of sculpting brushes*





Figure 2-5 The Make PolyMesh3D button in the Tool palette



Figure 2-6 Flyout displayed on choosing the Current Tool button

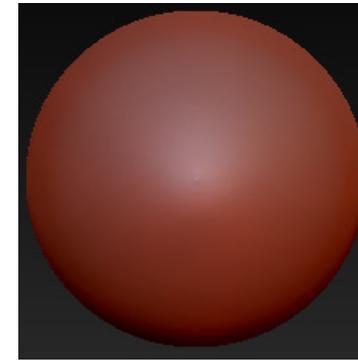


Figure 2-7 The sphere smoothed

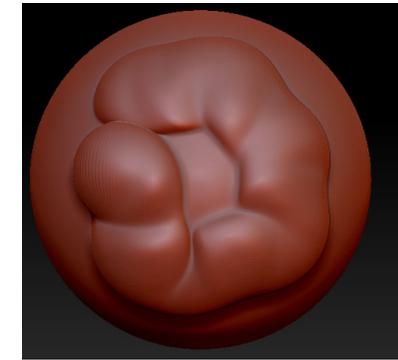


Figure 2-8 Shape of the sphere modified using the Blob brush



Figure 2-9 The clay brushes



Figure 2-10 Patterns created using different alphas

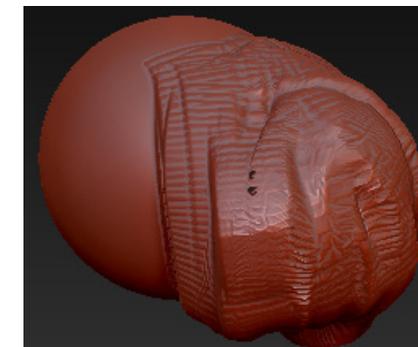


Figure 2-11 Volume of the sphere increased using the ClayBuildup brush

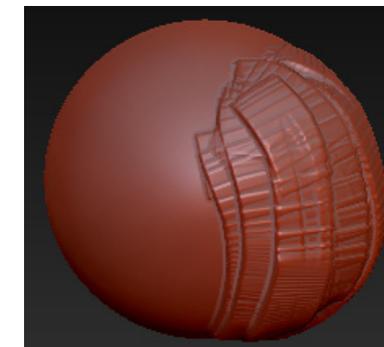


Figure 2-12 Volume of the sphere increased using the ClayTubes brush



Figure 2-13 The Clip brushes

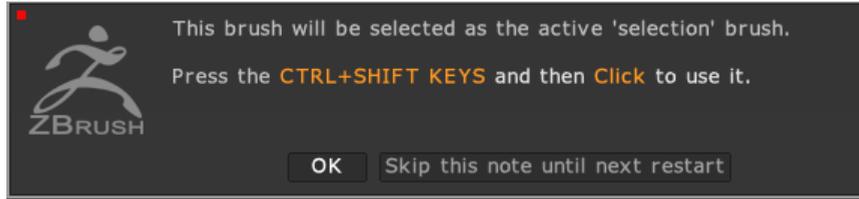


Figure 2-14 The message box displayed on choosing the ClipCircle brush

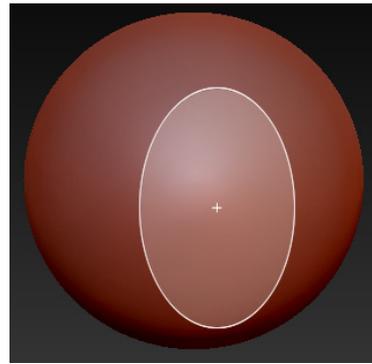


Figure 2-15 A elliptical marquee selection displayed

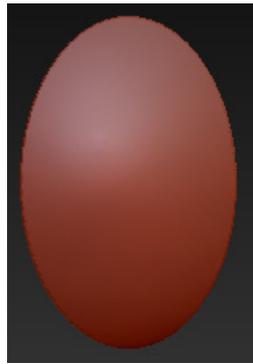


Figure 2-16 The shape of the sphere modified

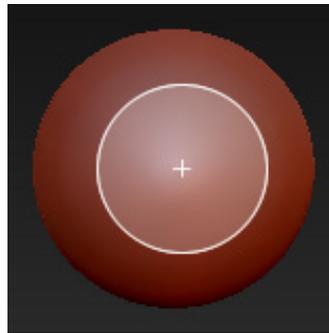


Figure 2-17 A circular marquee selection displayed

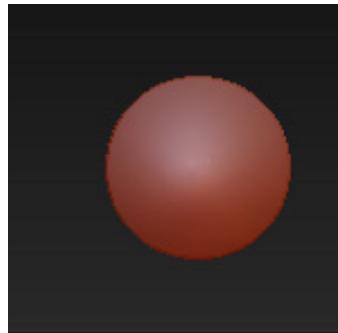


Figure 2-18 The shape of the sphere modified

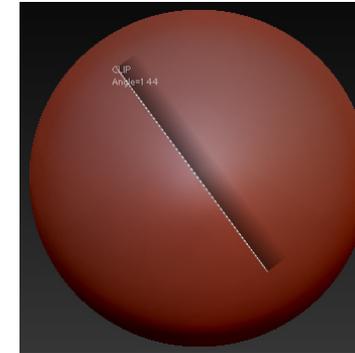


Figure 2-19 A straight line displayed on the surface of the sphere

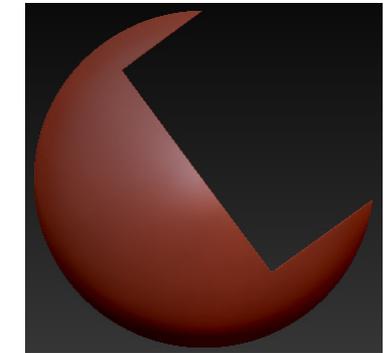


Figure 2-20 Shape modified by using the ClipCurve brush

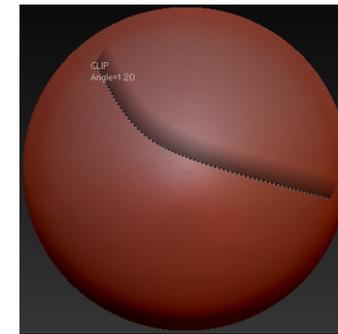


Figure 2-21 A curved line displayed on the surface of the sphere

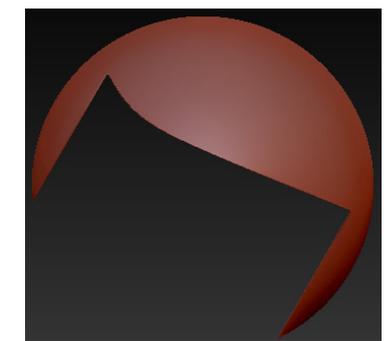


Figure 2-22 Shape modified by using the ClipCurve brush along with ALT

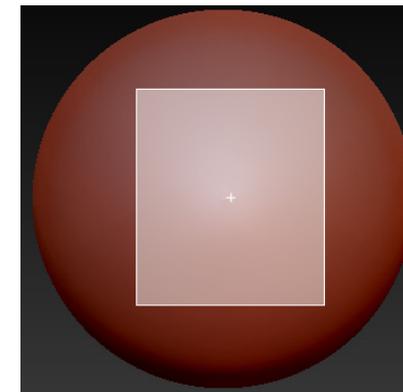


Figure 2-23 A rectangular marquee selection displayed

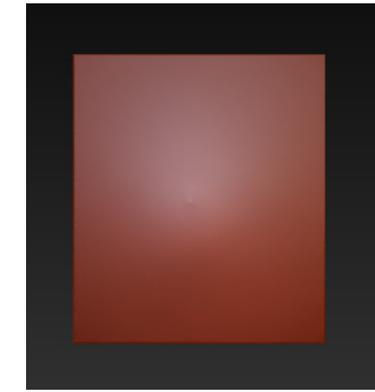


Figure 2-24 The shape of the sphere modified

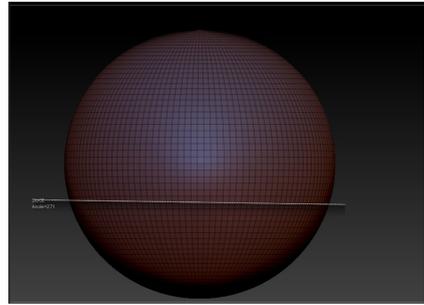


Figure 2-25 A straight line with grey area

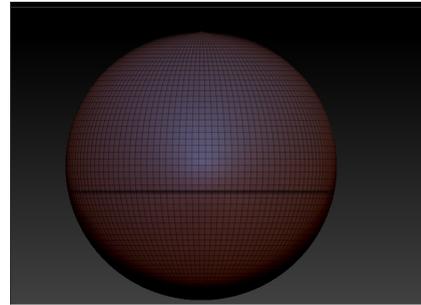


Figure 2-26 The creased edge created on the sphere

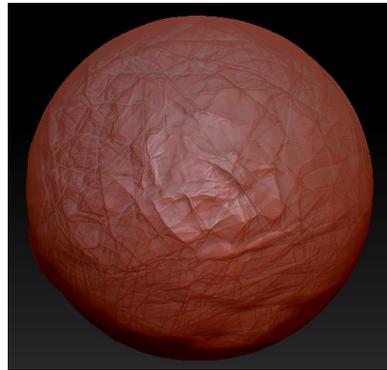


Figure 2-27 A pattern created using the Crumple brush



Figure 2-28 The Curve brushes

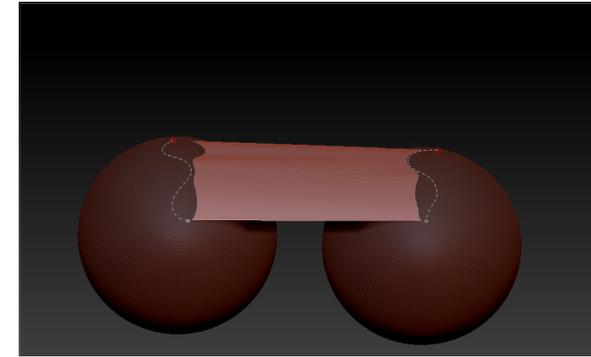


Figure 2-29 The bridge geometry created between two curves

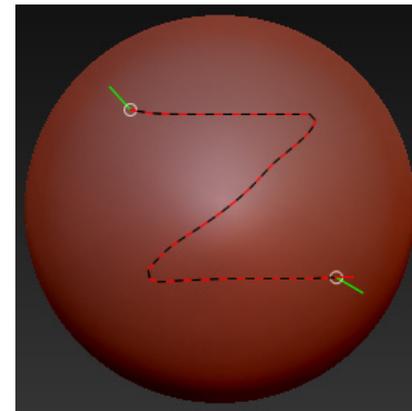


Figure 2-30 A path created on the surface of the object



Figure 2-31 Depth created along the path

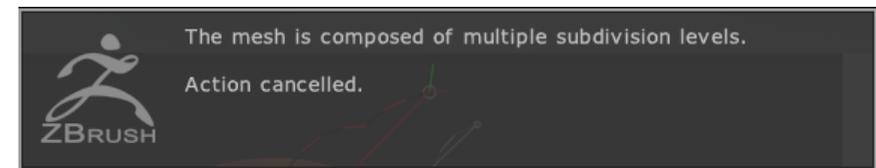


Figure 2-32 The message box displayed on using the CurveLathe brush on subdivided mesh

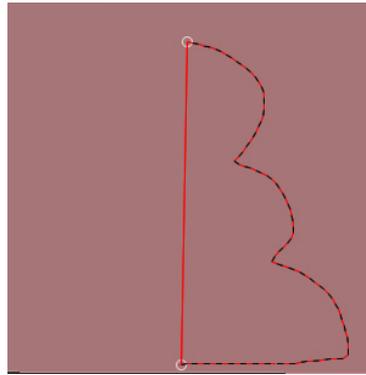


Figure 2-33 A profile curve created on the surface of plane

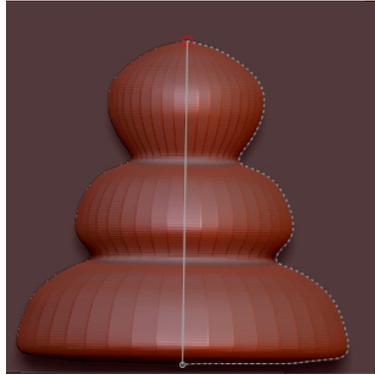


Figure 2-34 A new mesh created along the profile curve

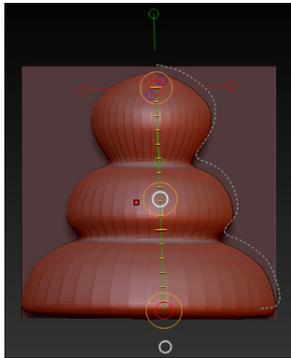


Figure 2-35 A line with three circles displayed

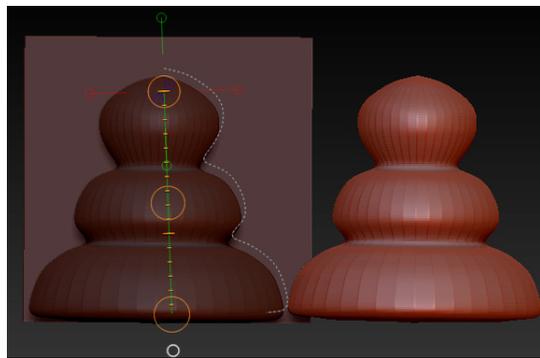


Figure 2-36 The duplicate copy of the mesh created

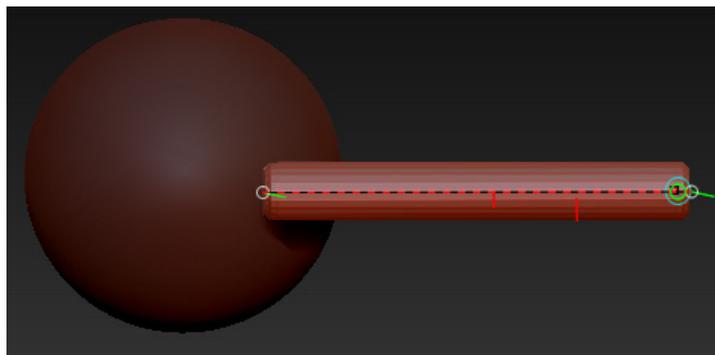


Figure 2-37 A tube created along the straight line

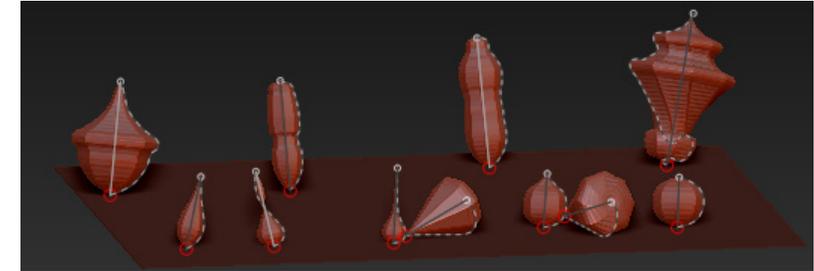


Figure 2-38 Multiple shapes created on the surface of a plane

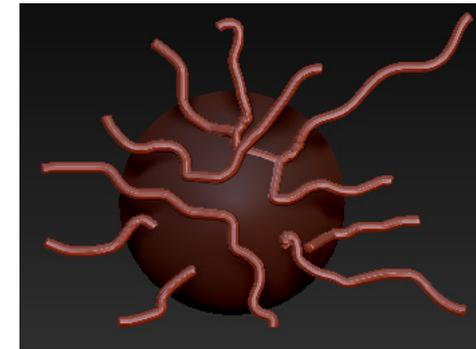


Figure 2-39 Multiple tubes created on the surface of a sphere

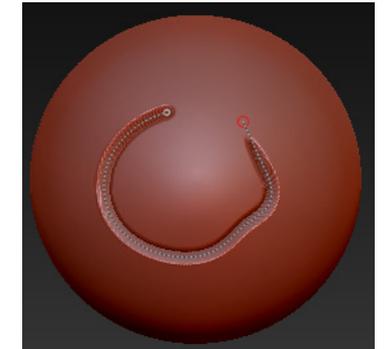


Figure 2-40 The polygons pinched along the path

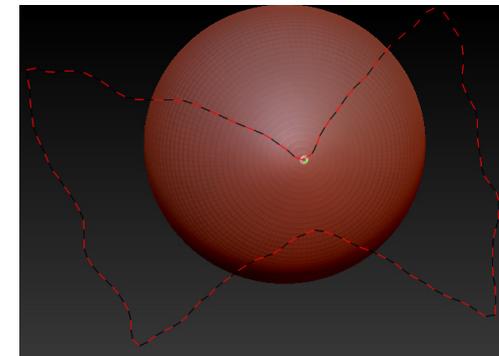


Figure 2-41 An outline drawn on the surface of the sphere

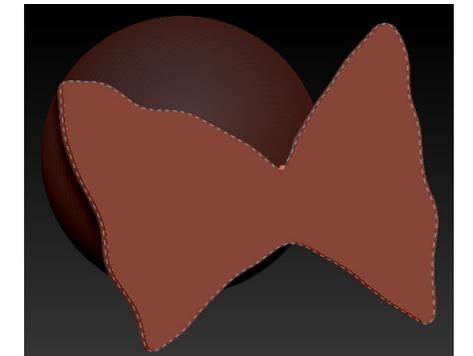


Figure 2-42 A planar mesh created on the surface of the sphere

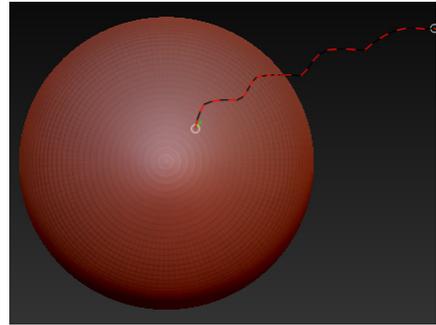


Figure 2-43 A curve drawn on the surface of the sphere

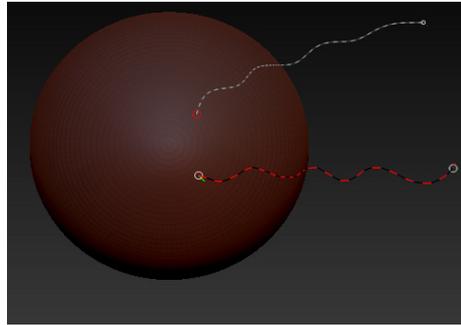


Figure 2-44 Second curve drawn below the curve drawn previously

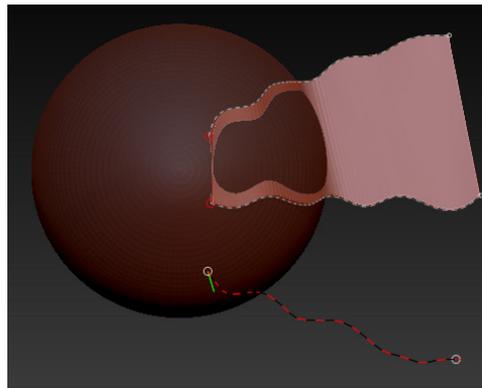


Figure 2-45 Third curve drawn below the second curve

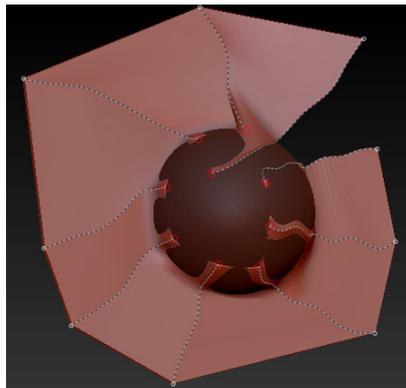


Figure 2-46 A surface created using the CurveSnapSurface brush

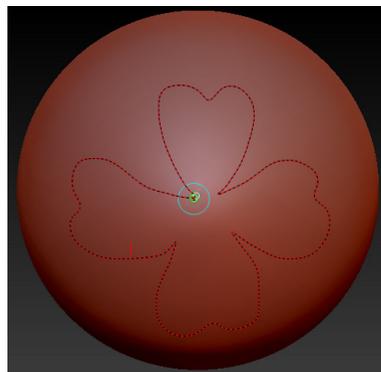


Figure 2-47 A path created on the surface of the sphere

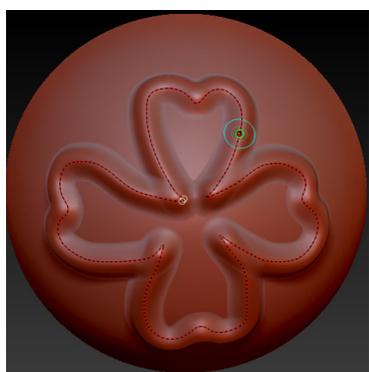


Figure 2-48 The depth created along the path

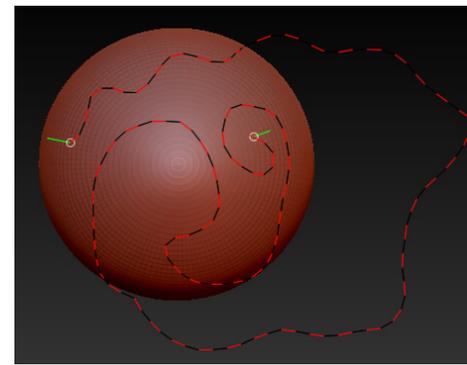


Figure 2-49 A curve created on the surface of the sphere

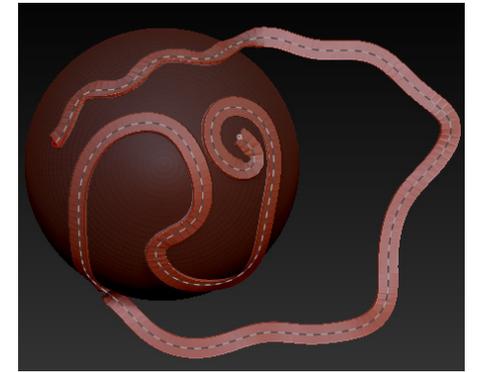


Figure 2-50 A surface resembling a ribbon created along the curve

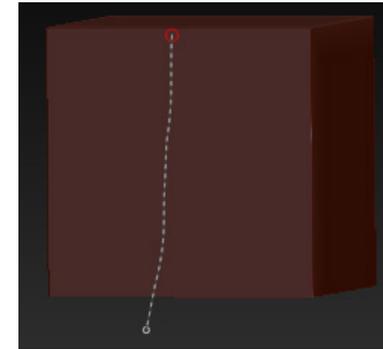


Figure 2-51 A curve drawn on the surface of the cube

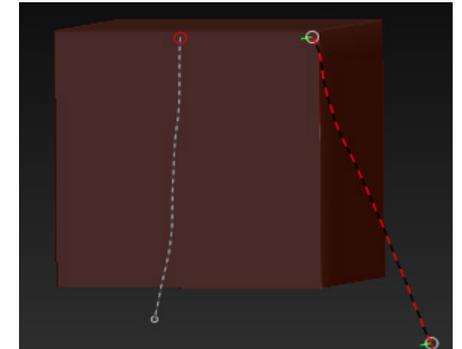


Figure 2-52 Second curve drawn on the right side of the curve drawn previously

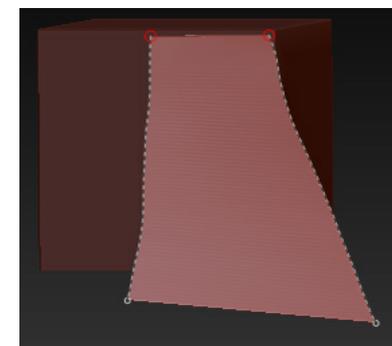


Figure 2-53 The two curves snapped

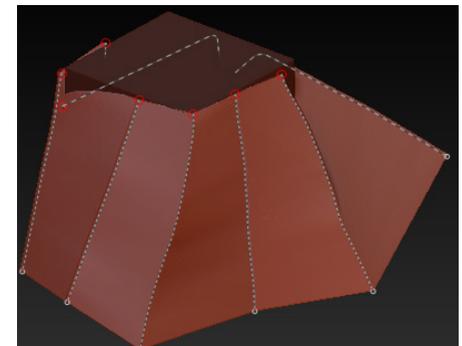


Figure 2-54 A new mesh created on the surface of the cube

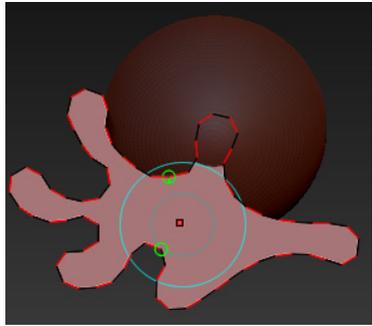


Figure 2-55 A planar surface created using the **CurveTriFill** brush

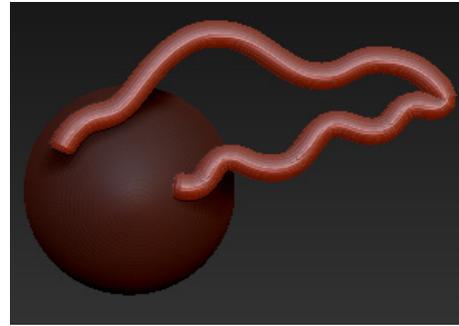


Figure 2-56 A curved tube created using the **CurveTube** brush



Figure 2-57 A seam created in the sphere using the **DamStandard** brush

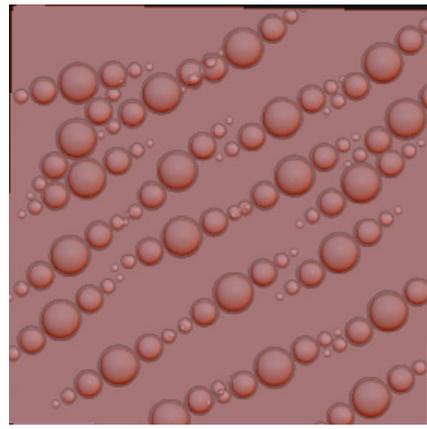


Figure 2-58 A pattern created on the surface of a plane using the **Deco1** brush



Figure 2-59 The polygons pulled out using the **Displace** brush



Figure 2-60 The polygons pushed in using the **Displace** brush

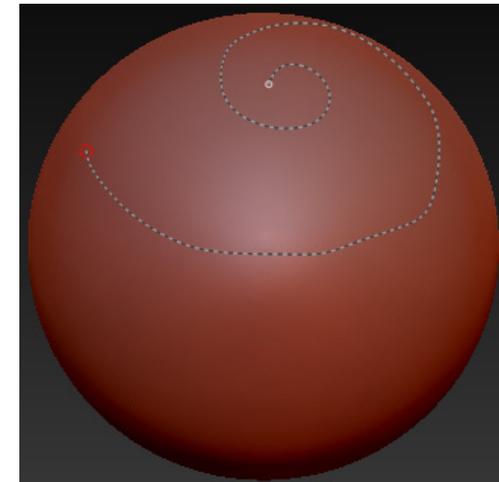


Figure 2-61 The path curve created on the surface of the sphere

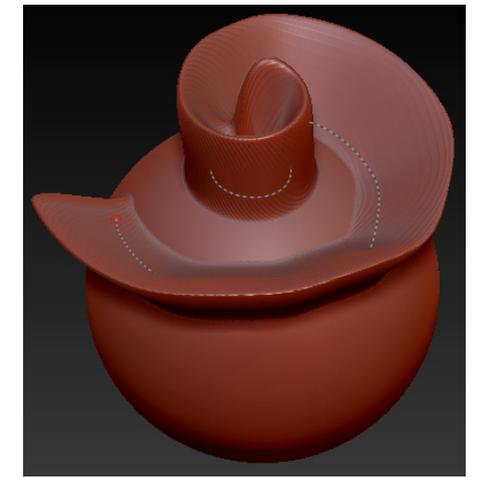


Figure 2-62 The polygons pulled out along the path curve



Figure 2-63 The original shape of the sphere maintained

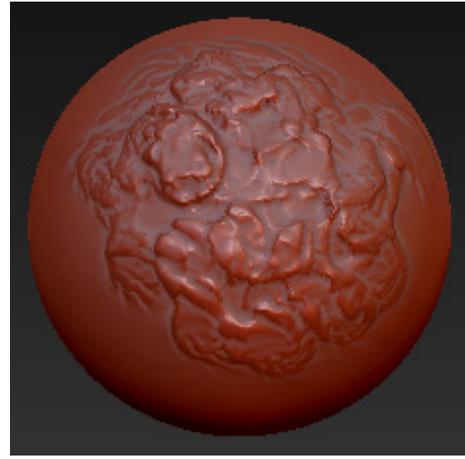


Figure 2-64 Flakes created on the surface of a sphere

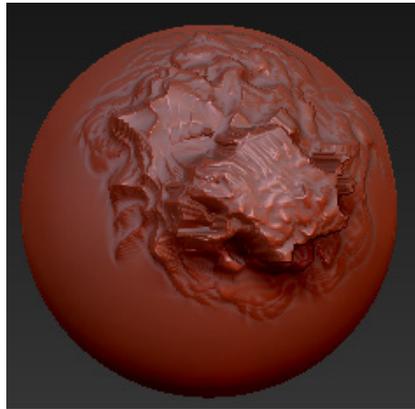


Figure 2-65 Flakes created on the surface of a sphere using the **Flakes** brush

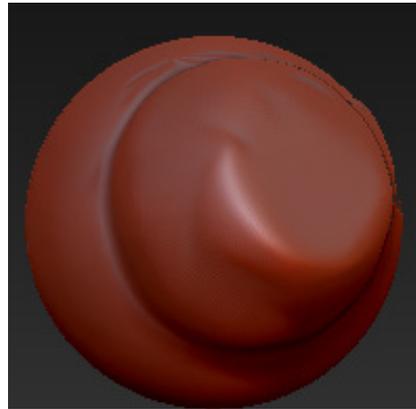


Figure 2-66 The surface of the sphere flattened using the **Flatten** brush

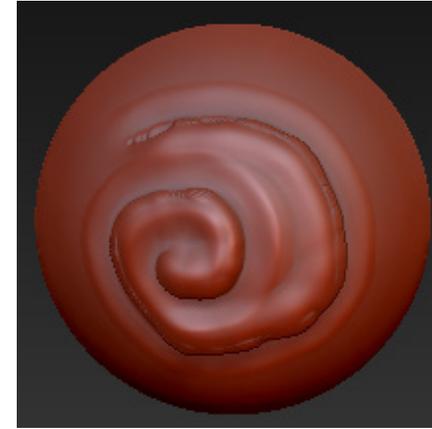


Figure 2-67 Folds created on the surface of a sphere



Figure 2-68 The Groom brushes

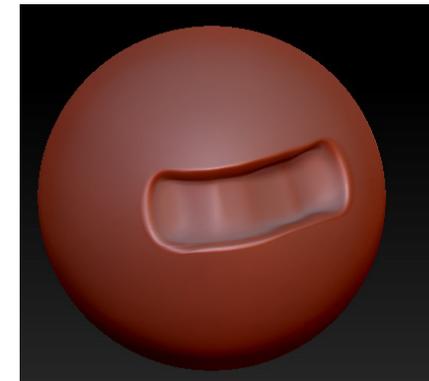


Figure 2-69 Surface of the sphere modified by using the **hPolish** brush



Figure 2-70 The IMM brushes

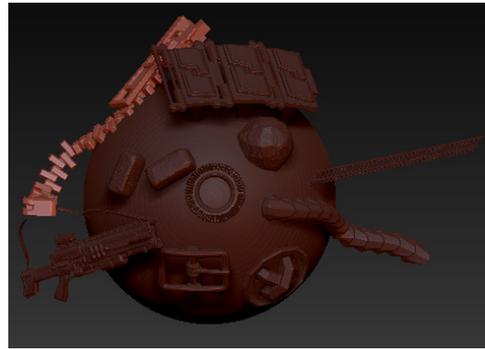


Figure 2-71 Different objects inserted into a sphere using IMM brushes

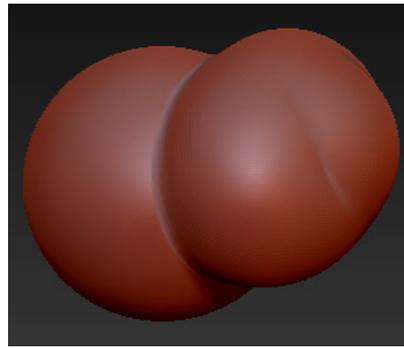


Figure 2-72 Surface of the sphere expanded by using the Inflat brush



Figure 2-73 The Insert brushes

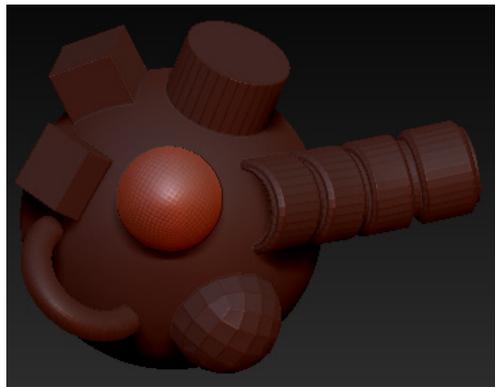


Figure 2-74 Different shapes inserted into a sphere using the insert brushes

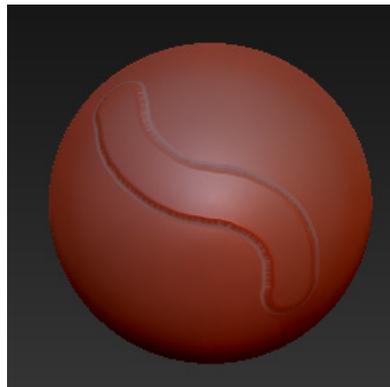


Figure 2-75 Constant displacement created using the Layer brush

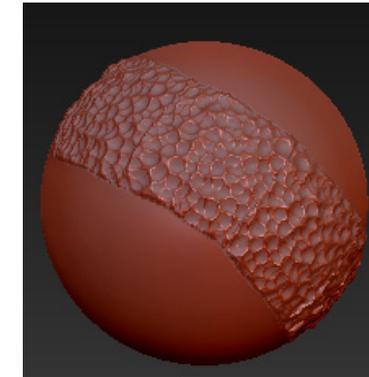


Figure 2-76 A pattern created using the LayeredPattern brush

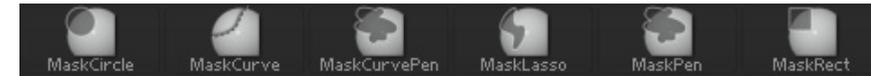


Figure 2-77 The mask brushes

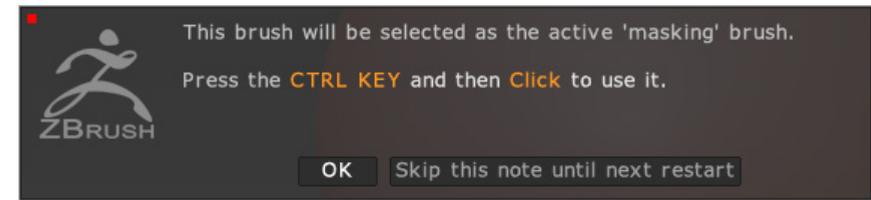


Figure 2-78 The message box displayed on choosing the MaskCircle brush

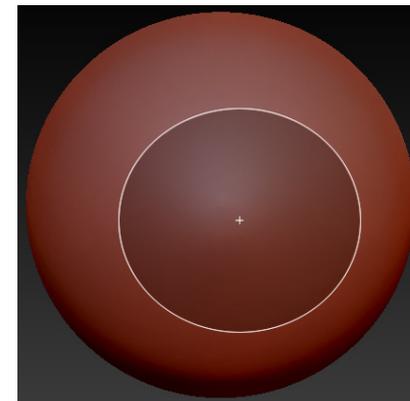


Figure 2-79 A circular marquee selection displayed

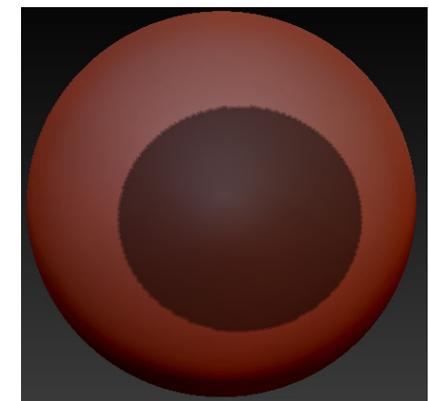


Figure 2-80 A circular mask created on the surface of the sphere

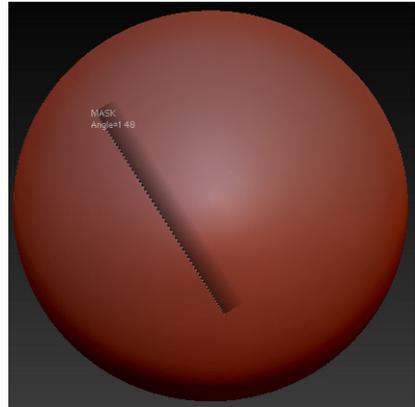


Figure 2-81 A straight line displayed on the surface of the sphere

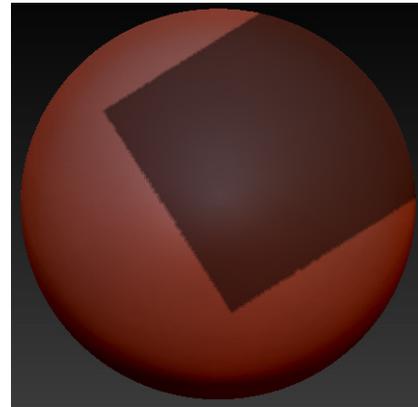


Figure 2-82 A mask created on the surface of the sphere

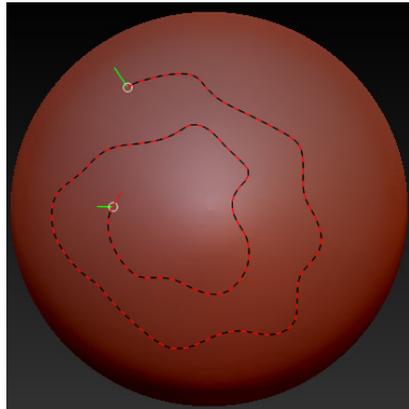


Figure 2-83 A path curve created on the surface of the sphere

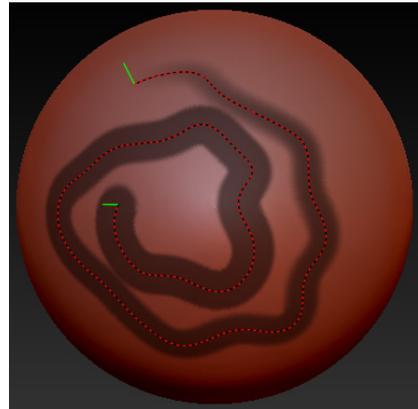


Figure 2-84 A mask created along the path curve

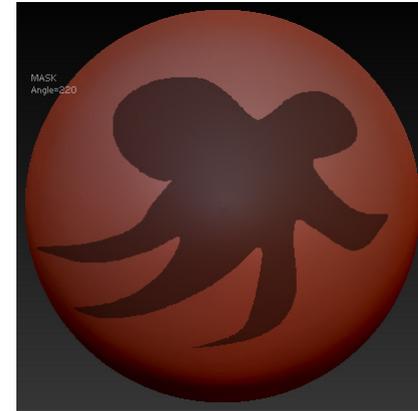


Figure 2-85 A freeform mask created using the mask overlay



Figure 2-86 A mask drawn with freehand using the MaskPen brush

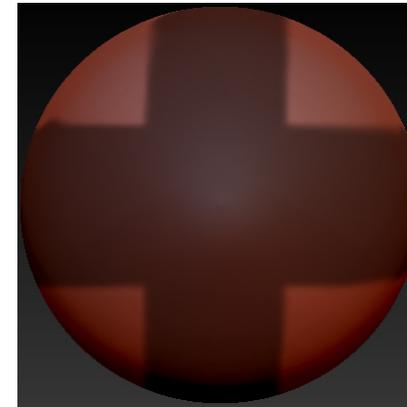


Figure 2-87 A mask created using the MaskPen brush

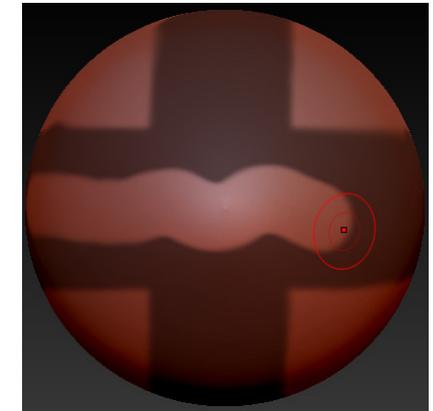


Figure 2-88 An area of the mask removed

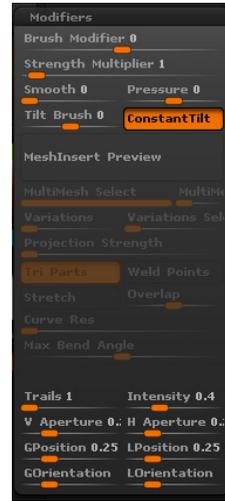


Figure 2-89 The Modifiers subpalette in the Brush palette



Figure 2-90 The flyout displayed on choosing the MeshInsert Preview button

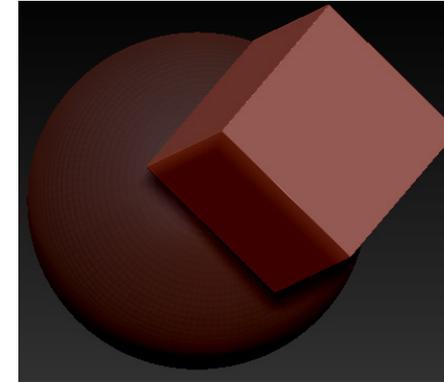


Figure 2-91 A cube created on the surface of the sphere

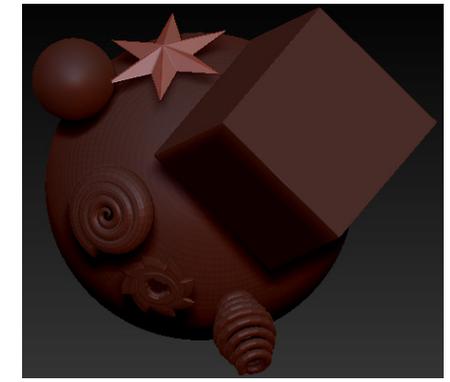


Figure 2-92 Different types of primitives inserted on the surface of the sphere



Figure 2-93 A pattern created using the ClayBuildup brush



Figure 2-94 Morph Target subpalette in the Tool palette

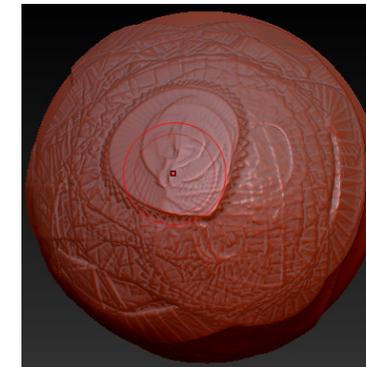


Figure 2-95 A pattern created on the existing pattern

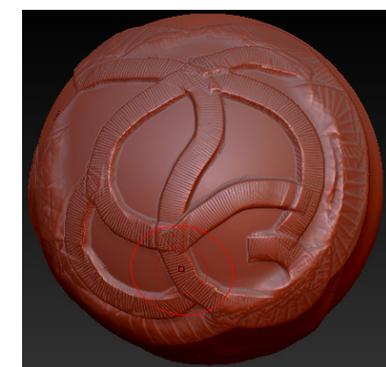


Figure 2-96 Cursor dragged on the surface of the sphere



Figure 2-97 The move brushes

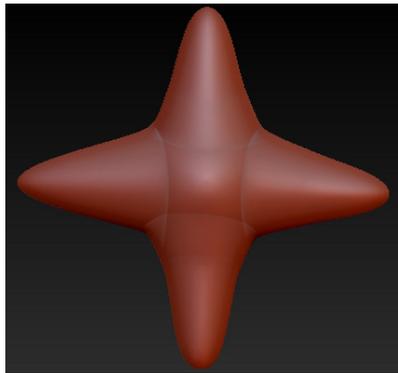


Figure 2-98 Shape of the sphere modified using the Move brush

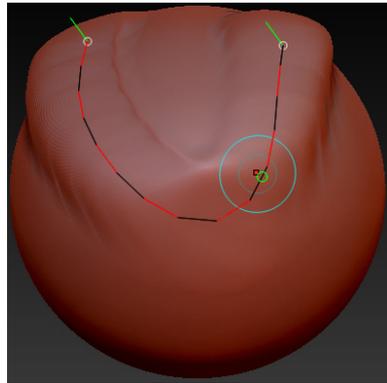


Figure 2-99 The polygons moved along the path curve

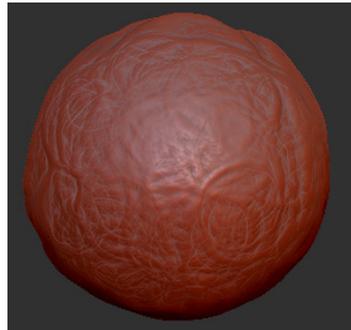


Figure 2-100 Fractal noise added using the Noise brush



Figure 2-101 The pen brushes

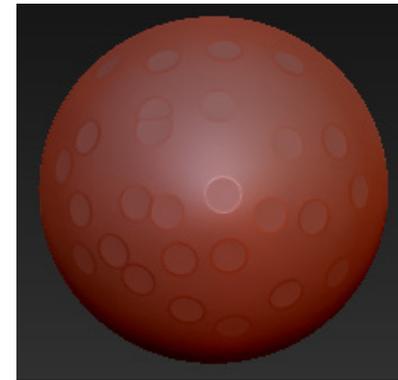


Figure 2-102 The surface of the sphere flattened

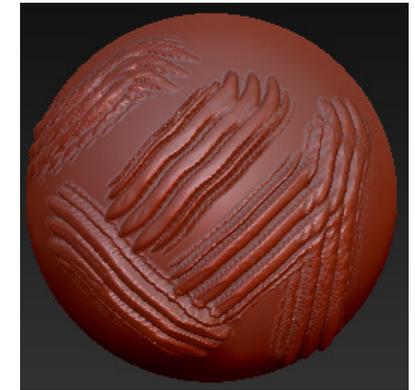


Figure 2-103 Scratches created on the surface of a sphere

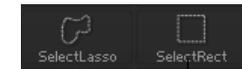


Figure 2-104 The select brushes

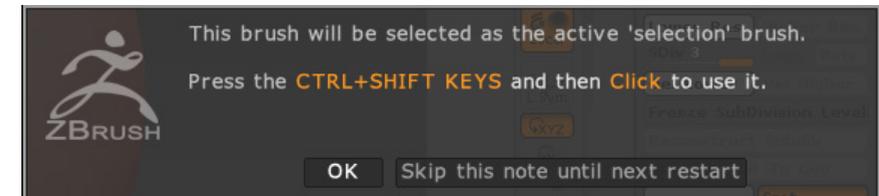


Figure 2-105 The message box displayed on choosing the SelectLasso brush

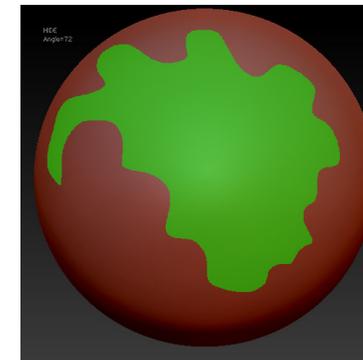


Figure 2-106 Green selection mask displayed on the surface



Figure 2-107 The selected area displayed in the canvas

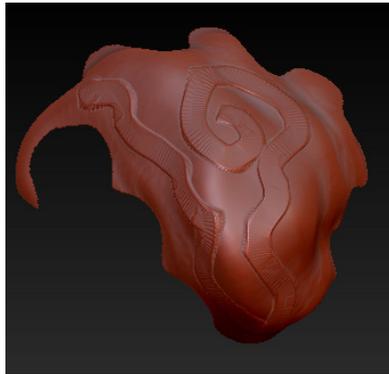


Figure 2-108 The selected area sculpted using different brushes



Figure 2-109 The complete sphere displayed in the canvas

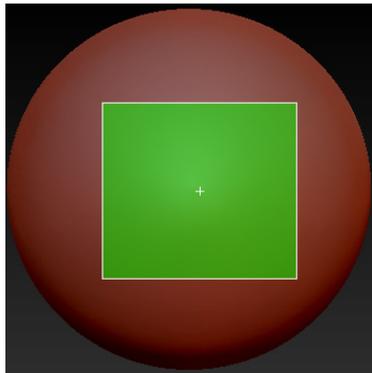


Figure 2-110 The green colored rectangular selection displayed

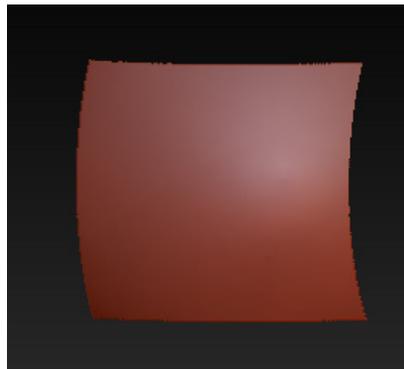


Figure 2-111 The selected area of the sphere displayed in the canvas



Figure 2-112 Pattern produced using the Slash3 brush



Figure 2-113 Pattern produced using the Slash3 brush



Figure 2-114 The slice brushes

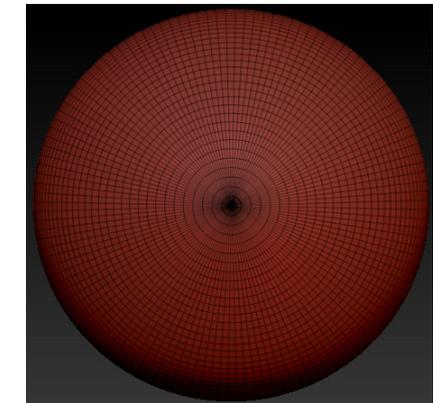


Figure 2-115 The polygons of the sphere displayed

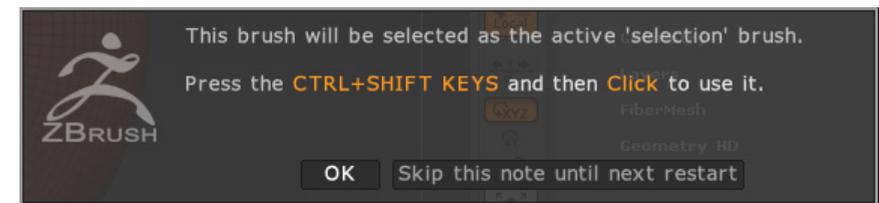


Figure 2-116 The message box displayed on choosing the SliceCirc button

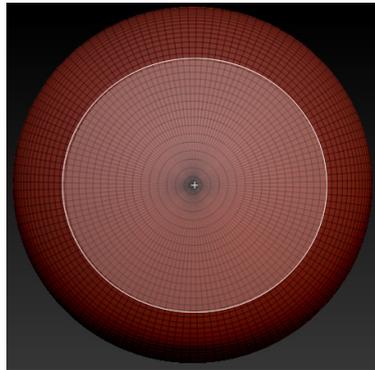


Figure 2-117 A circular selection mask displayed on the sphere

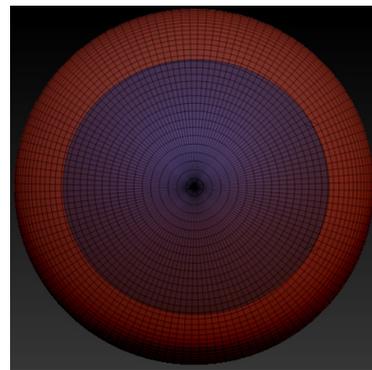


Figure 2-118 The selected area of the mask separated from the sphere

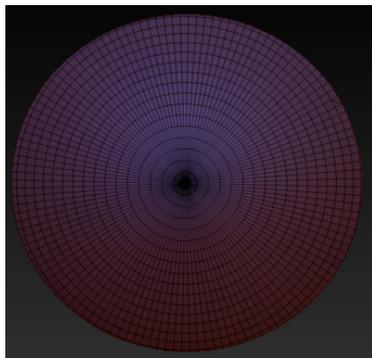


Figure 2-119 The selected area displayed in the canvas

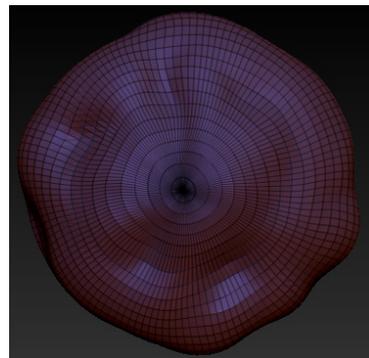


Figure 2-120 The selected area sculpted using the Standard brush

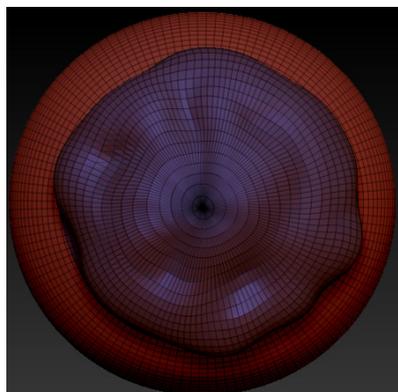


Figure 2-121 The complete sphere displayed in the canvas

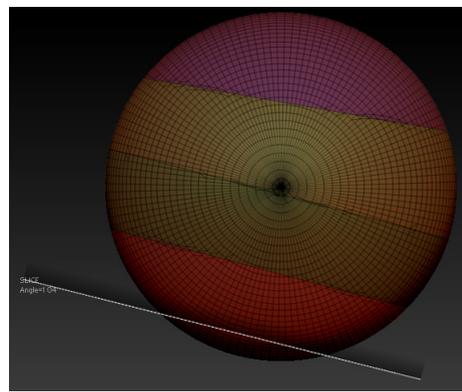


Figure 2-122 The sphere divided into different parts using the SliceCurve brush

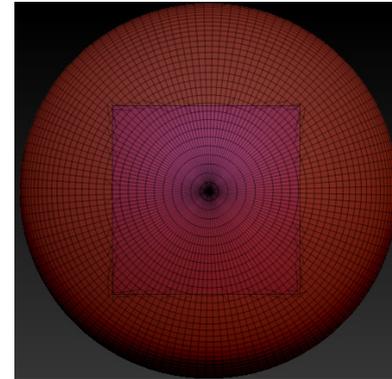


Figure 2-123 A rectangular selection area created on the surface of sphere

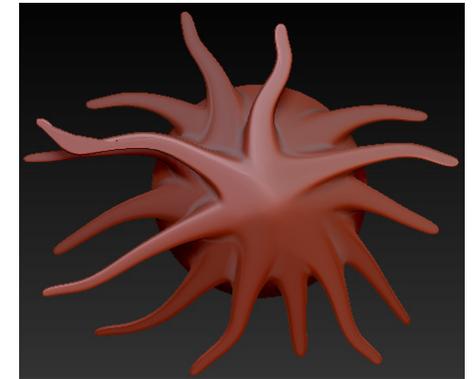


Figure 2-124 The polygons slide outward using the Slide brush



Figure 2-125 The Smooth brushes

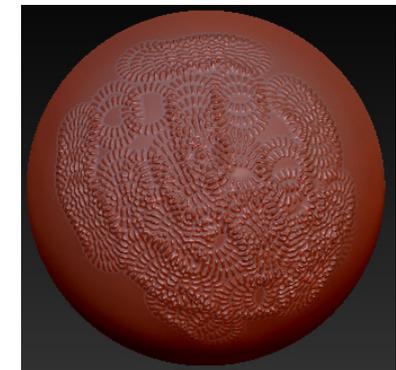


Figure 2-126 Pattern created using the Standard brush

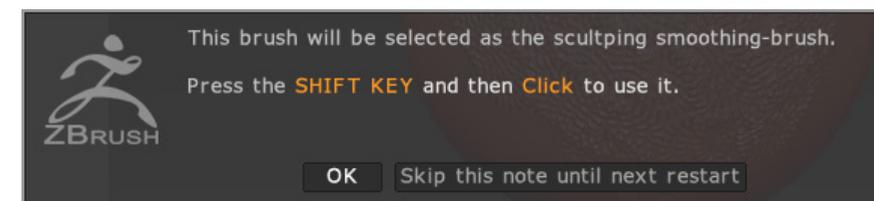


Figure 2-127 The message box displayed on choosing the Smooth brush



Figure 2-128 The surface smoothed using the **Smooth** brush

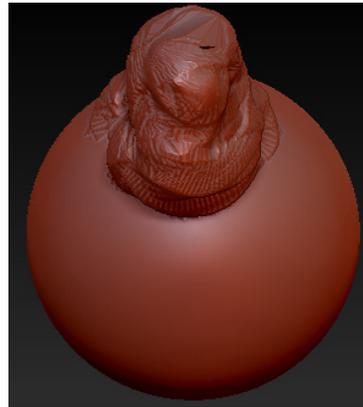


Figure 2-129 Peak created using the **ClayBuildup** brush

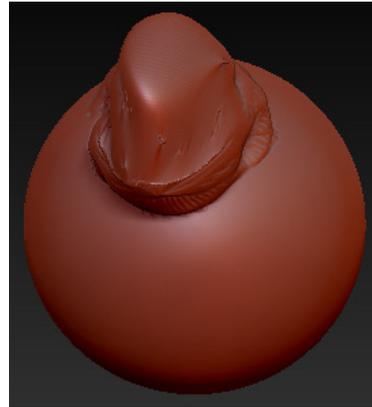


Figure 2-130 Peak smoothed using the **SmoothPeaks** brush

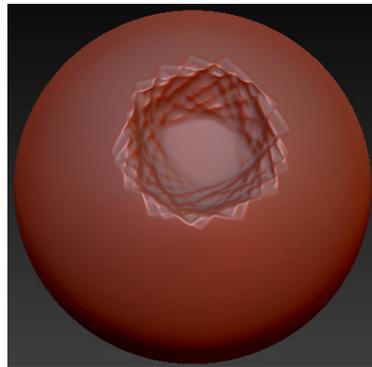


Figure 2-131 Cavity created using the **ClayBuildup** brush

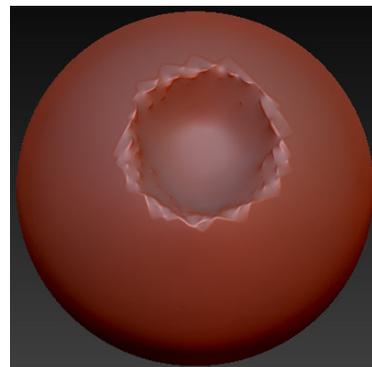


Figure 2-132 Cavity smoothed using the **SmoothValleys** brush

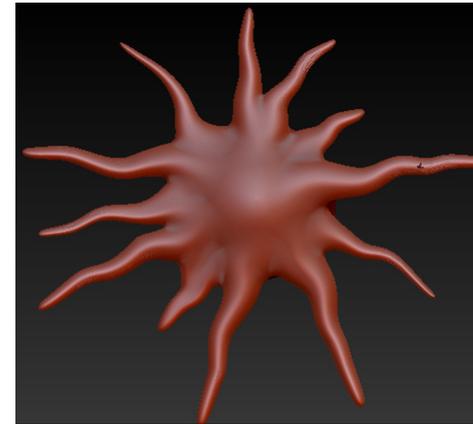


Figure 2-133 Strands pulled out using the **SnakeHook** brush

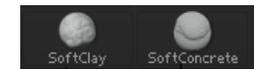


Figure 2-134 The soft brushes



Figure 2-135 Rectangular alpha added using the **SoftClay** brush

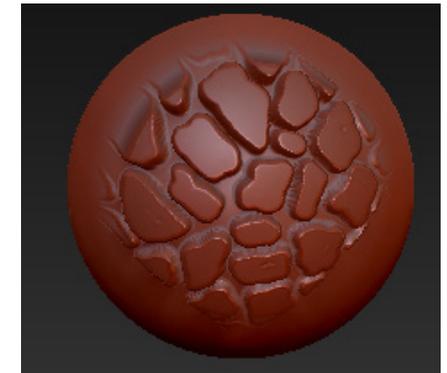


Figure 2-136 A stone like alpha added using the **SoftConcrete** brush



Figure 2-137 Twisted displacement produced by using the **Spiral** brush



Figure 2-138 A sphere sculpted by the **Standard** brush

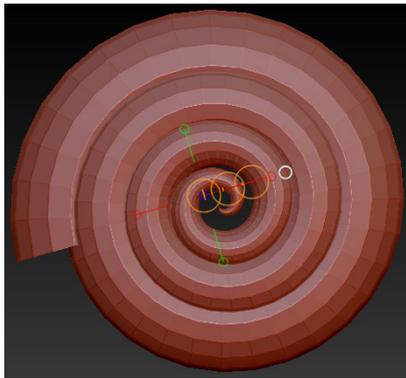


Figure 2-139 Action line displayed on the spiral

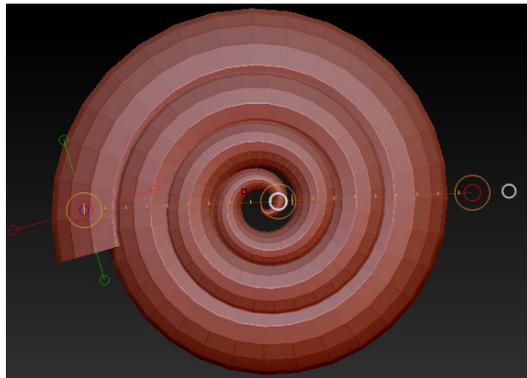


Figure 2-140 Size of the action line increased on the spiral

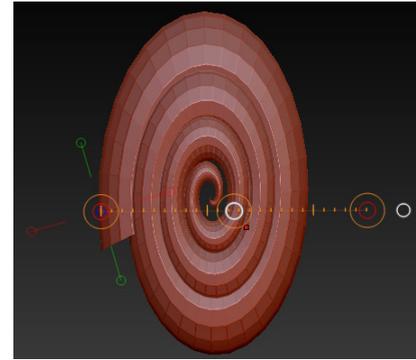


Figure 2-141 Spiral scaled up vertically

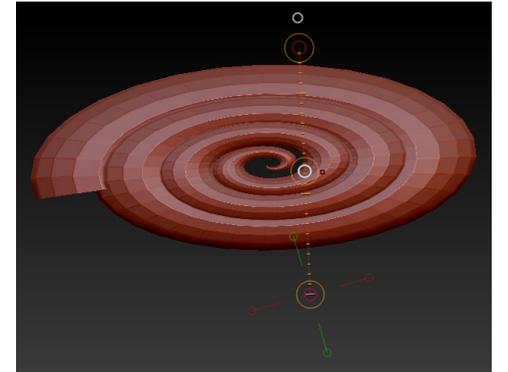


Figure 2-142 Spiral scaled up horizontally

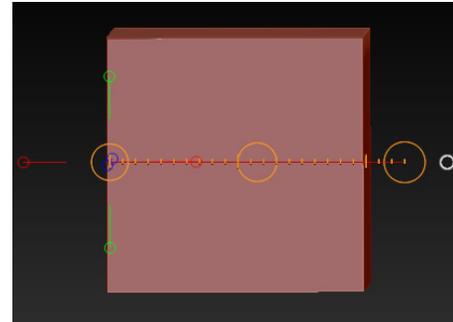


Figure 2-143 Action line displayed on the spiral

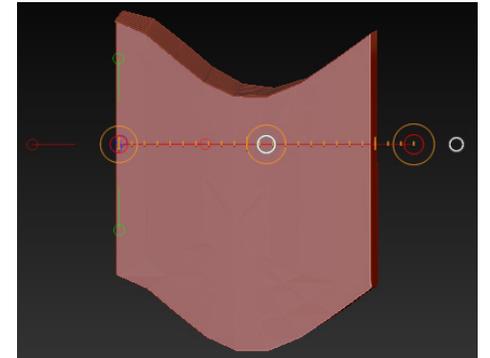


Figure 2-144 Surface of the cube bent using the **Transpose** brush



Figure 2-145 Model of the dog created in the canvas

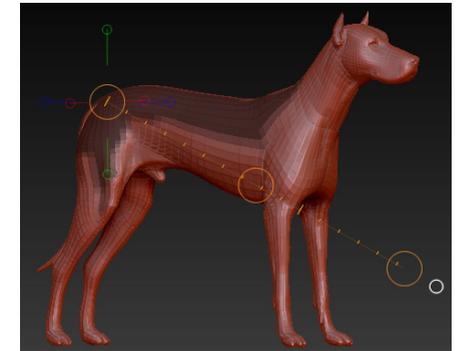


Figure 2-146 Mask created on the top area of the model

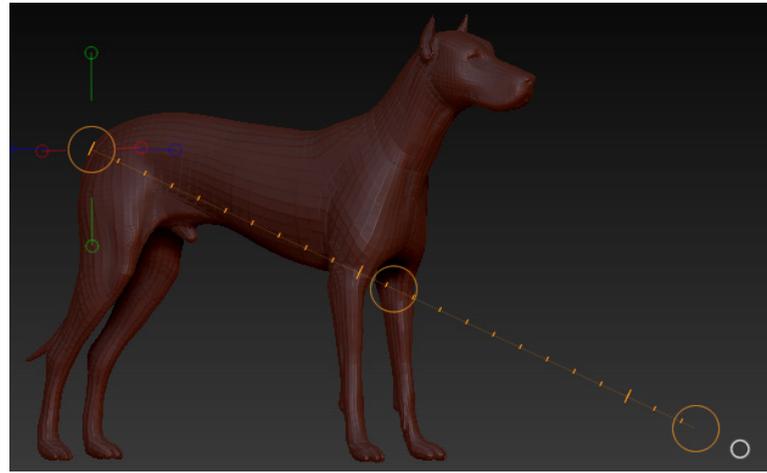


Figure 2-147 Mask created on the entire surface of the model

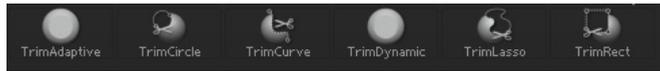


Figure 2-148 The Trim brushes

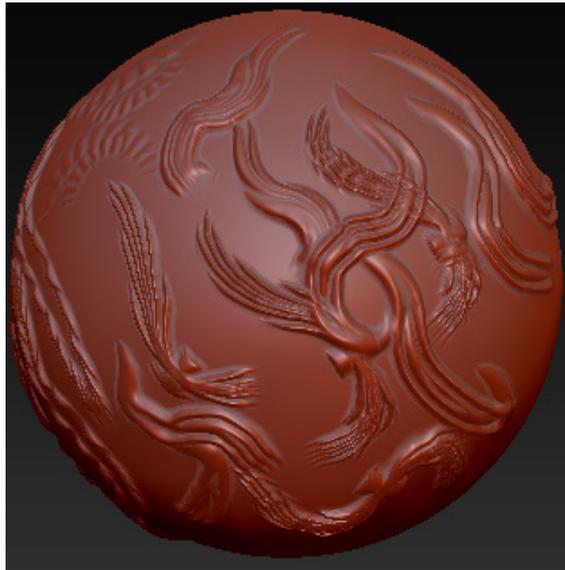


Figure 2-149 Different patterns created using the Weave1 brush



Figure 2-150 Choosing the ZModeler brush from the flyout

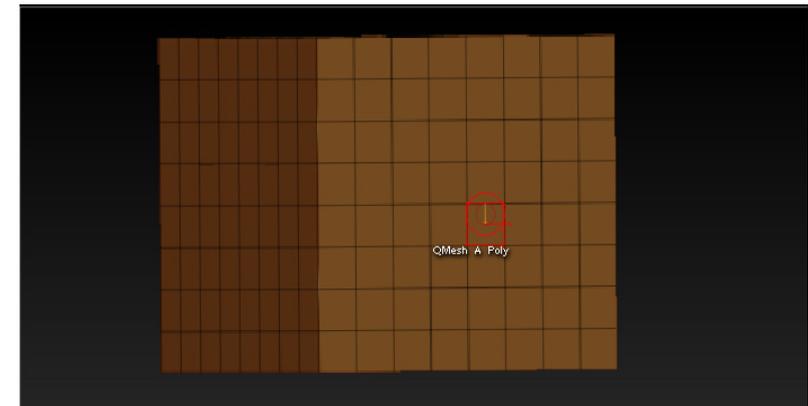


Figure 2-151 The highlighted area of the primitive



Figure 2-152 The ZMOEDLER window

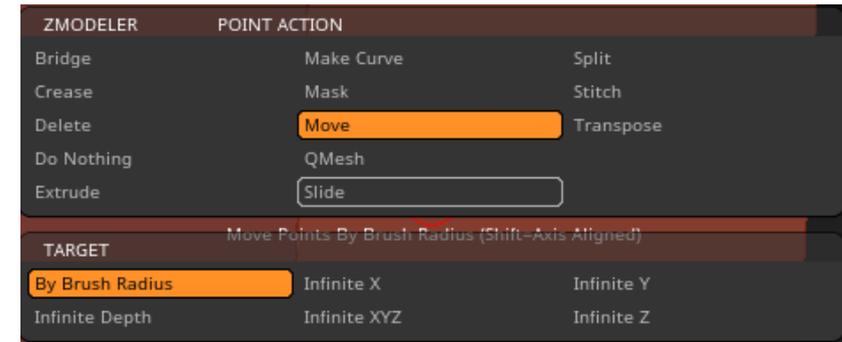


Figure 2-154 The ZMODELER window with options corresponding to point



Figure 2-153 The ZMOEDLER window with options corresponding to edge

Chapter 3

Introduction to Digital Sculpting

Learning Objectives

After completing this chapter, you will be able to:

- *Understand digital sculpting*
- *Learn about different subpalettes in Tool palette*
- *Understand the usage of the Projection Master*



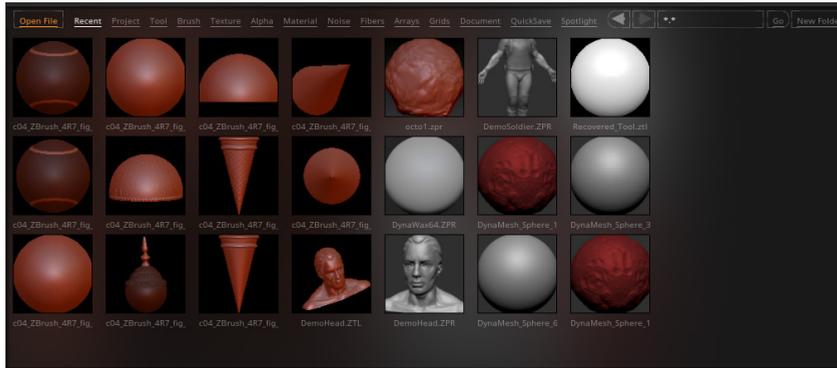


Figure 3-1 The LightBox browser



Figure 3-3 The Activate Symmetry button in the Transform palette



Figure 3-2 The primitives accessed through the flyout

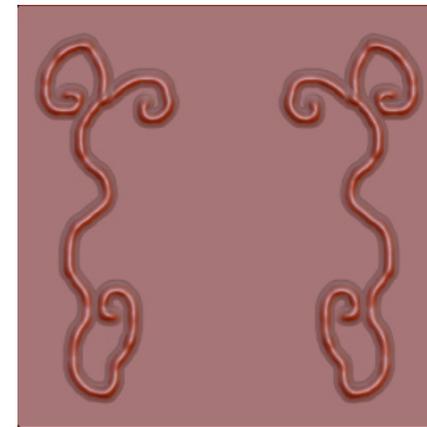


Figure 3-4 Pattern drawn with the symmetry activated along X axis

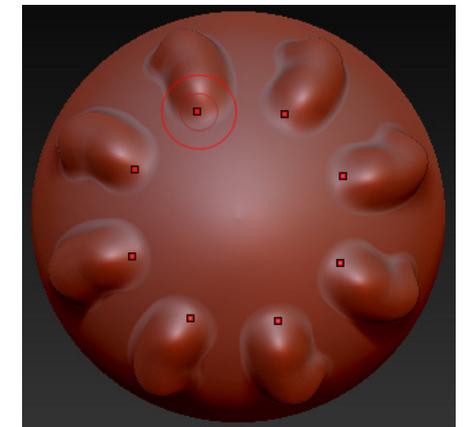


Figure 3-5 Radial pattern drawn with the symmetry activated along Z axis



Figure 3-6 The alpha patterns

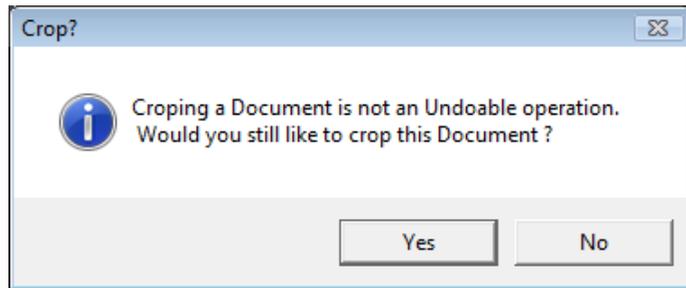


Figure 3-7 The warning message displayed on choosing the CropAndFill button

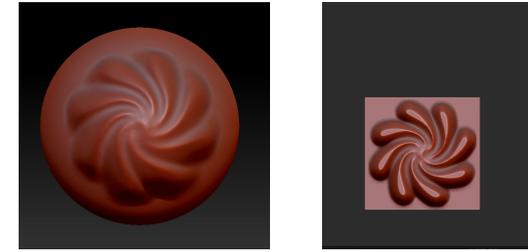


Figure 3-8 Object cropped by using the CropAndFill button

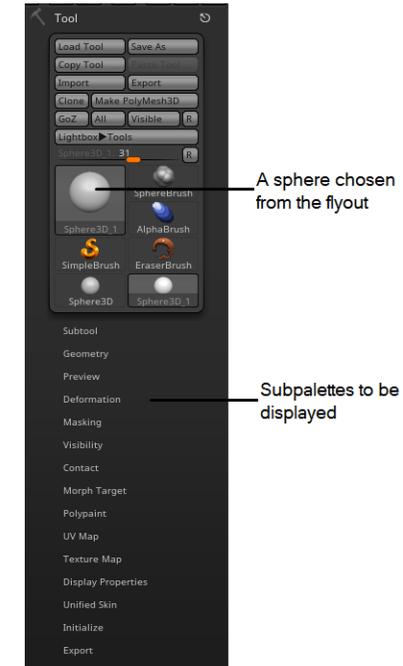


Figure 3-9 Subpalettes displayed on choosing a primitive

e

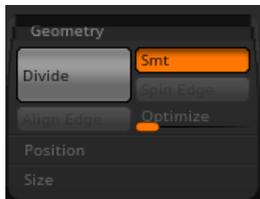


Figure 3-10 The **Geometry** subpalette displayed on creating a primitive model



Figure 3-11 The **Geometry** subpalette displayed on converting a primitive model into a polymesh



Figure 3-12 The **Geometry** subpalette displayed on creating a ZSphere

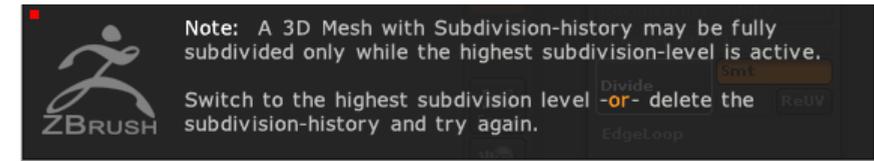


Figure 3-13 A message box displayed when the **SDiv** slider is not at its highest subdivision level



Figure 3-14 The **Layers** subpalette

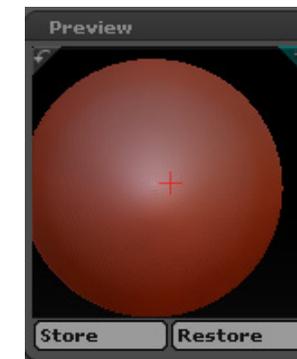


Figure 3-15 The preview area in the **Preview** subpalette



Figure 3-16 The Surface subpalette

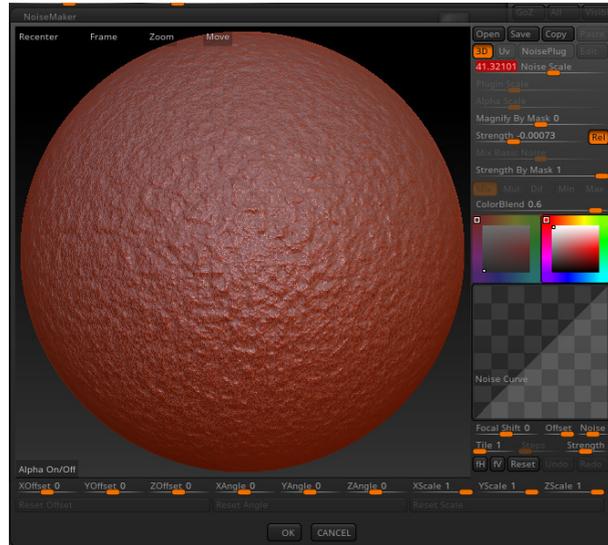


Figure 3-17 The NoiseMaker window



Figure 3-18 The Deformation subpalette

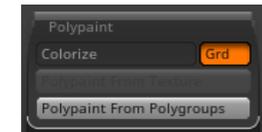


Figure 3-19 The Polypaint subpalette



Figure 3-20 The Make Unified Skin button in the Unified Skin subpalette

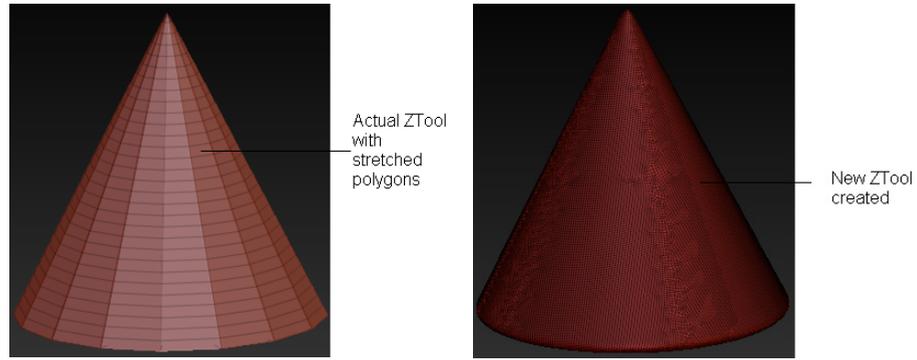


Figure 3-21 The ZTool created after choosing the *Make Unified Skin* button



Figure 3-22 The *Initialize* subpalette



Figure 3-23 The *Export* subpalette

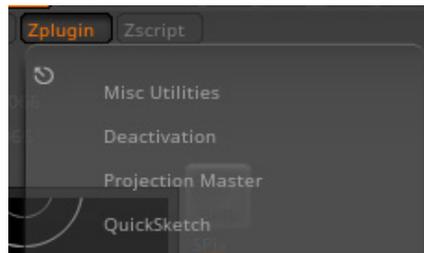


Figure 3-24 The *Projection Master* button in the *Zplugin* palette



Figure 3-25 The *Projection Master* dialog box

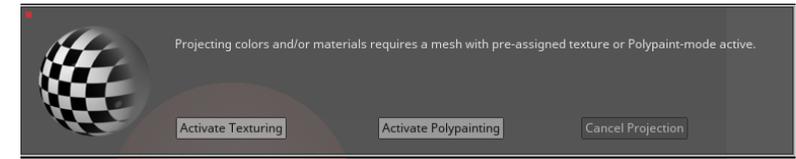


Figure 3-26 Message box displayed on choosing the *DROP NOW* button



Figure 3-27 Colors painted on the 2D illustration

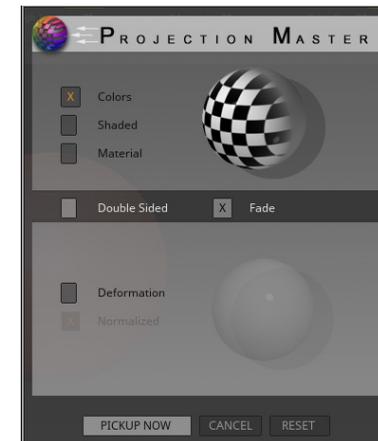


Figure 3-28 The *PICKUP NOW* button in the *Projection Master* dialog box



Figure 3-29 The 2.5D illustration of the model painted



Figure 3-30 Shading applied on the visible portion of the model



Figure 3-31 The flyout displayed

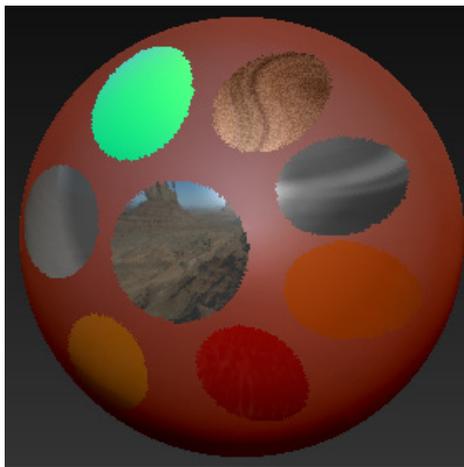


Figure 3-32 The 3D model with painted materials

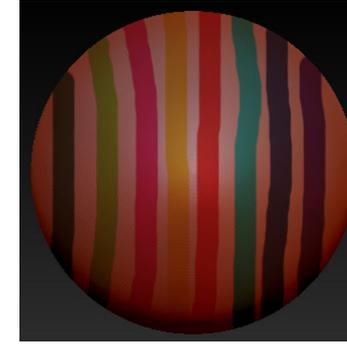


Figure 3-33 Different colors painted on the 2D illustration

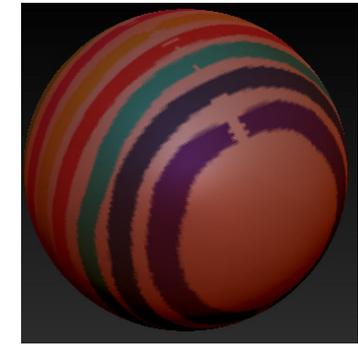


Figure 3-34 Painted colors replicated on the backside of the sphere



Figure 3-35 The 2D illustration of a sphere painted with the Fade check box selected



Figure 3-36 Effect after selecting the Fade check box on the sphere

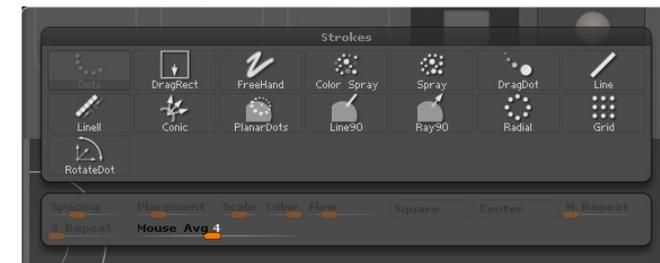


Figure 3-37 New stroke types added in the Stroke flyout



Figure 3-38 The message displayed on selecting the *Deformation* check box for a primitive object

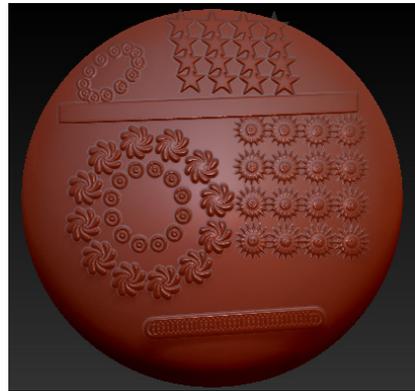


Figure 3-39 Different patterns created using different strokes and alphas

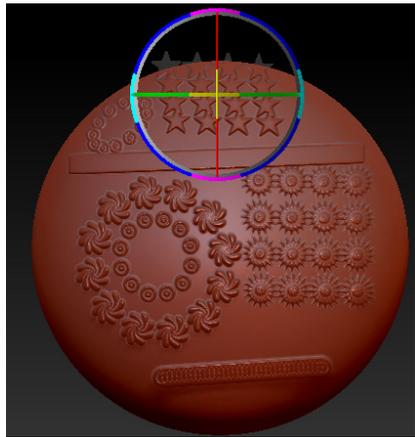


Figure 3-40 Moving a pattern toward left

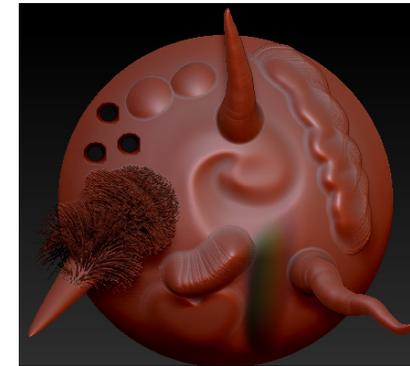


Figure 3-42 Different types of sculpting done by using different 2.5D brushes

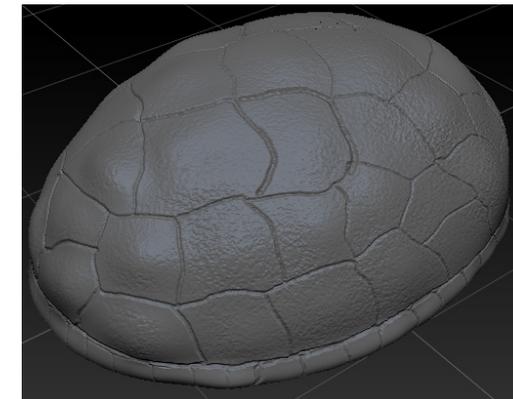


Figure 3-43 The turtle shell



Figure 3-41 The 2.5D brushes in the Tool flyout

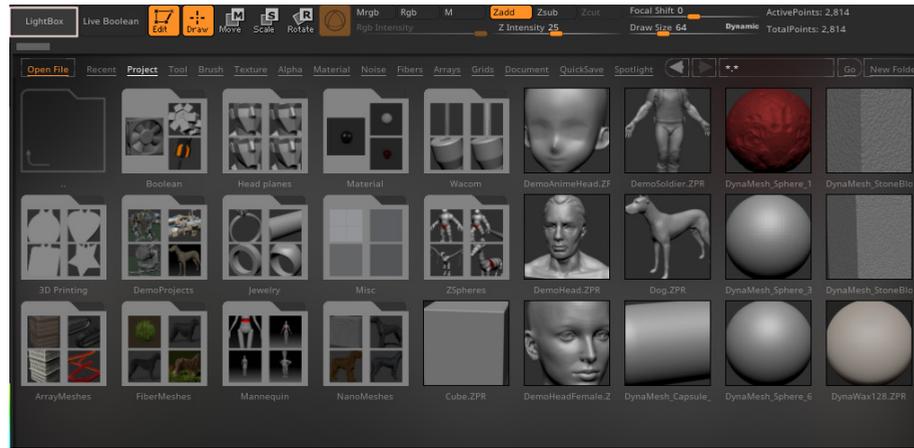


Figure 3-44 The DefaultSphere.ZPR file chosen from the LightBox browser

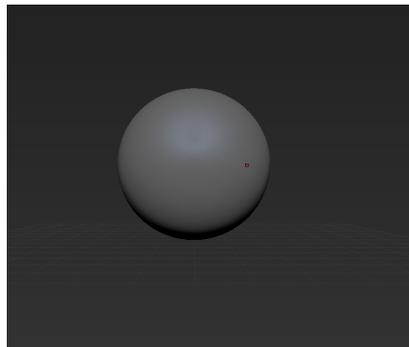


Figure 3-45 The DynaMesh_Sphere_3 model created on the canvas

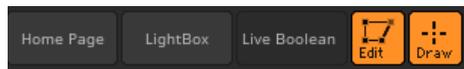


Figure 3-46 The LightBox button in the top shelf



Figure 3-47 Choosing the ClipRect brush from the flyout

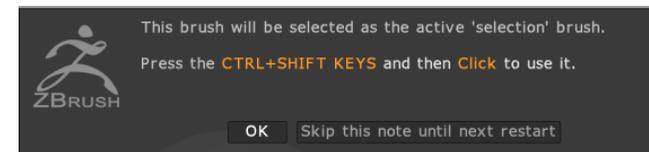


Figure 3-48 Message box displayed on choosing the ClipRect brush

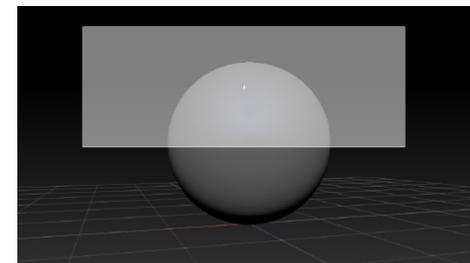


Figure 3-49 Upper part of sphere selected using the marquee selection

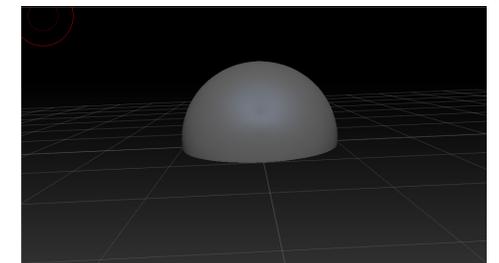


Figure 3-50 Lower half of the sphere deleted



Figure 3-51 The Deformation subpalette expanded



Figure 3-52 The x and y options deactivated



Figure 3-53 Value entered in the edit box



Figure 3-56 Settings for the Standard brush for adding depth

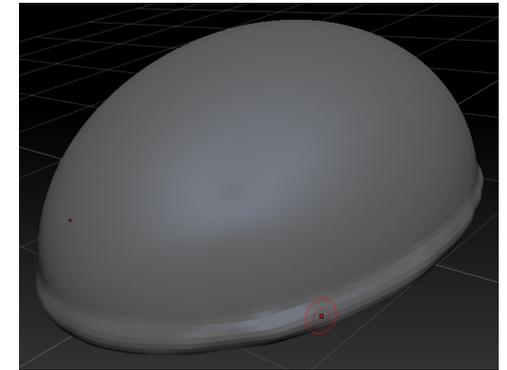


Figure 3-57 Depth added to the lower part of the turtle shell using the Standard brush

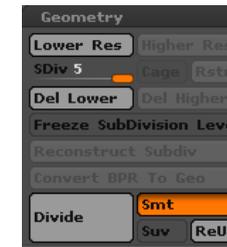


Figure 3-58 Choosing the Divide button from the Geometry subpalette

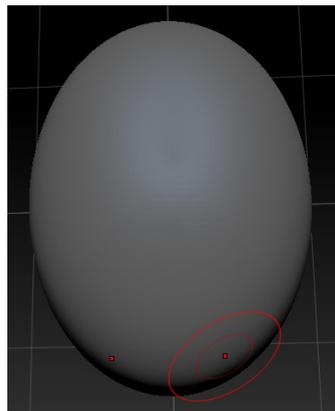


Figure 3-54 Top view of the turtle shell

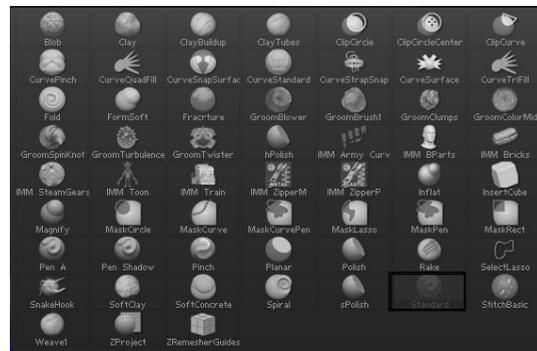


Figure 3-55 The Standard brush chosen from the flyout



Figure 3-59 Settings for the Standard brush for creating pattern

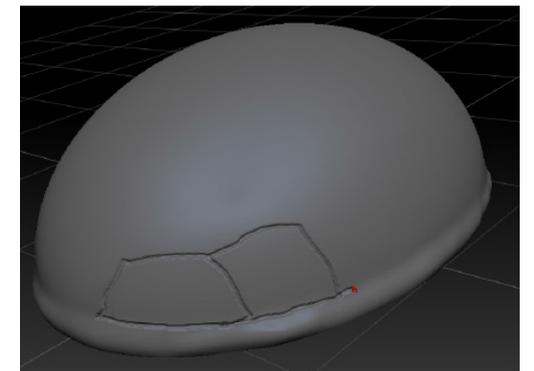


Figure 3-60 A pattern created on the upper part of the turtle shell using the Standard brush

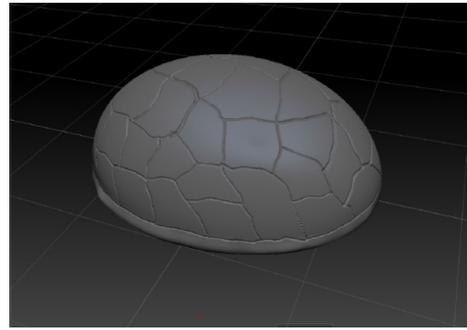


Figure 3-61 Pattern created on the entire upper part of the turtle shell

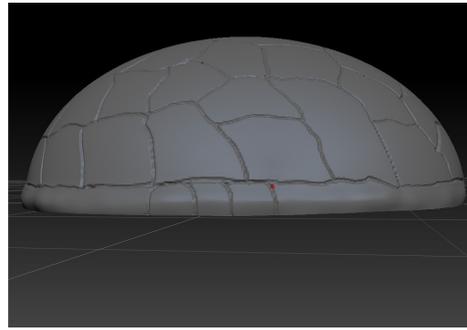


Figure 3-62 Pattern created on the lower part of the turtle shell using the **Standard** brush

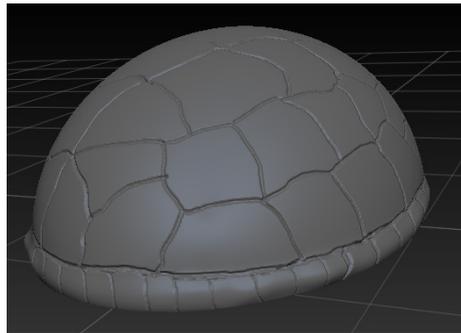


Figure 3-63 Pattern created on the entire lower part of the turtle shell

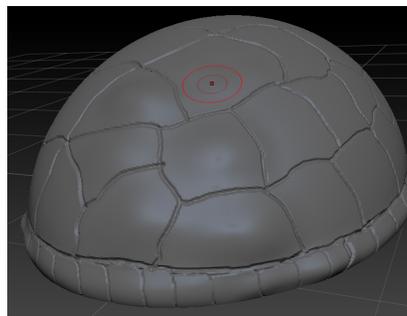


Figure 3-64 Depth added to the pattern using the **Standard** brush

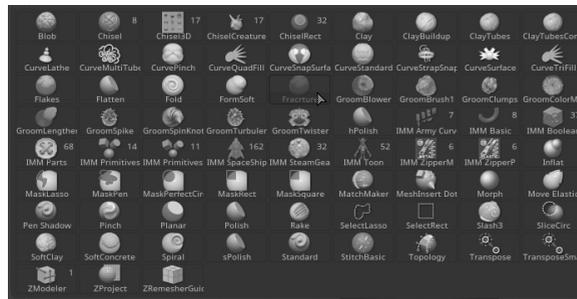


Figure 3-65 The **Fracture** brush chosen

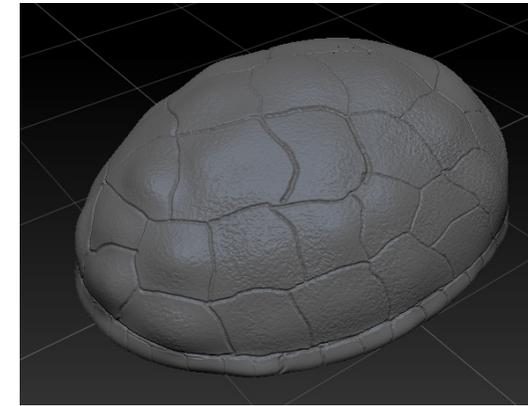


Figure 3-66 The final output

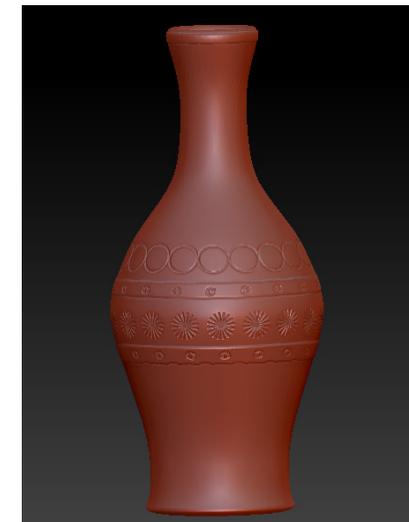


Figure 3-67 The flower vase



Figure 3-68 Cylinder3D chosen from the flyout

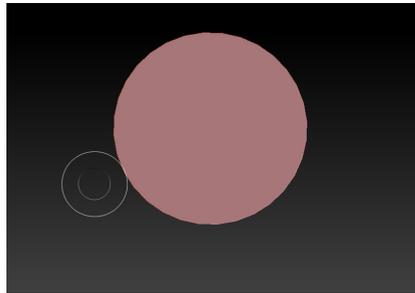


Figure 3-69 The cylinder created in the canvas



Figure 3-70 The Edit button chosen from the top shelf

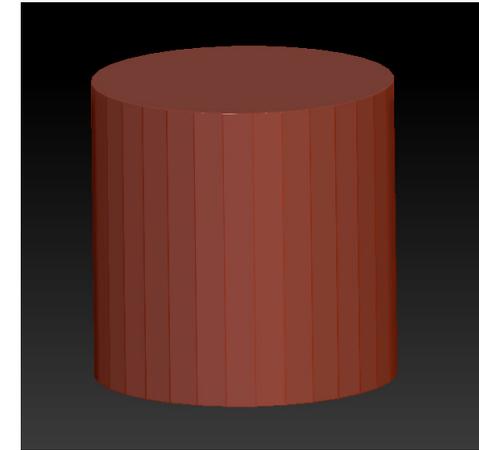


Figure 3-71 The cylinder rotated



Figure 3-72 The Make PolyMesh3D button chosen from the Tool palette

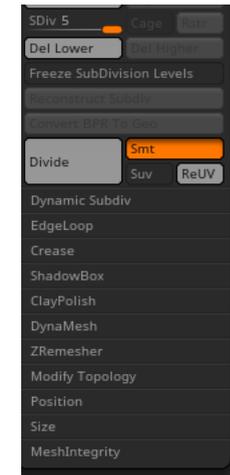


Figure 3-73 Choosing the Divide button from the Geometry subpalette

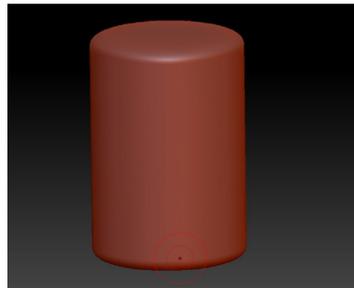


Figure 3-74 Height of the cylinder increased



Figure 3-75 The Activate Symmetry button chosen in the Transform palette

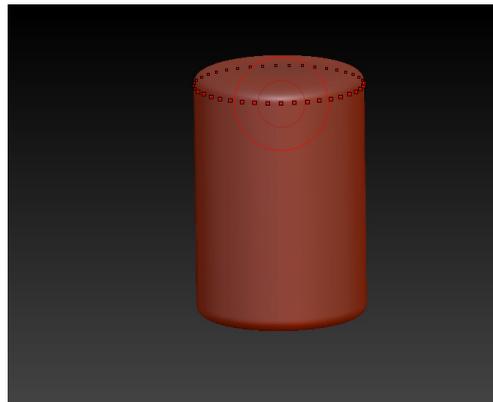


Figure 3-76 Radial symmetry activated in the Z-axis

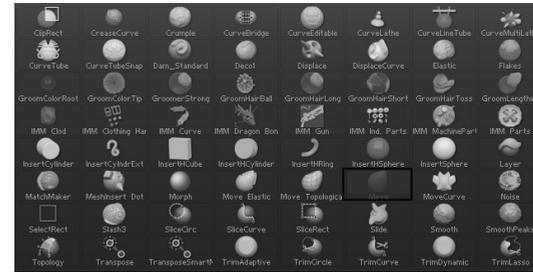


Figure 3-77 The Move brush chosen



Figure 3-78 The value of the Draw Size slider set to 450

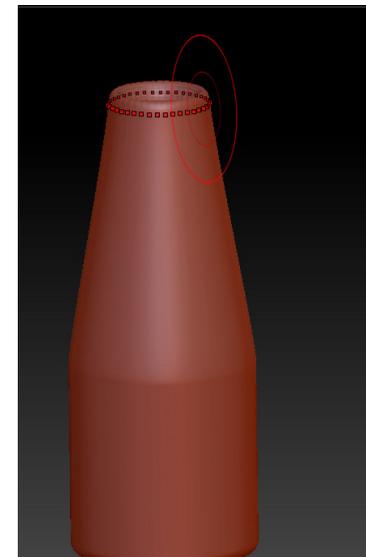


Figure 3-79 Top area of the cylinder dragged upward

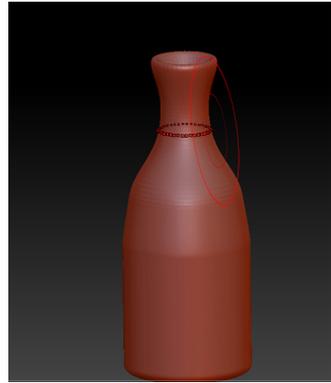


Figure 3-80 Neck of the flower vase formed by using the Move brush

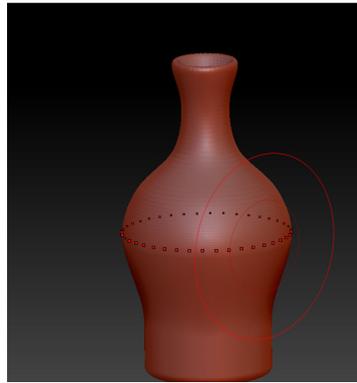


Figure 3-81 Round shape given to the flower vase

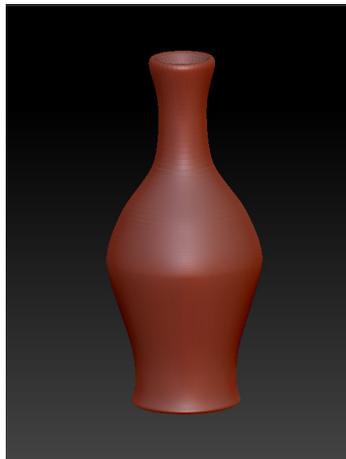


Figure 3-82 Shape of the flower vase refined by using the Move brush



Figure 3-83 The Alpha 28 alpha image chosen from the flyout



Figure 3-84 The FreeHand stroke chosen from the flyout



Figure 3-85 Pattern created on the neck area



Figure 3-86 Pattern created on the other parts of the flower vase



Figure 3-87 Alpha 34 chosen from the Alpha palette

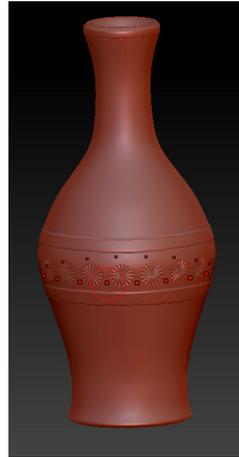


Figure 3-88 The pattern created using Alpha 34



Figure 3-89 Alpha 05 chosen from the flyout



Figure 3-90 The pattern created using Alpha 05



Figure 3-91 The final model of the flower vase

n.



Figure 3-92 Final model of the door

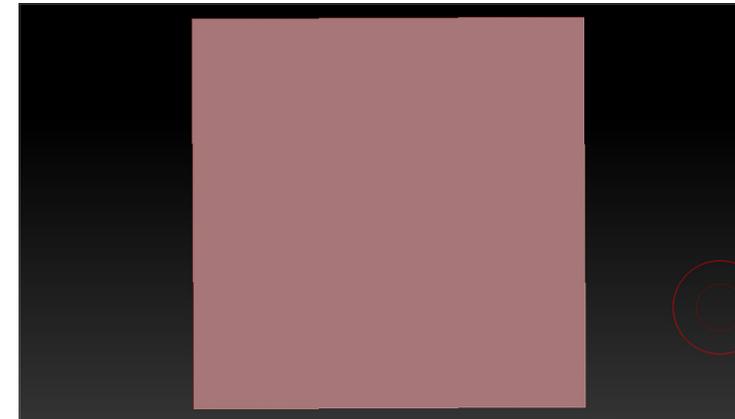


Figure 3-93 The Plane3D primitive created on the canvas



Figure 3-94 The value of *H Radius* slider changed to 66

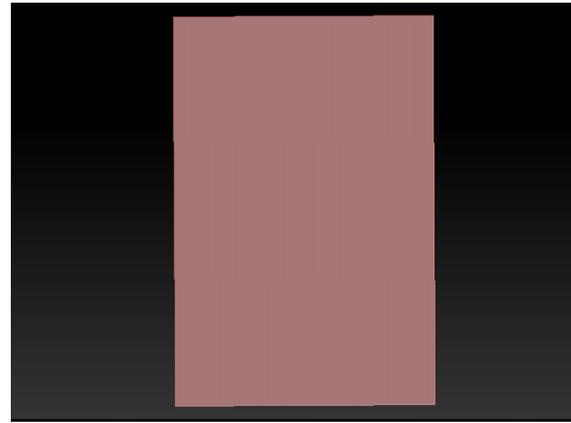


Figure 3-95 Shape of the plane changed

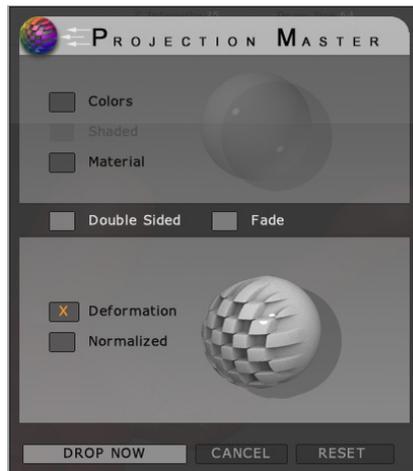


Figure 3-96 The *Deformation* check box selected

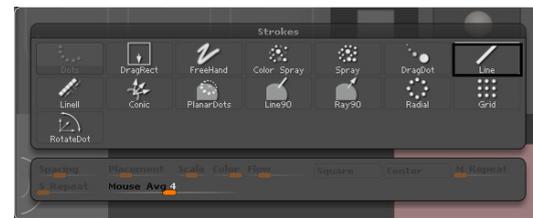


Figure 3-97 The *Line* stroke chosen in the flyout



Figure 3-98 Line drawn on the left side of the door

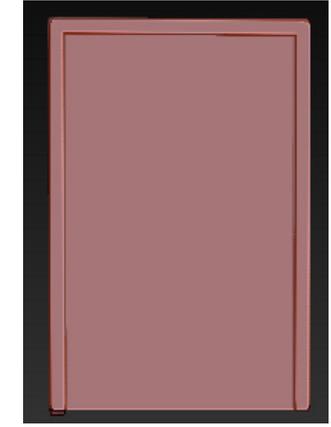


Figure 3-99 Frame created for the door

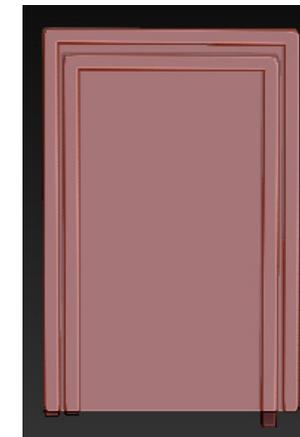


Figure 3-100 Another frame created for the door

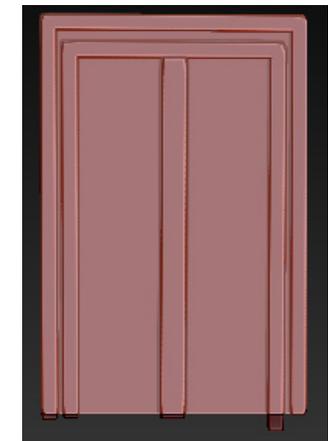


Figure 3-101 A vertical partition created in the middle of the door

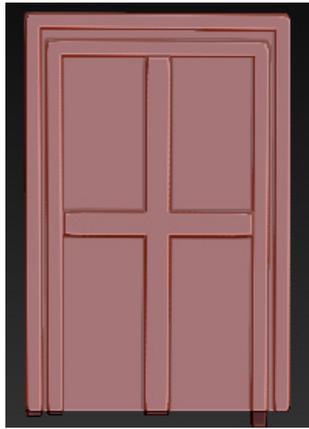


Figure 3-102 A horizontal partition created in the middle of the door



Figure 3-103 The vertical and horizontal lines created on the partitions

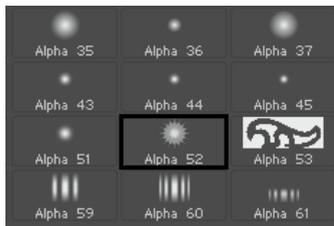


Figure 3-104 Alpha 52 chosen in the flyout



Figure 3-105 Knob created for the door

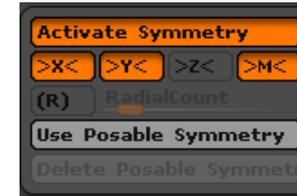


Figure 3-106 Symmetry activated along X and Y axes



Figure 3-107 Alpha 19 applied to the door panels



Figure 3-108 Final model of the door

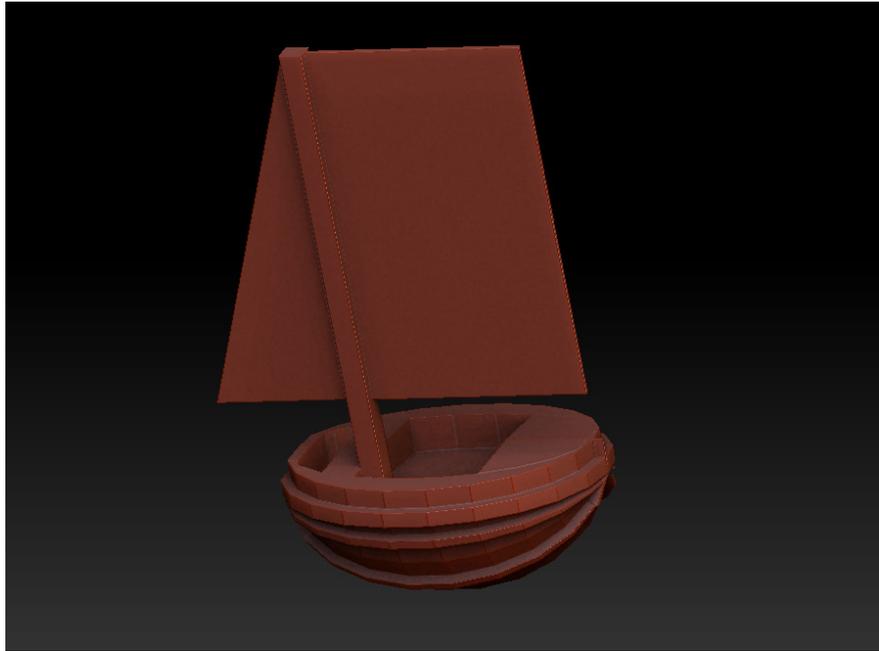


Figure 3-109 The boat model

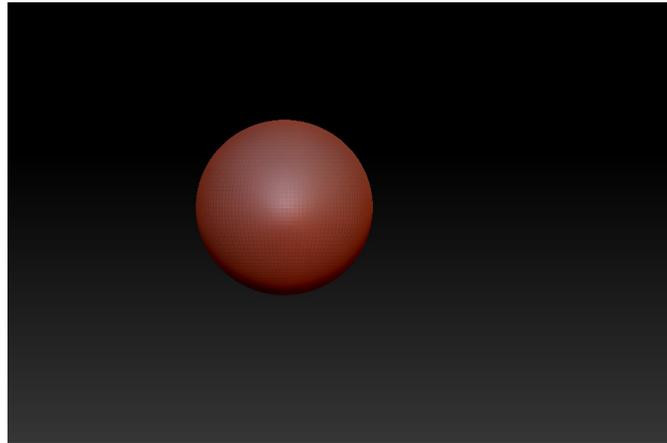


Figure 3-110 The Sphere3D primitive created on the canvas

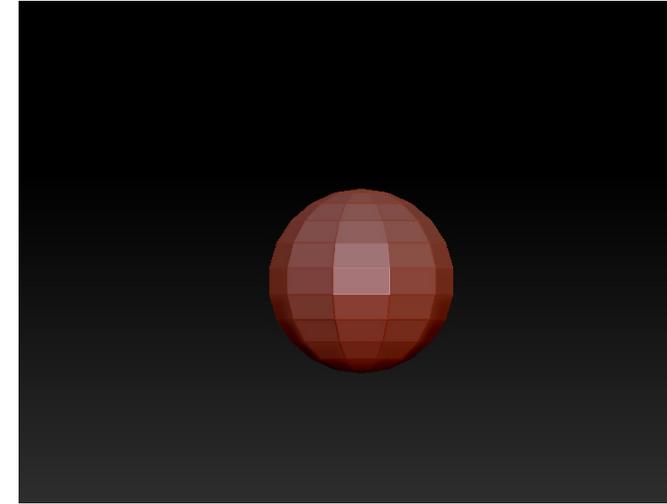


Figure 3-111 Shape of the sphere changed

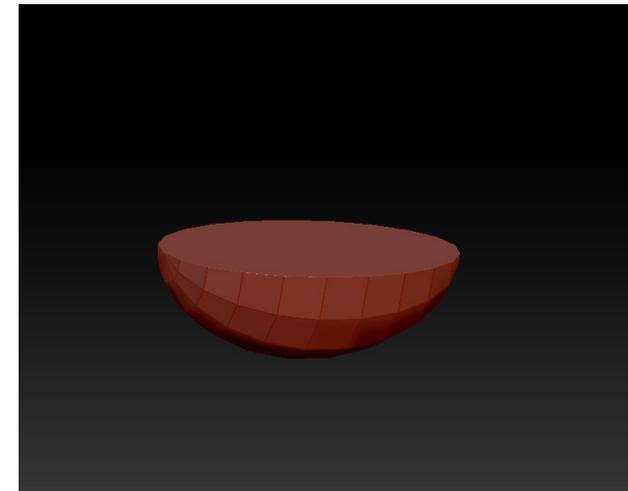


Figure 3-112 Shape of the sphere changed

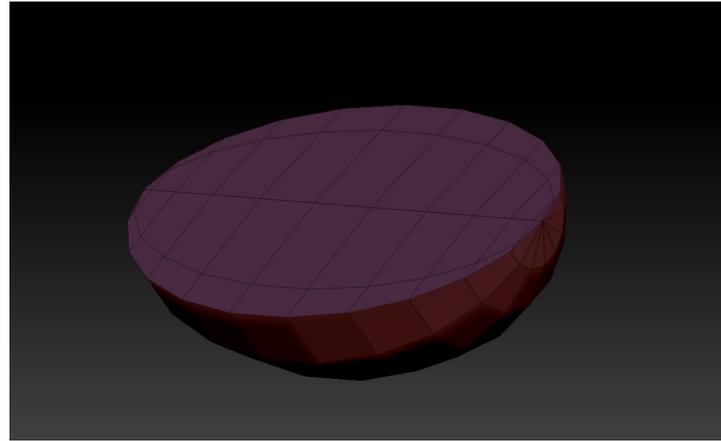


Figure 3-113 The edge loop created

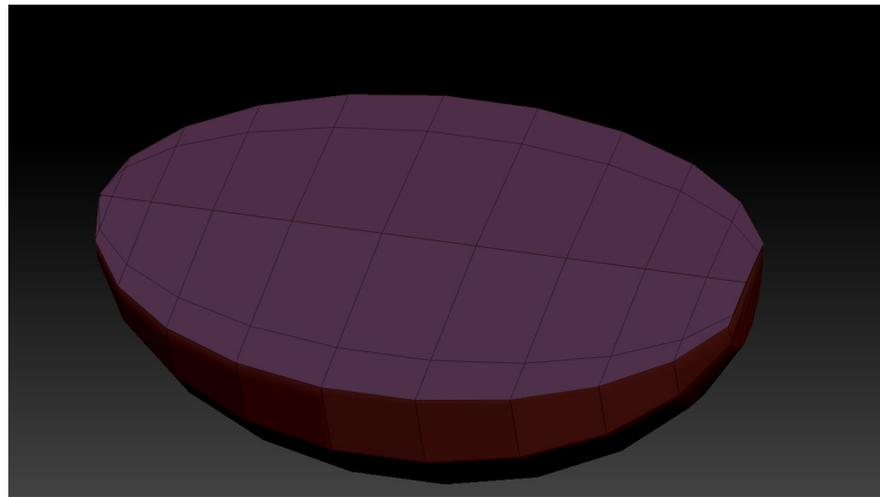


Figure 3-114 The point deleted

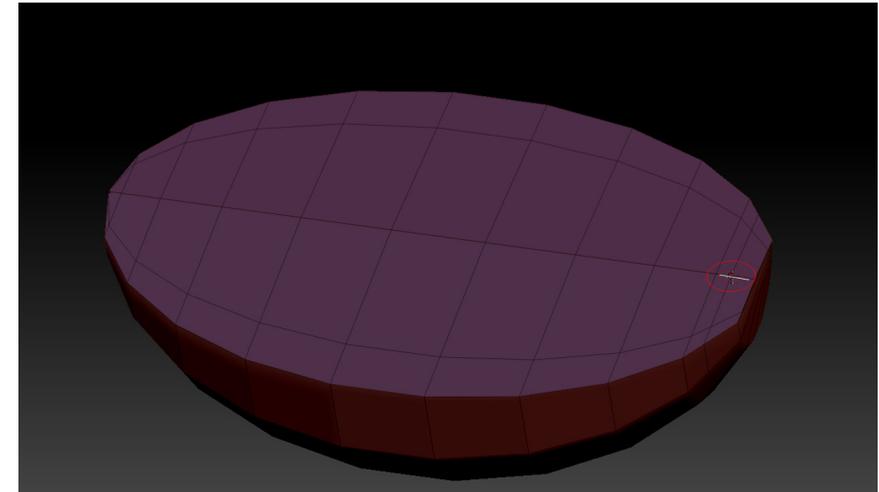


Figure 3-115 The edge loop created

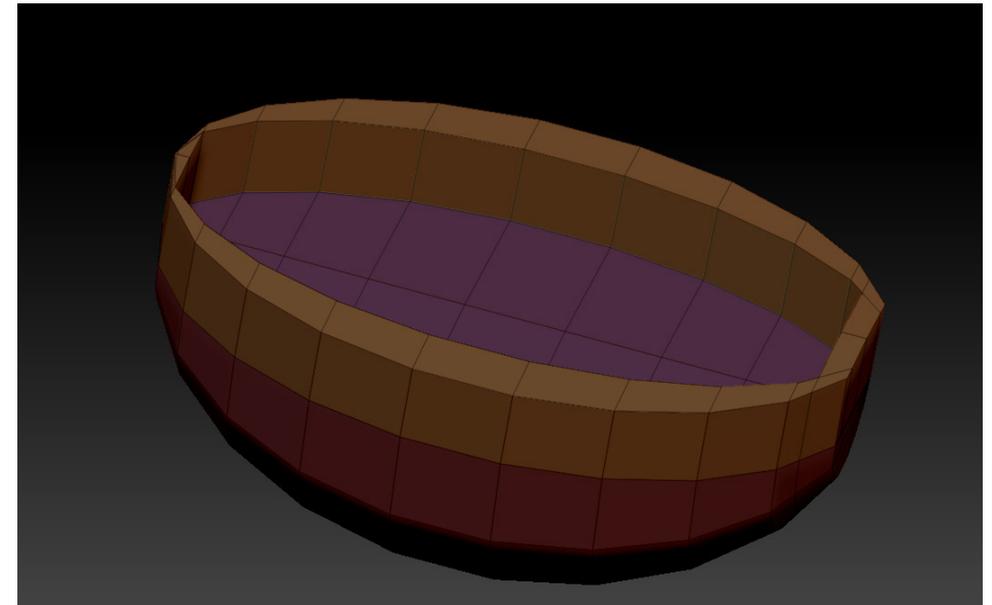


Figure 3-116 The extruded polygon

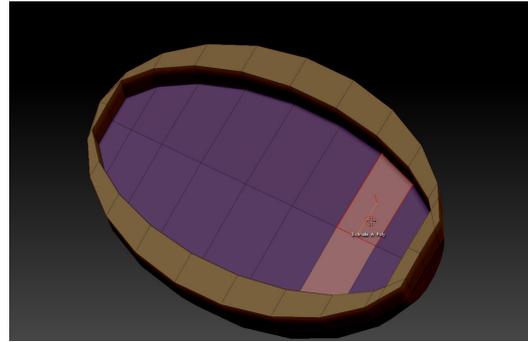


Figure 3-117 The selected polygons

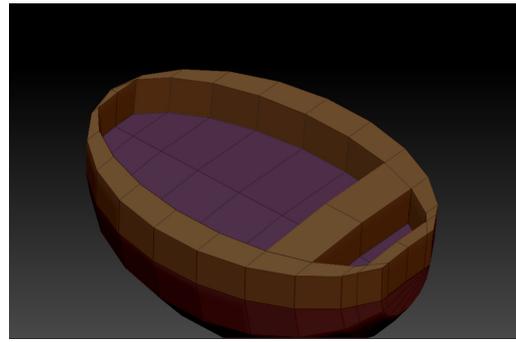


Figure 3-118 The polygons extruded

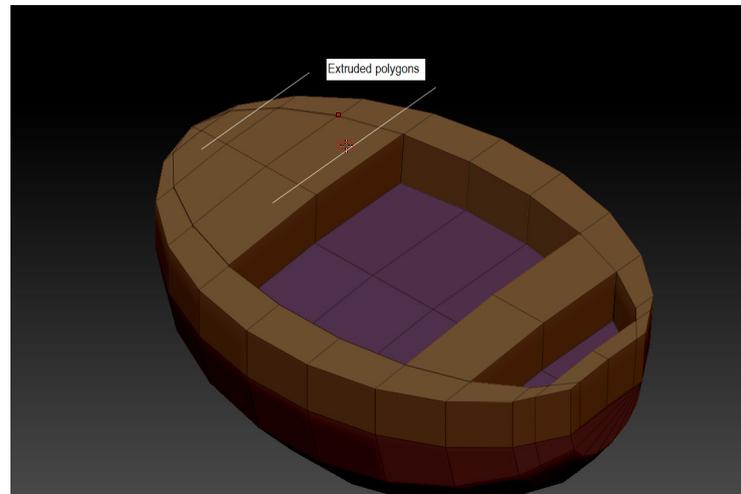


Figure 3-119 The extruded polygons

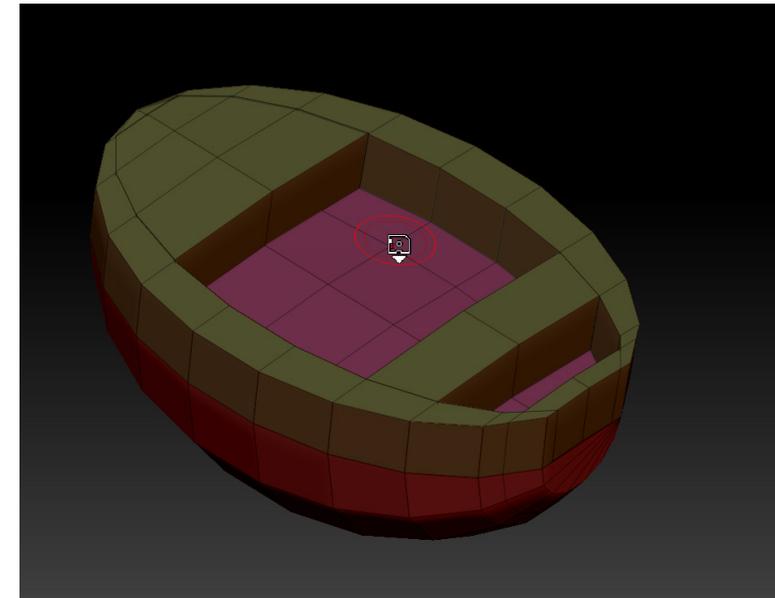


Figure 3-120 The edge loop added

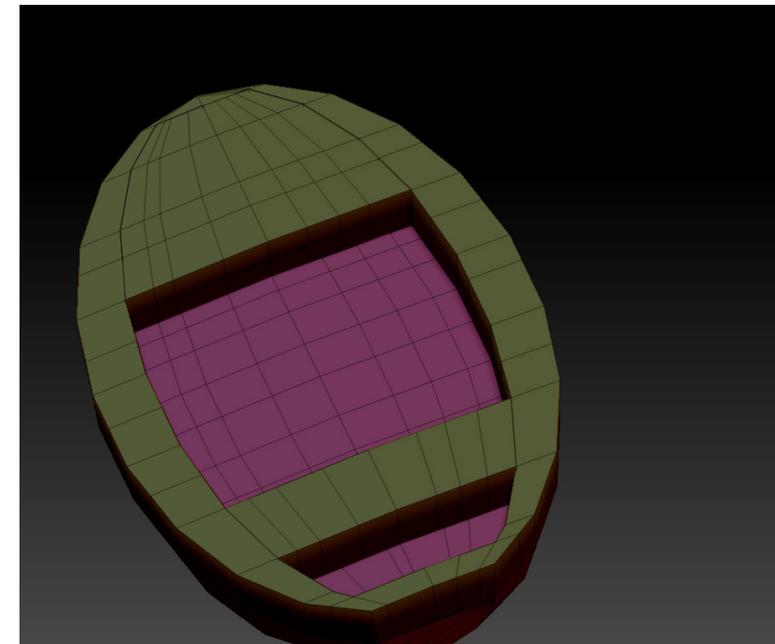


Figure 3-121 The edge loops created

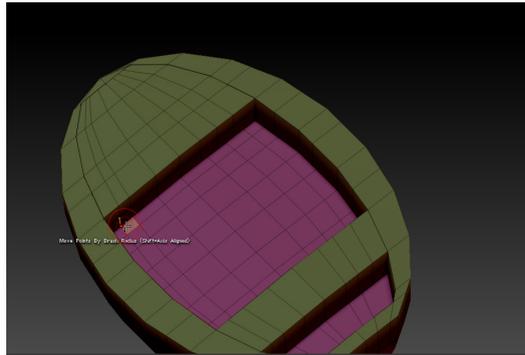


Figure 3-122 Selected polygon

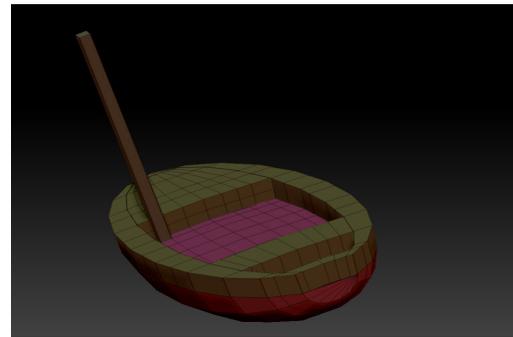


Figure 3-123 The extruded polygon

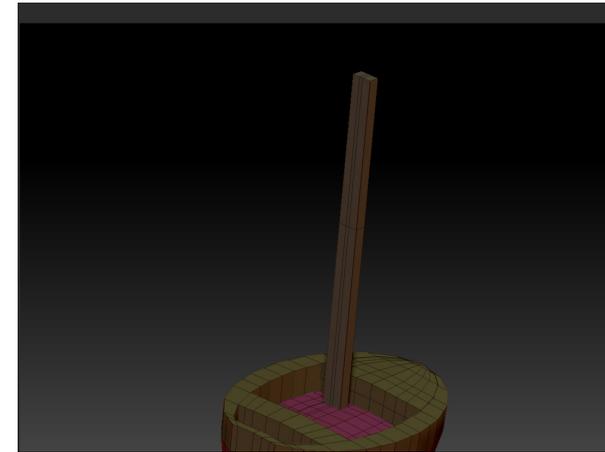


Figure 3-125 Added edge loops

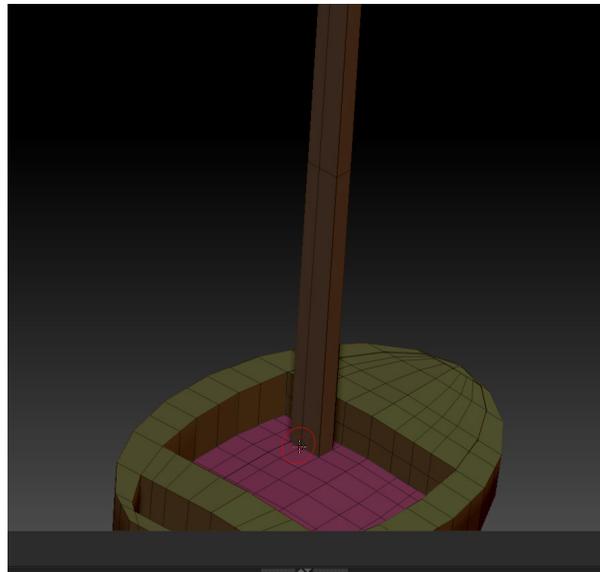


Figure 3-124 The edge loop added

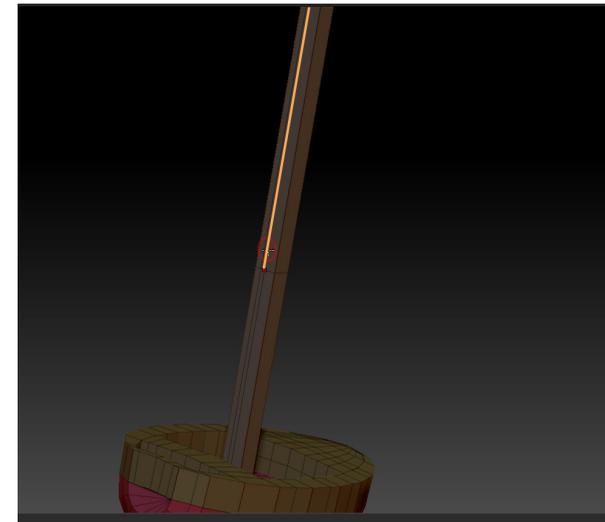


Figure 3-126 Selected polygon

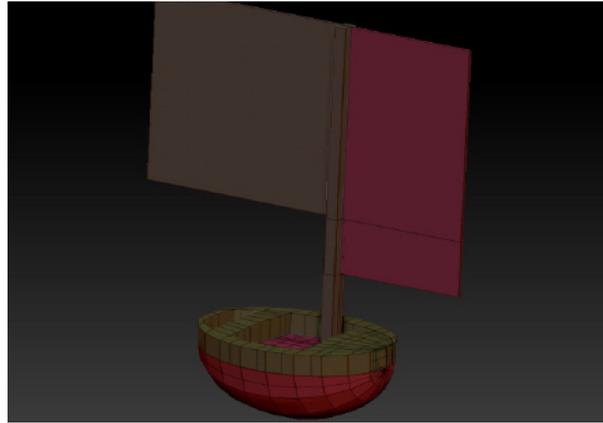


Figure 3-127 Polygons extruded

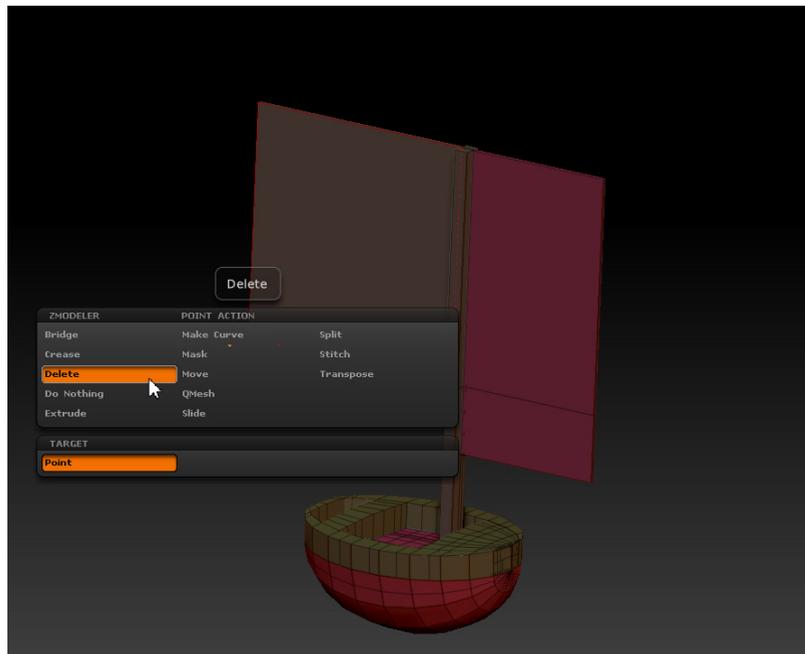


Figure 3-128 Choosing the *Delete* option



Figure 3-129 Deleted points

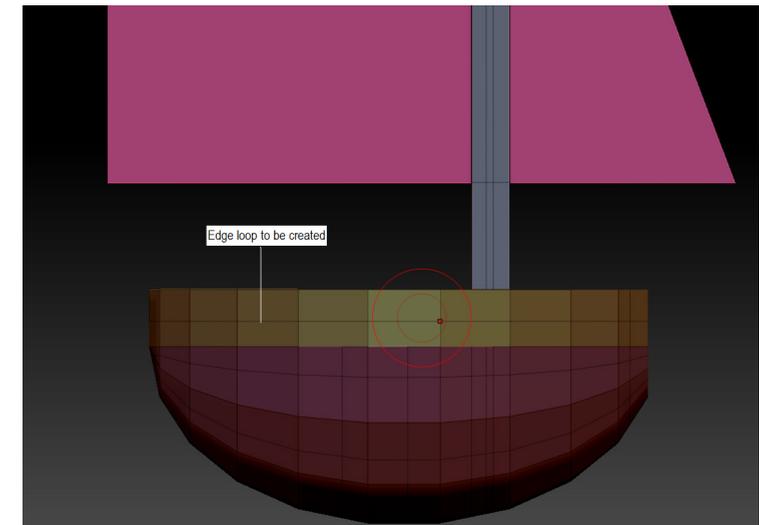


Figure 3-130 Edge loop is created

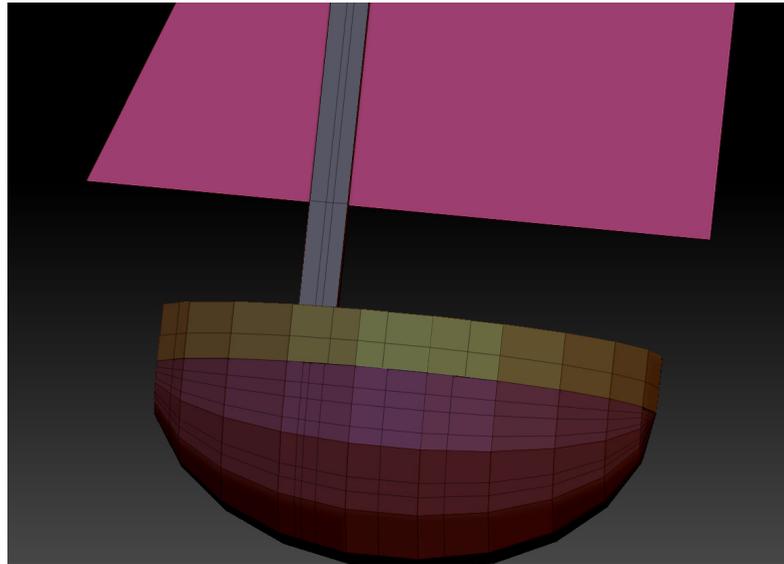


Figure 3-131 The edge loops are added

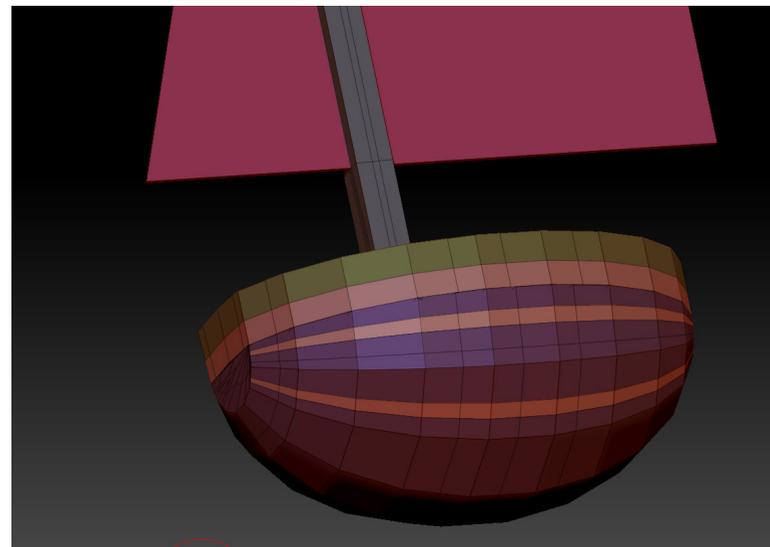


Figure 3-132 The edges are added

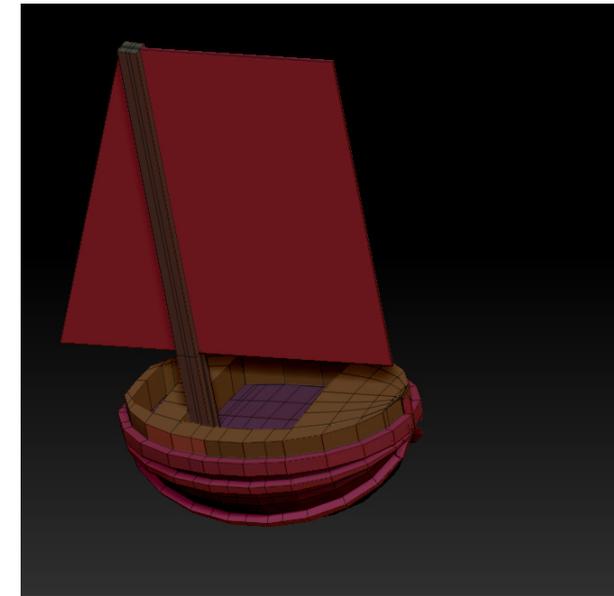


Figure 3-133 The polygons extruded



Figure 3-134 Model of a table lamp



Figure 3-135 Model of a photo frame

Chapter 4

SubTools and FiberMesh

Learning Objectives

After completing this chapter, you will be able to:

- *Work with the SubTool subpalette*
- *Work with the FiberMesh subpalette*
- *Understand different settings of FiberMesh*
- *Create scenes using different subtools and FiberMesh*



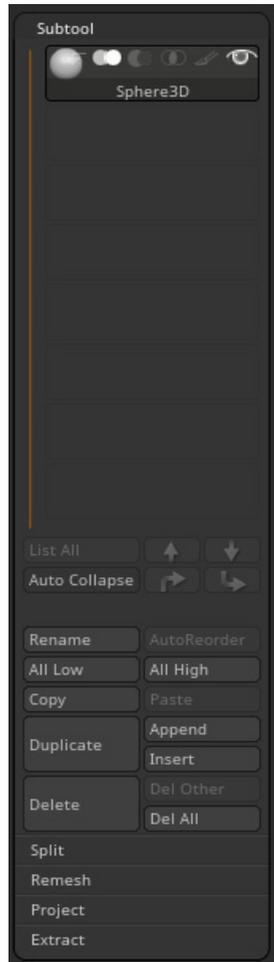


Figure 4-1 The SubTool subpalette displayed on creating a sphere

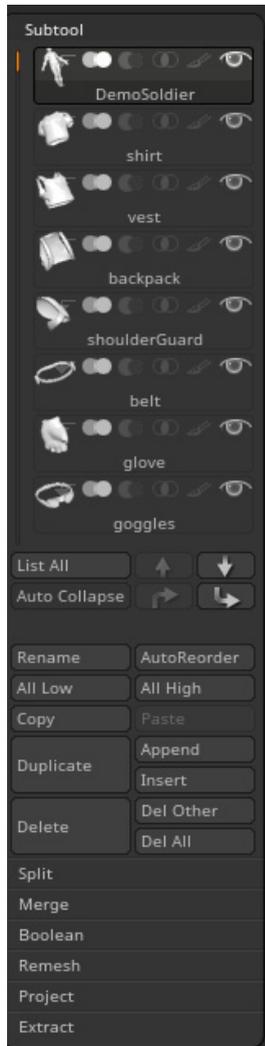


Figure 4-2 The SubTool subpalette displayed on loading the DemoSoldier



Figure 4-3 The flyout displayed on choosing the List All button

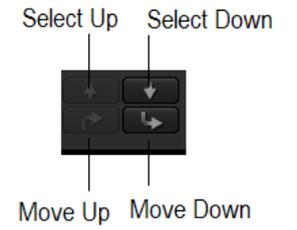


Figure 4-4 The arrow buttons

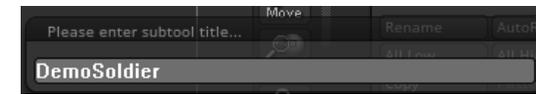


Figure 4-5 The Please enter subtool title window



Figure 4-6 The model of the DemoSoldier. ZTL before choosing the All Low button



Figure 4-7 The model of the DemoSoldier. ZTL after choosing the All Low button



Figure 4-8 The flyout displayed on choosing the *Append* button

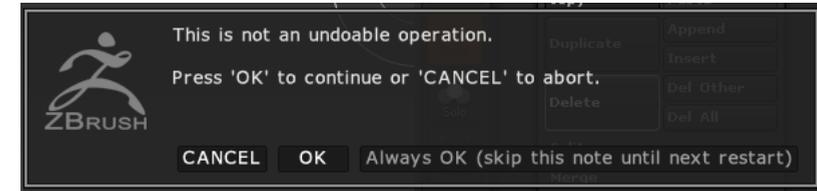


Figure 4-11 The message box displayed on choosing the *Delete* button

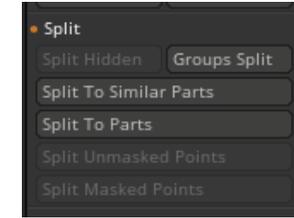


Figure 4-12 The *Split* area



Figure 4-9 A sphere inserted inside the model

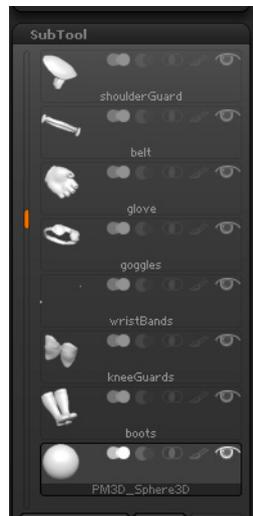


Figure 4-10 The thumbnail for the sphere displayed below the *vest* subtool

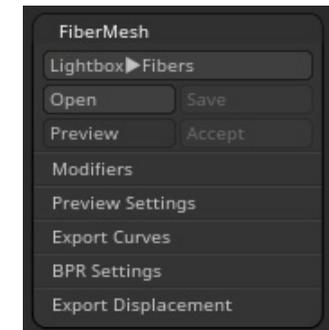


Figure 4-13 The *FiberMesh* subpalette

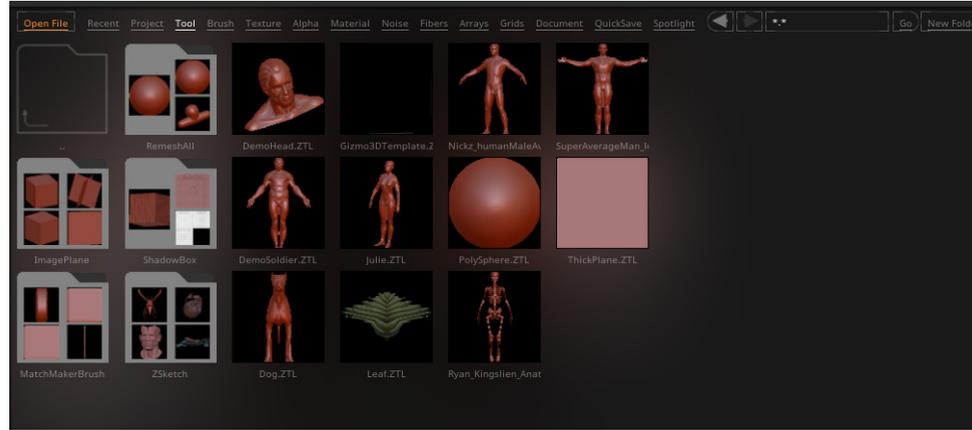


Figure 4-14 The DemoHead.ZTL file chosen from the LightBox browser



Figure 4-15 A mask drawn on the head of the model

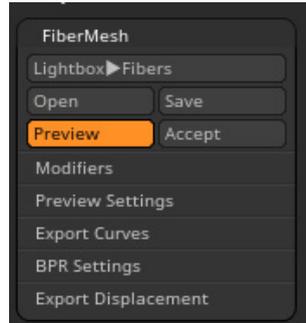


Figure 4-16 The Preview button chosen from the FiberMesh subpalette



Figure 4-17 The fiber mesh created on the masked area of the head

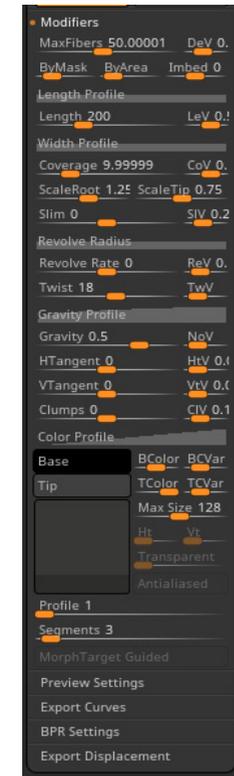


Figure 4-18 The Modifiers area

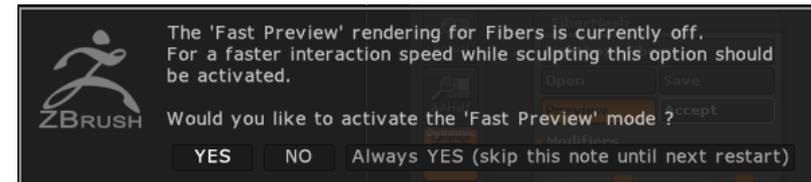


Figure 4-19 Message box displayed on choosing the Accept button



Figure 4-20 The final rendered preview of the fiber mesh



Figure 4-21 The inbuilt fibres in the LightBox browser

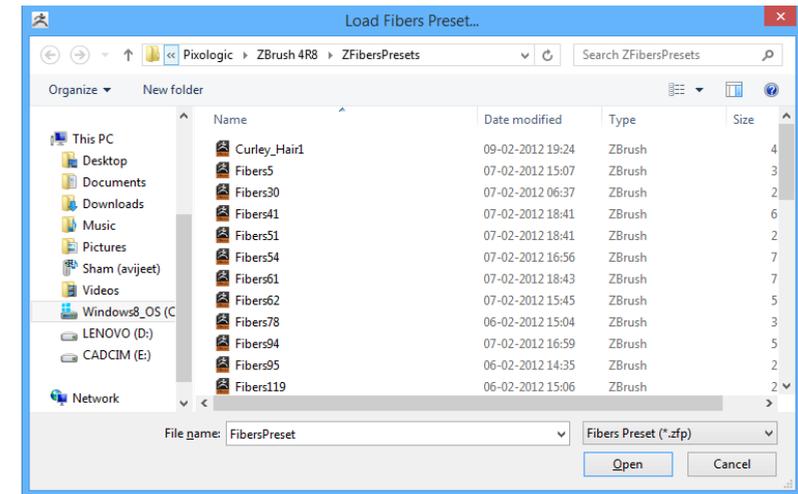


Figure 4-22 The Load Fibers Preset dialog box

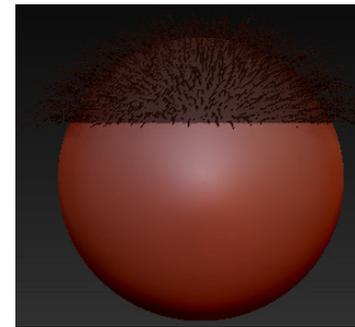


Figure 4-23 The mesh containing 2000 fibers

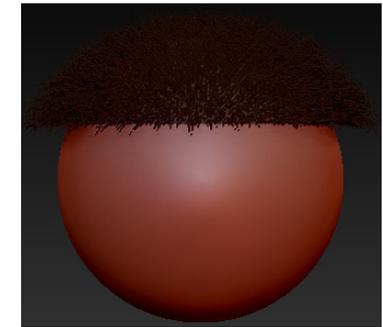


Figure 4-24 The mesh containing 10,000 fibers

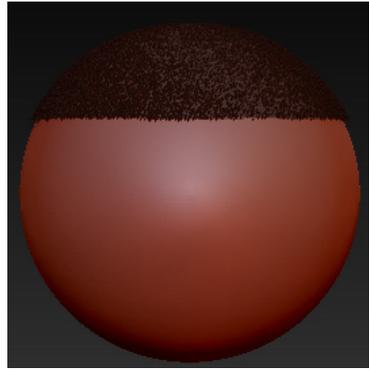


Figure 4-25 Fiber mesh with the value of the **Length** slider set to **50**



Figure 4-26 Fiber mesh with the value of the **Length** slider set to **1000**



Figure 4-27 The fiber mesh with the value of **Gravity** slider set to **1**

e.



Figure 4-28 Effect produced by the **GroomBlower** brush



Figure 4-29 Effect produced by the **GroomClumps** brush



Figure 4-30 Effect produced by the **GroomColorMild** brush



Figure 4-31 Effect produced by the **GroomHairBall** brush



Figure 4-32 Effect produced by the *GroomHairToss* brush



Figure 4-33 Effect produced by the *GroomSpike* brush



Figure 4-34 The ice cream cone

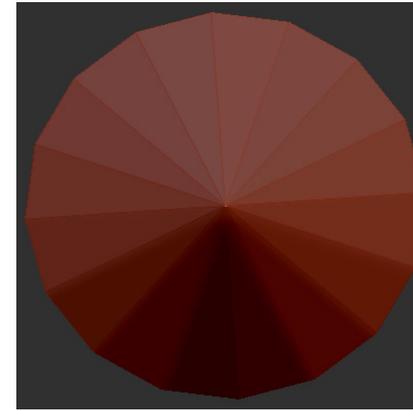


Figure 4-35 The cone created in the canvas

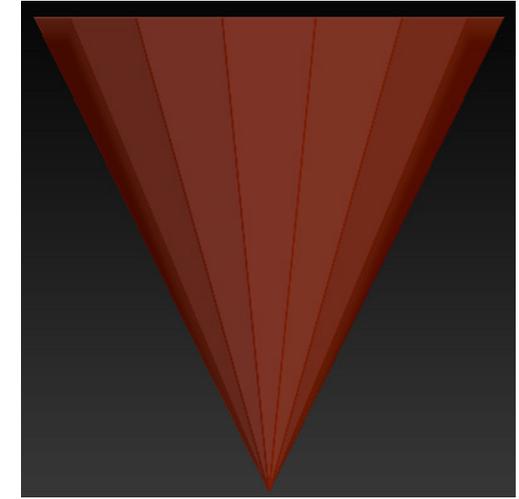


Figure 4-36 The cone snapped to the canvas



Figure 4-37 The values in *X Size* and *Y Size* sliders set

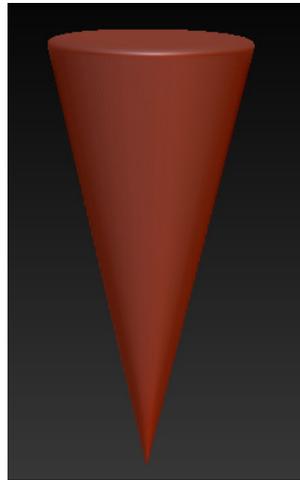


Figure 4-38 The ice cream cone smoothed

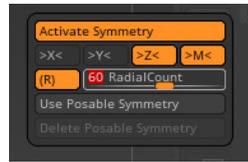


Figure 4-39 The value of the RadialCount slider set to 60



Figure 4-40 Patterns created at the top of the ice cream cone

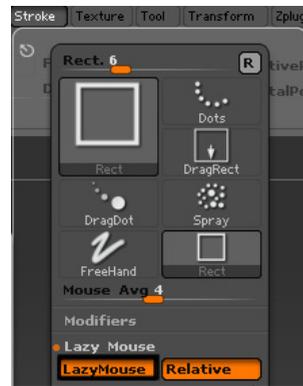


Figure 4-41 The LazyMouse button chosen from the Stroke palette



Figure 4-42 The crisscross pattern created on ice cream cone

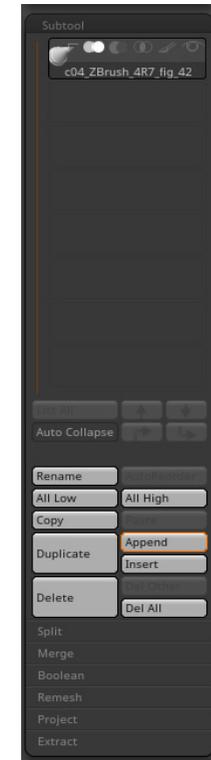


Figure 4-43 The Append button chosen in the SubTool subpalette

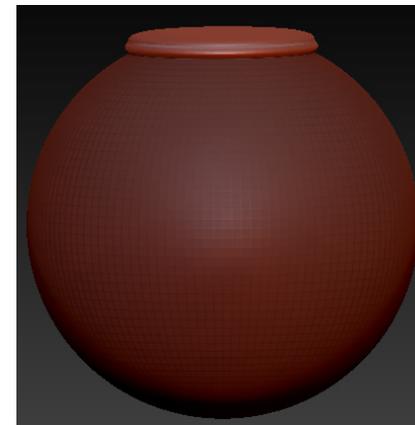


Figure 4-44 The sphere overlapping ice cream cone

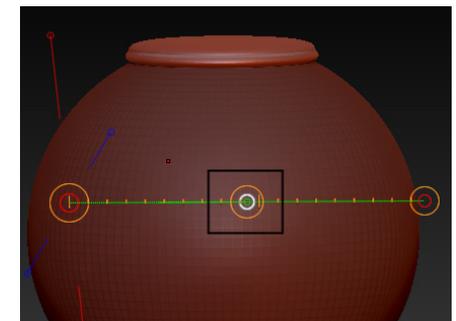


Figure 4-45 The action line

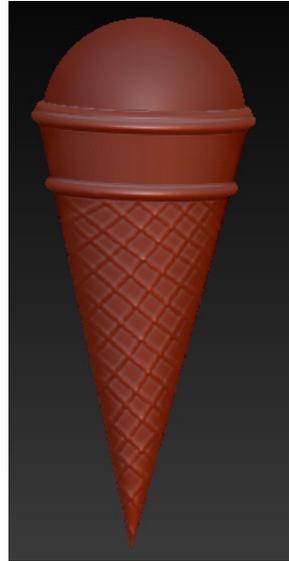


Figure 4-46 The scoop fitting inside the cone

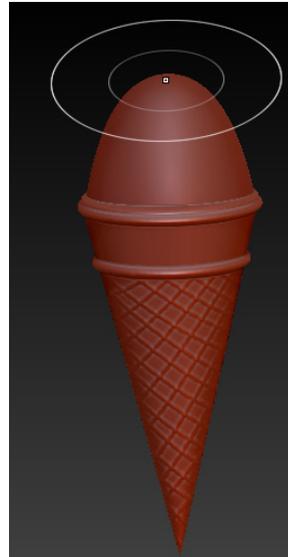


Figure 4-47 The top portion of the scoop moved up using the Move brush



Figure 4-48 Bumps created in the scoop using the Standard brush



Figure 4-49 Shape of the scoop modified using the Spiral brush



Figure 4-50 The final model of the monument

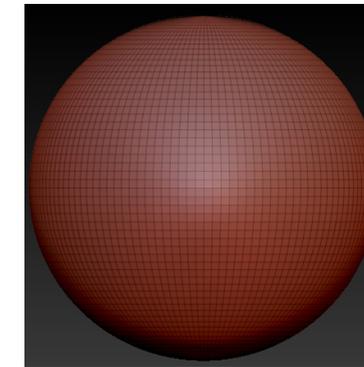


Figure 4-51 The sphere snapped to the canvas

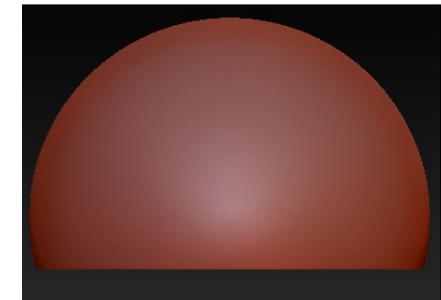


Figure 4-52 The lower half of the dome deleted

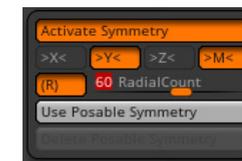


Figure 4-53 Radial symmetry activated in Z-axis

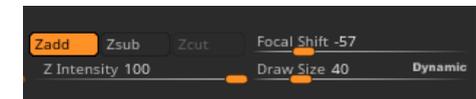


Figure 4-54 Settings in the top shelf

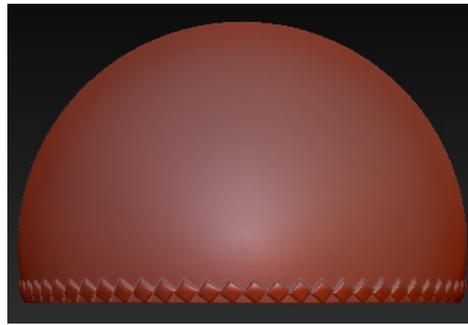


Figure 4-55 Pattern created on the lower part of the dome

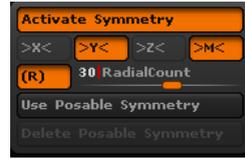


Figure 4-56 The value of the RadialCount slider set to 30

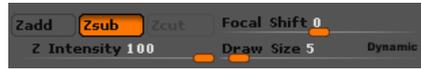


Figure 4-57 Settings in the top shelf

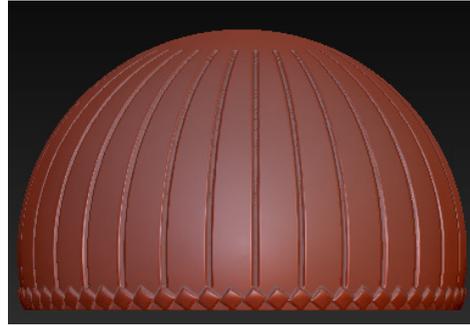


Figure 4-58 Vertical lines created on the dome



Figure 4-59 Tiles created on the dome

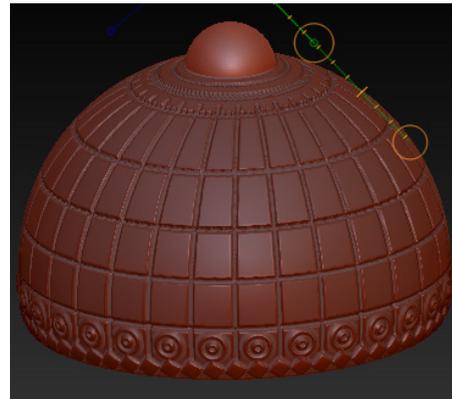


Figure 4-60 The dome top scaled and moved to the top

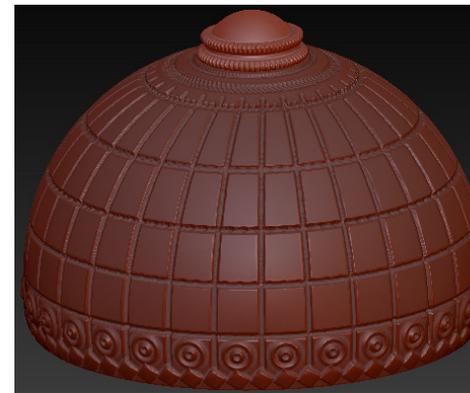


Figure 4-61 Pattern created on the dome top using radial symmetry

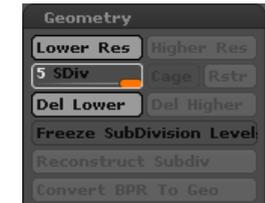


Figure 4-62 The Del Lower button chosen in the Geometry subpalette

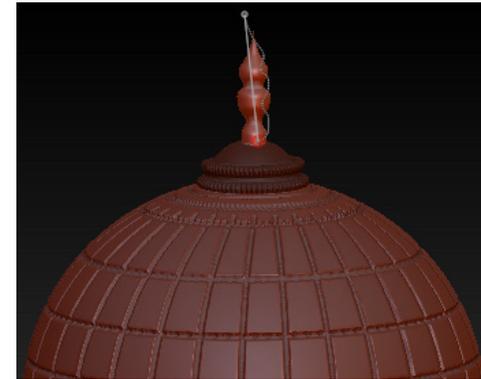


Figure 4-63 Finial created on the dome top using the CurveLathe brush



Figure 4-64 Cylinder overlapping the dome

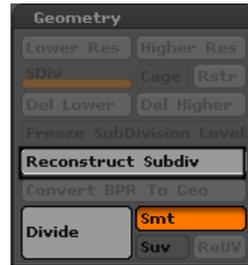


Figure 4-65 Reconstruct Subdiv button chosen from the Geometry subpalette

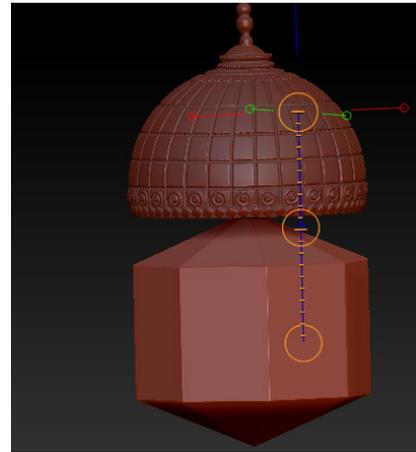


Figure 4-66 The walls moved below the dome

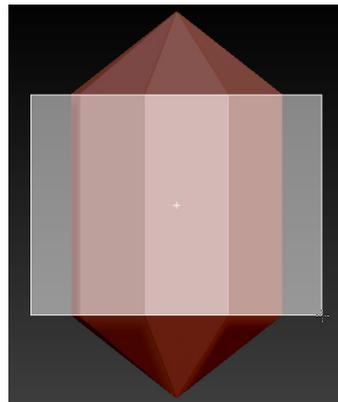


Figure 4-67 Marquee selection on the walls



Figure 4-68 The walls moved under the dome

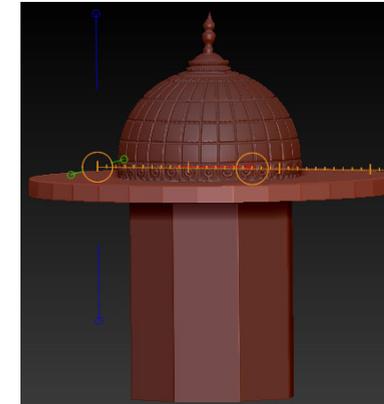


Figure 4-69 The roof scaled and moved below the dome

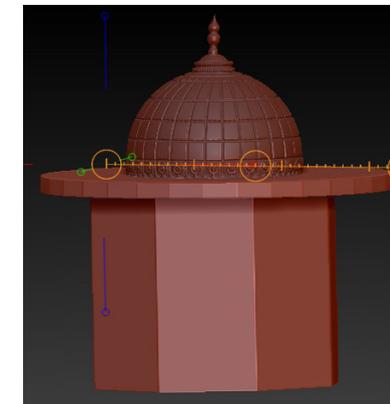


Figure 4-70 The size of the walls increased along X and Y axes

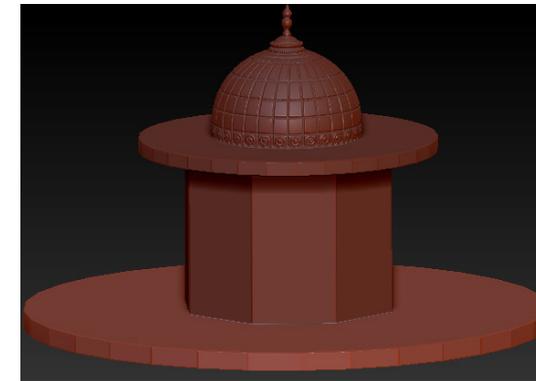


Figure 4-71 Duplicate roof scaled along the X and Y axes

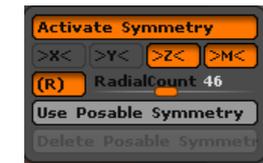


Figure 4-72 The value of RadialCount slider set to 46



Figure 4-73 Railing created using the InsertHRing brush

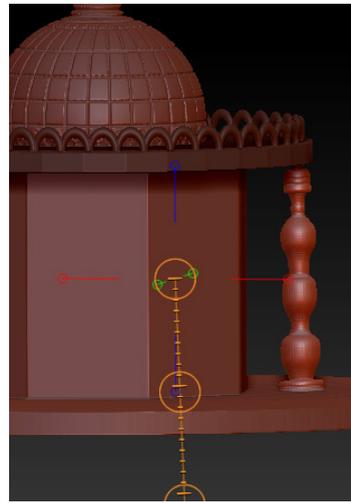


Figure 4-74 Pillar created using the CurveLathe brush



Figure 4-75 Copy of the pillar created and moved toward left

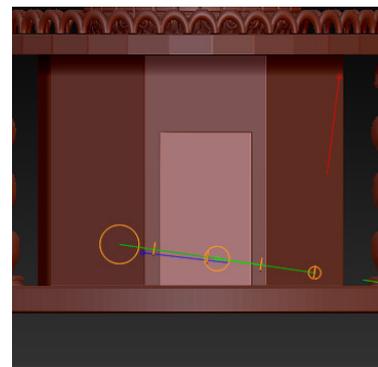


Figure 4-76 The door moved using the action line



Figure 4-77 The Deformation check box selected

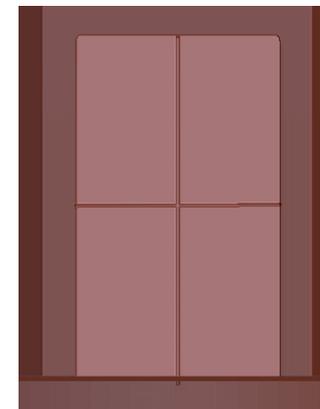


Figure 4-78 Horizontal and vertical partitions created on the door

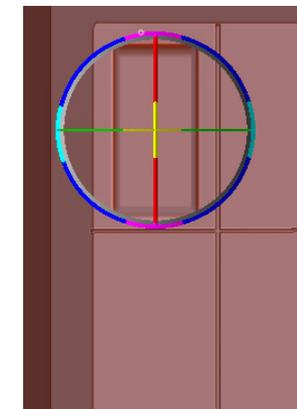


Figure 4-79 The pattern scaled up



Figure 4-80 Pattern created on all the panels



Figure 4-81 Newly created pattern copied on all the panels



Figure 4-82 Pattern created on all the panels



Figure 4-83 Knob of the door created

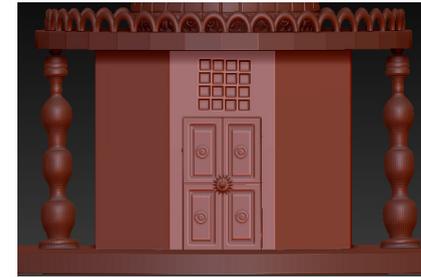


Figure 4-84 Grid pattern created on the walls



Figure 4-85 The final model of the monument

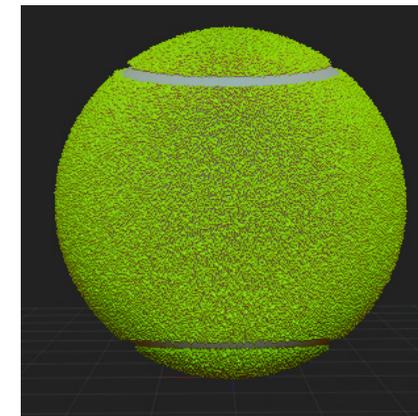


Figure 4-86 The final model of the tennis ball

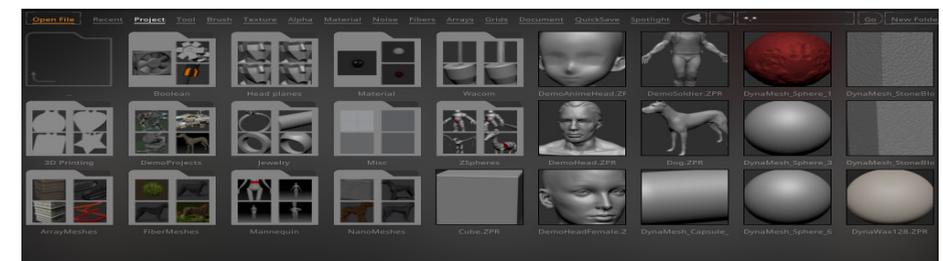


Figure 4-87 The *DynaWax128.ZPR* file chosen from the LightBox browser

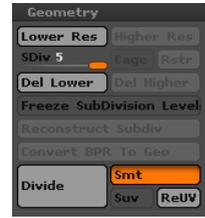


Figure 4-88 The DynaWax128.ZPR created in the canvas Figure 4-89 Choosing the Divide button from the Geometry subpalette



Figure 4-90 Message box displayed on choosing the MaskRect brush

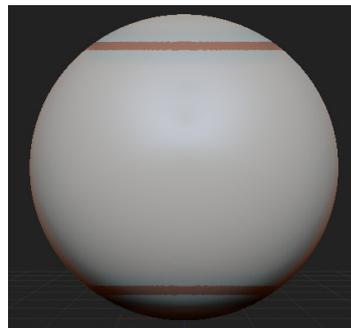
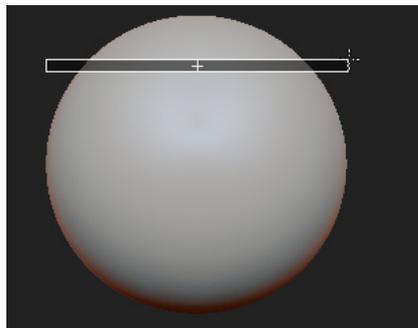


Figure 4-91 Upper part of the tennis ball selected Figure 4-92 Mask created on lower and upper parts of the tennis ball

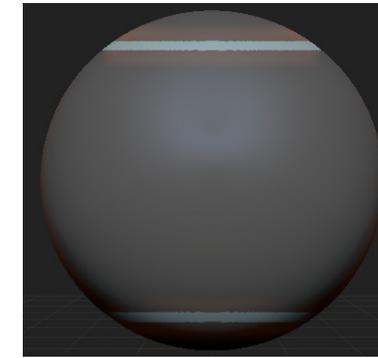


Figure 4-93 Mask on the tennis ball inverted



Figure 4-94 Choosing the Preview button from the FiberMesh subpalette

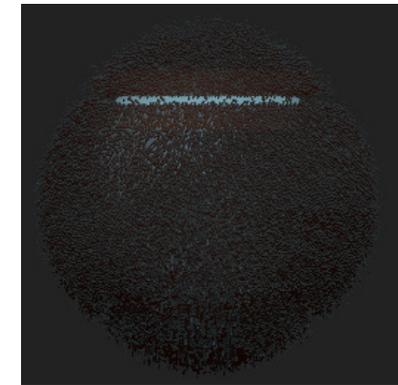


Figure 4-95 Fibrous mesh displayed on the tennis ball

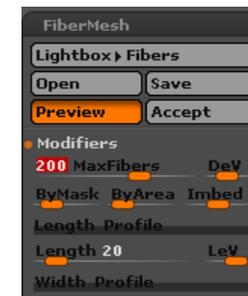


Figure 4-96 The value in the Length edit box set to 20

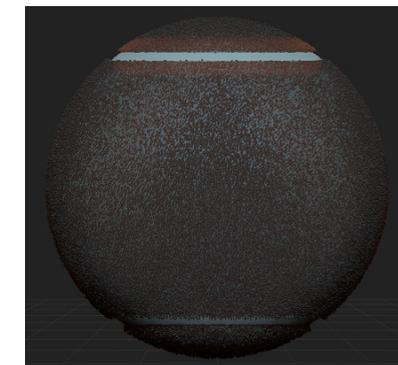


Figure 4-97 Length of the fibers decreased



Figure 4-98 Color chosen from the color picker window

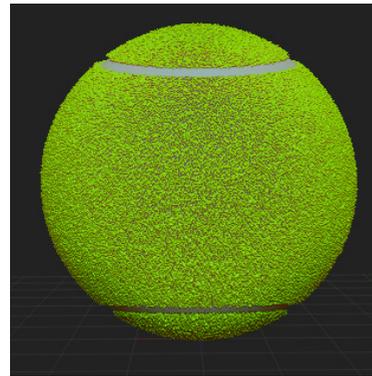


Figure 4-99 The color of the fibers changed to green

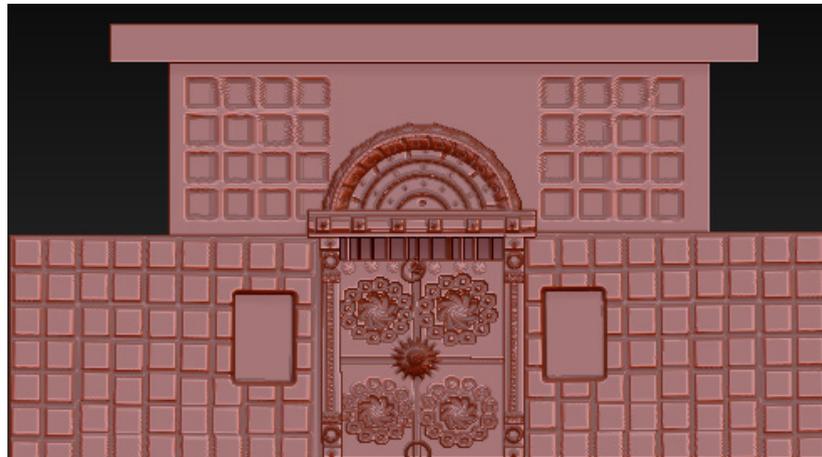


Figure 4-100 Model of a house

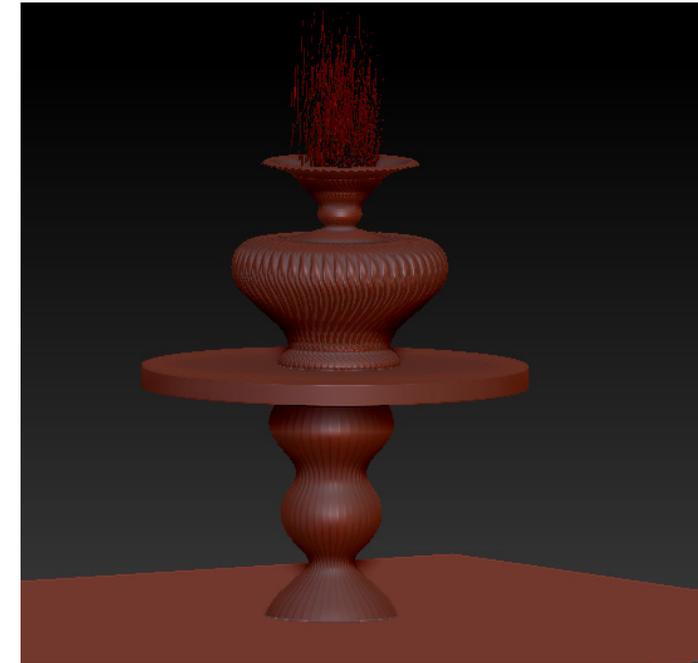


Figure 4-101 Scene to be created for Exercise 2

Chapter 5

ZSpheres

Learning Objectives

After completing this chapter, you will be able to:

- *Work with ZSpheres*
- *Understand ZSketching*
- *Understand rigging using ZSpheres*
- *Create basic models using ZSpheres*





Figure 5-1 The value of the Range slider set to 0



Figure 5-2 ZSphere chosen from the 3D Meshes area of the flyout

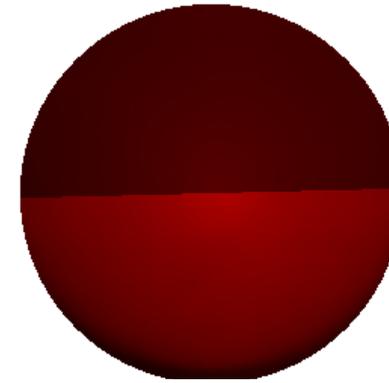


Figure 5-3 A double colored sphere created in the canvas

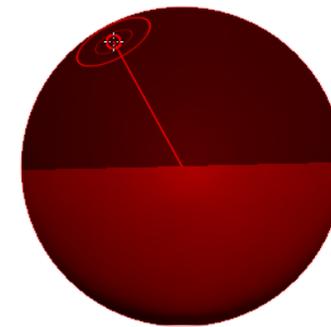


Figure 5-4 Concentric circles displayed on the surface of ZSphere

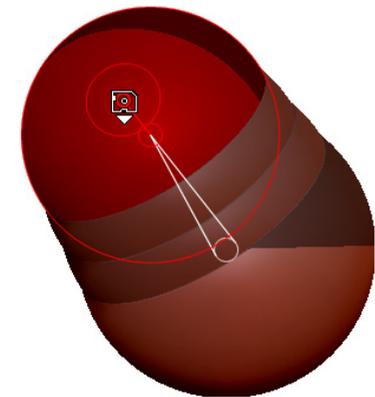


Figure 5-5 New ZSphere created

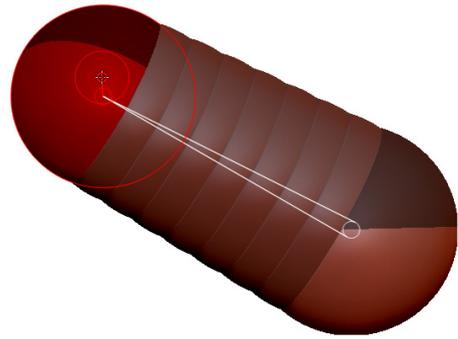


Figure 5-6 Newly created ZSphere moved away from the previous ZSphere

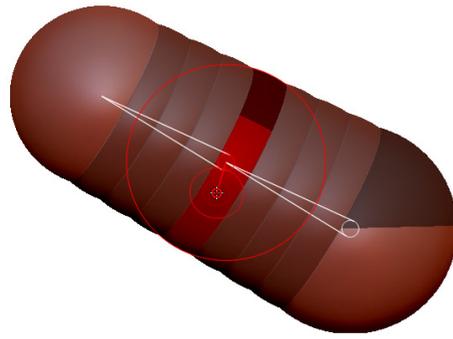


Figure 5-7 Linked sphere converted into an editable ZSphere

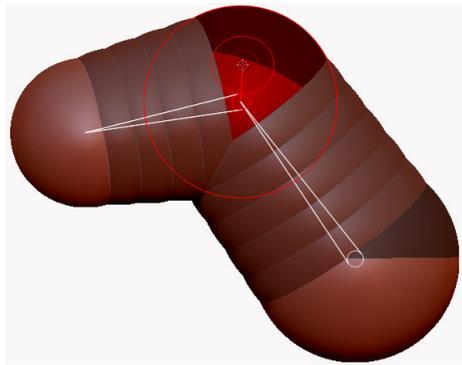


Figure 5-8 The ZSphere moved using the **Move** button

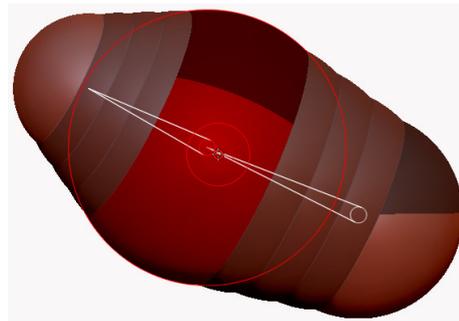


Figure 5-9 The ZSphere scaled using the **Scale** button

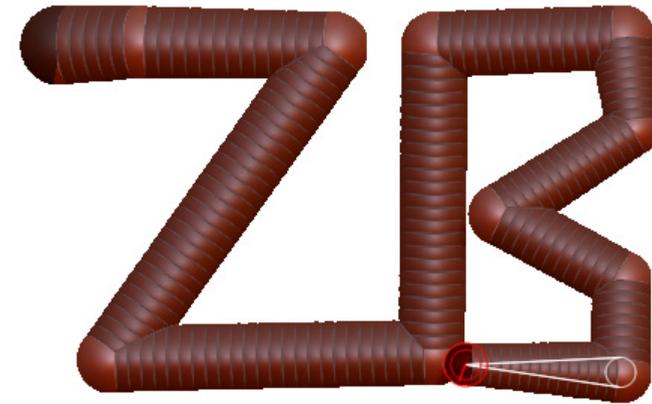


Figure 5-10 Structure created using ZSpheres

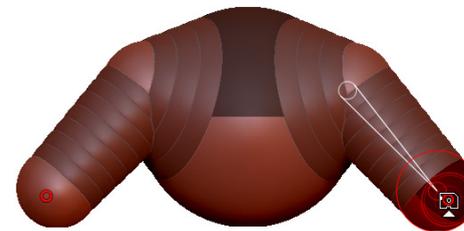


Figure 5-11 Similar ZSpheres created by activating the symmetry in X axis

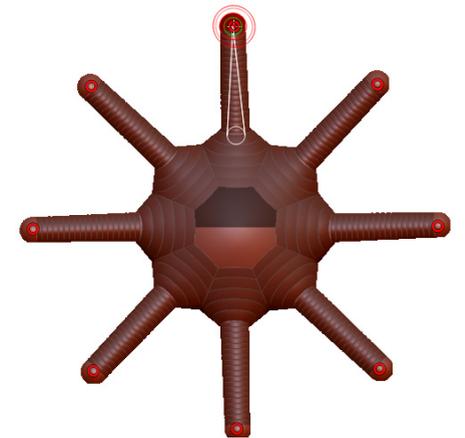


Figure 5-12 Similar ZSpheres created by activating the radial symmetry

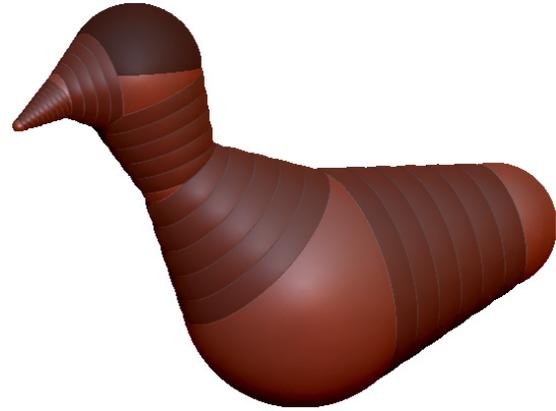


Figure 5-13 ZSphere structure created in the canvas



Figure 5-14 The thumbnail for the ZSphere displayed

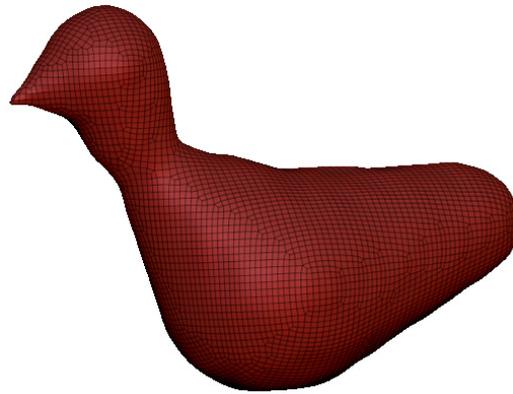


Figure 5-16 The skinned mesh after choosing the PolyF button



Figure 5-15 The Unified Skin subpalette expanded

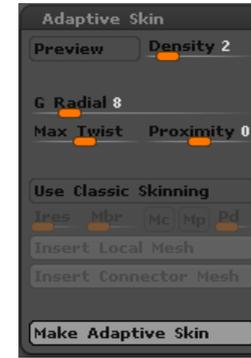


Figure 5-17 The Adaptive Skin subpalette chosen

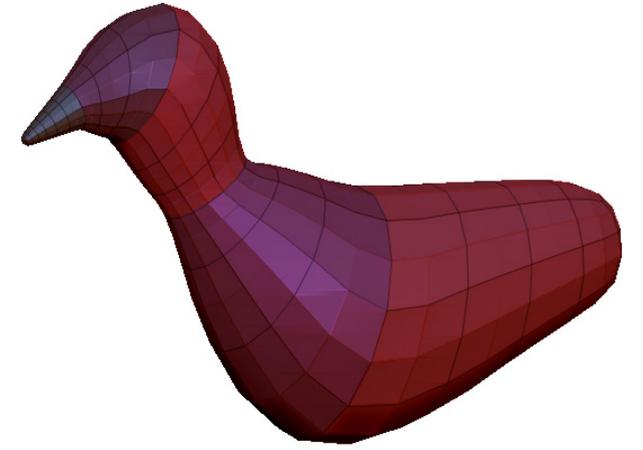


Figure 5-18 The skinned mesh after choosing the PolyF button



Figure 5-19 The ZSphere structure



Figure 5-20 The preview of the ZSphere structure

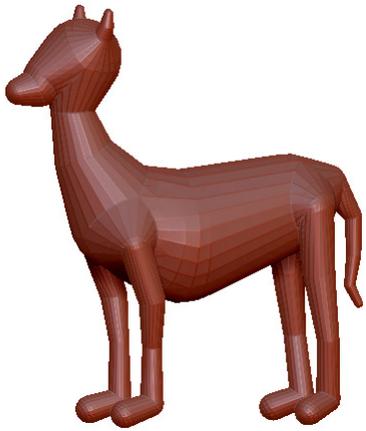


Figure 5-21 Preview of the mesh with the value of the **Density** slider set to 1



Figure 5-22 Preview of the mesh with the value of the **Density** slider set to 7



Figure 5-23 Preview of the mesh with the value of the **G Radial** slider set to 4

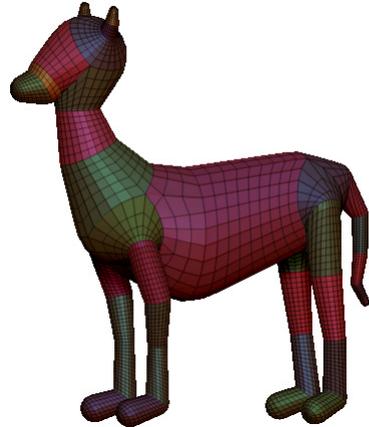


Figure 5-24 Preview of the mesh with the value of the **G Radial** slider set to 20



Figure 5-25 The **ZSketch** subpalette in the **Tool** palette

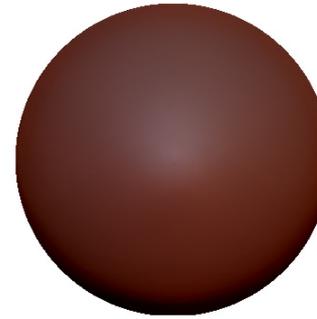


Figure 5-26 The color of the **ZSphere** changed



Figure 5-27 Different shapes created using the strips of **ZSpheres**

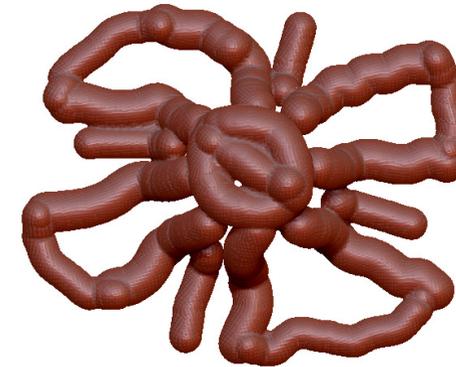


Figure 5-28 **Polymesh** preview of the **ZSketch**



Figure 5-29 A structure created using **ZSpheres**



Figure 5-30 ZSketching done on the surface of the structure

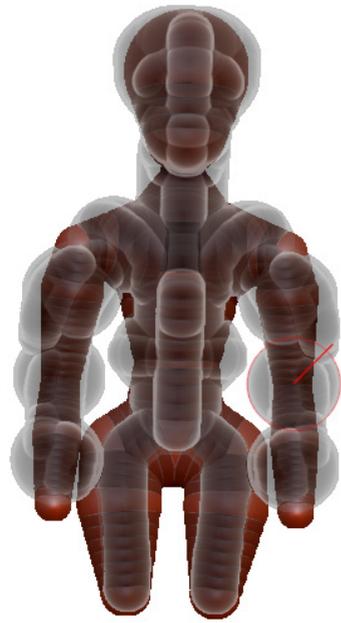


Figure 5-31 Transparency in the sketched strips



Figure 5-32 Strips with the value of the Min Dist slider set to 0.1

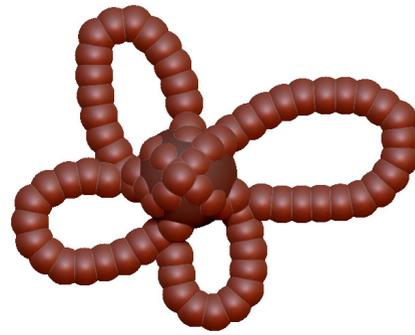


Figure 5-33 Strips with the value of the Min Dist slider set to 1



Figure 5-34 Flyout displayed on choosing the Current Brush button



Figure 5-35 Strips created using the Armature brush



Figure 5-36 The skinned preview of the strips



Figure 5-37 Strips bulged out using the Bulge brush



Figure 5-38 Strips smoothed using the Smooth 1 brush



Figure 5-40 The DemoSoldier.ZTL file created in the canvas



Figure 5-39 The Rigging subpalette



Figure 5-41 The DemoSoldier_1 subtool chosen from the SubTool subpalette

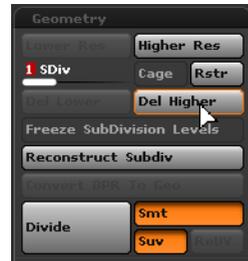


Figure 5-42 The Del Higher button chosen from the Geometry subpalette



Figure 5-43 ZSphere primitive chosen from the 3D Meshes area of the flyout

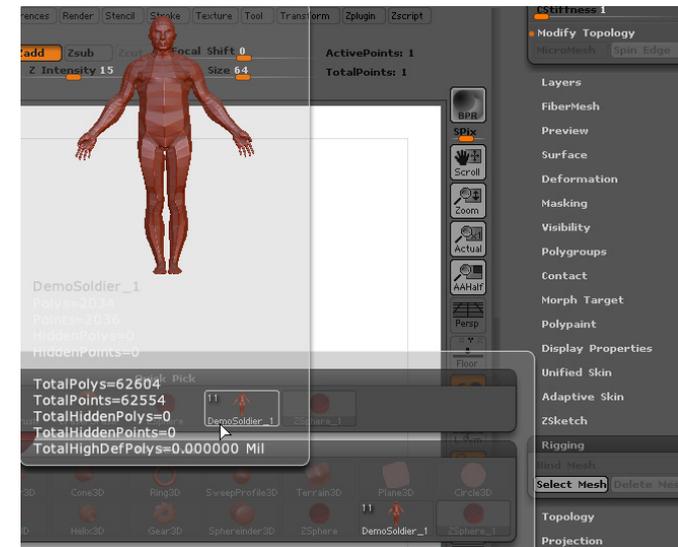


Figure 5-44 DemoSoldier_1 chosen from the flyout

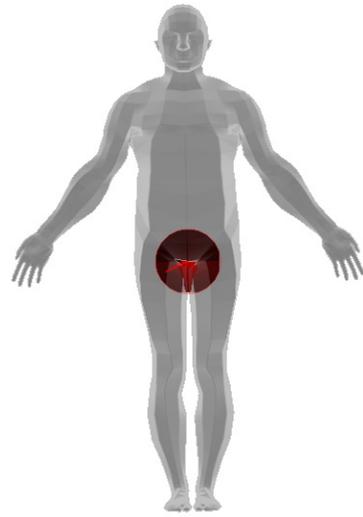


Figure 5-45 The transparent model displayed in the canvas

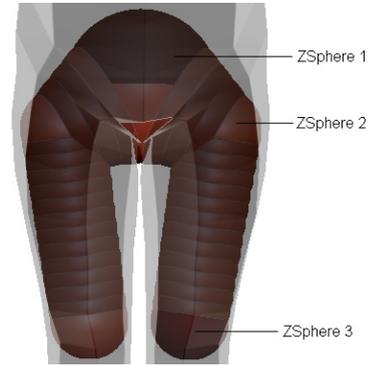


Figure 5-46 Structure created using the ZSpheres

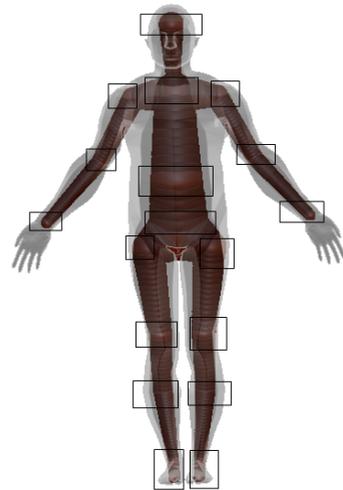


Figure 5-47 Structure created inside the transparent model

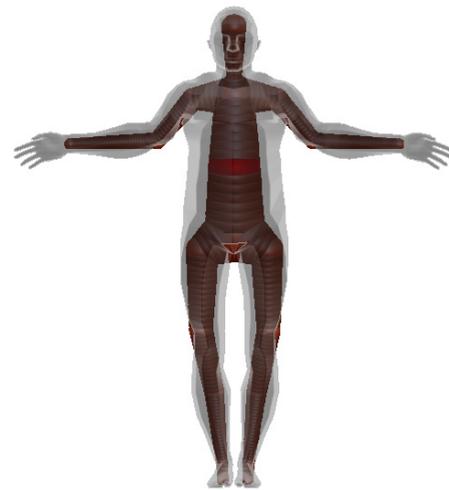


Figure 5-48 Bend created in the elbow of the model

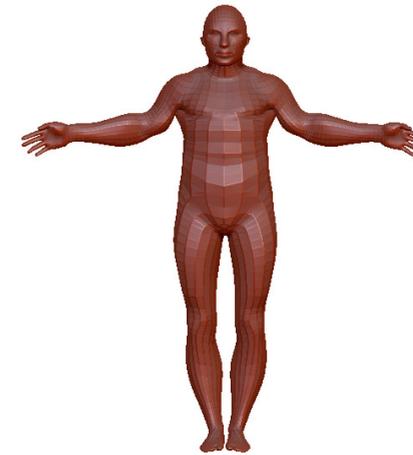


Figure 5-49 The skinned model displayed in the canvas



Figure 5-50 The model smoothed by setting the value of the SDiv slider to 5



Figure 5-51 Basic shape of the human body

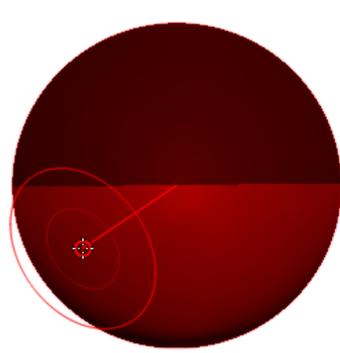


Figure 5-52 ZSphere created in the canvas

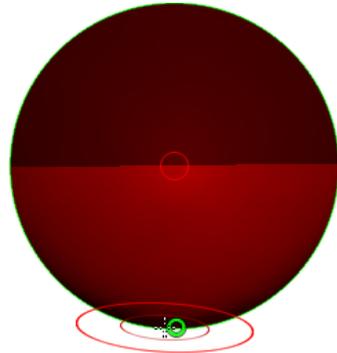


Figure 5-53 Green circle displayed

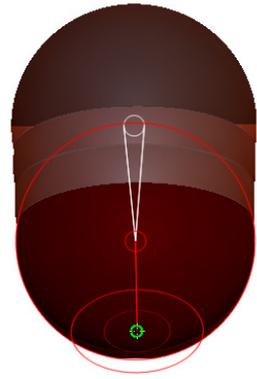


Figure 5-54 Second ZSphere created below the existing ZSphere

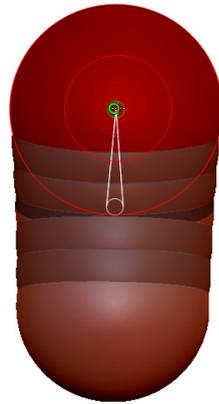


Figure 5-55 Third ZSphere created above the existing ZSphere

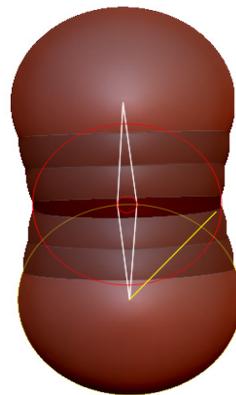


Figure 5-56 Middle most ZSphere scaled using the Scale button



Figure 5-57 ZSphere created for the hips

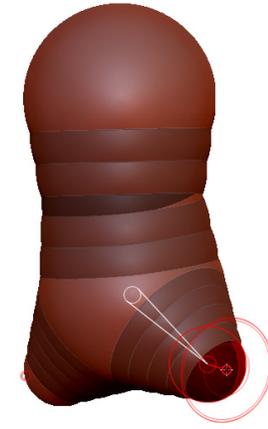


Figure 5-58 Positioning ZSphere in the side view

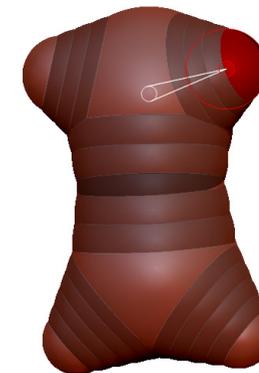


Figure 5-59 ZSphere created for the shoulders

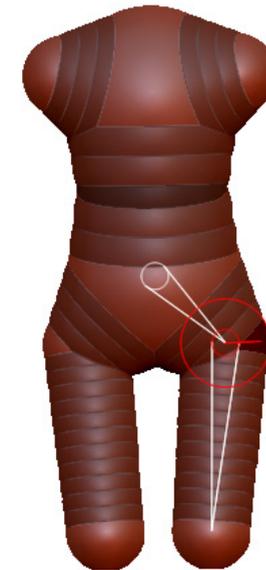


Figure 5-60 ZSphere created and moved downward

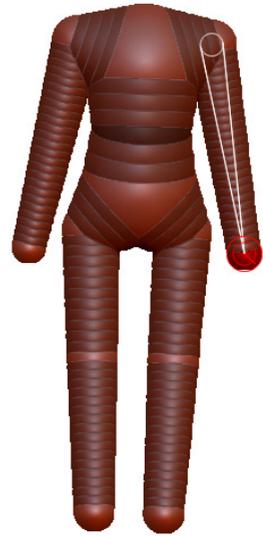


Figure 5-61 ZSpheres created for the legs and the arms

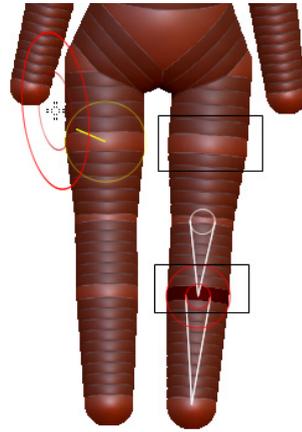


Figure 5-62 Two new ZSpheres inserted and scaled



Figure 5-63 The ZSpheres adjusted in the side view

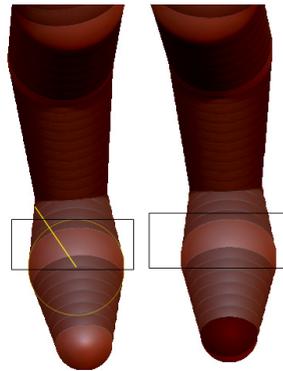


Figure 5-64 Middle ZSphere scaled up

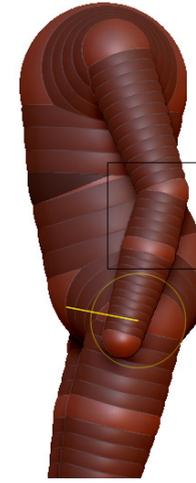


Figure 5-65 Two new ZSpheres inserted and positioned in the side view



Figure 5-66 New ZSphere created for the palm and moved downwards

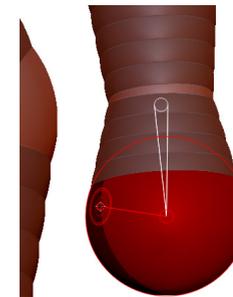


Figure 5-67 Cursor hovered at the area dividing the red and maroon tones of the ZSphere

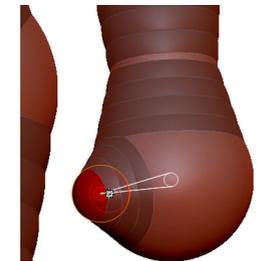


Figure 5-68 ZSphere created and moved outward

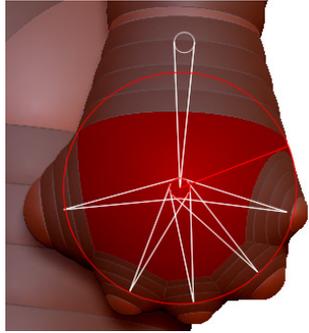


Figure 5-69 Knuckles created for all the fingers of the hand

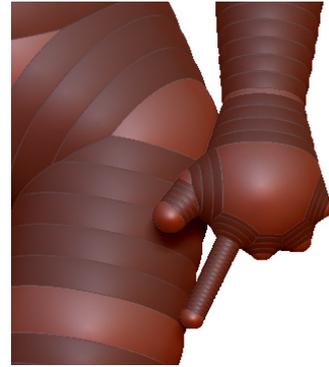


Figure 5-70 Thumb and index finger created by creating ZSpheres and moving them outward

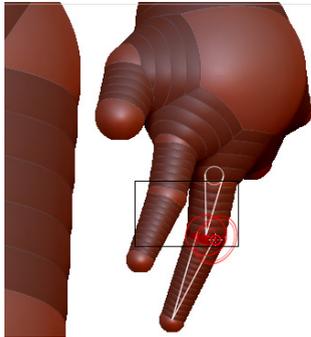


Figure 5-71 Two new ZSpheres inserted in the index finger and the middle finger

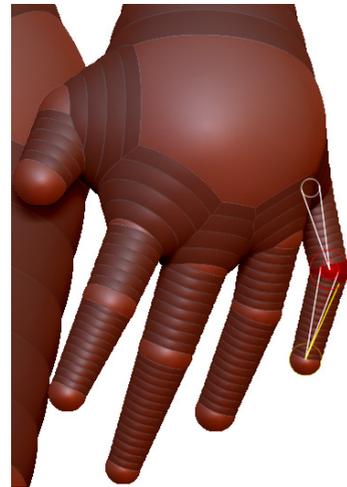


Figure 5-72 Ring finger and the little finger created using ZSpheres

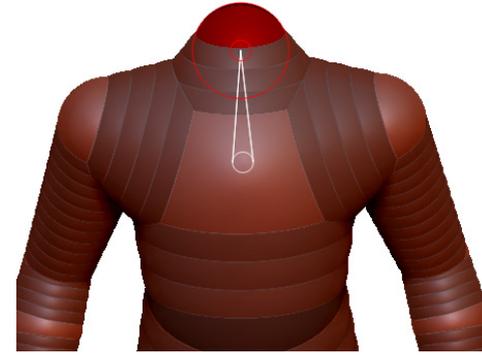


Figure 5-73 ZSphere created for the lower part of the neck

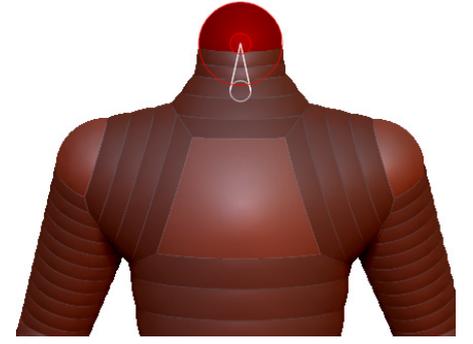


Figure 5-74 Second ZSphere created for the upper part of the neck

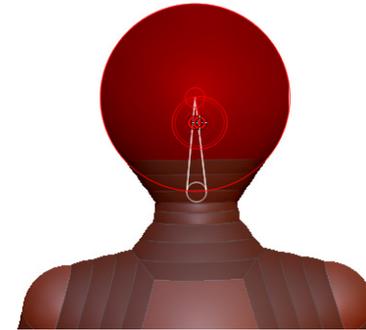


Figure 5-75 ZSphere created for the lower part of the head

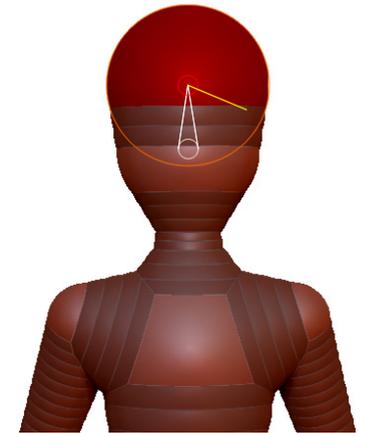


Figure 5-76 ZSphere created for the upper part of the head



Figure 5-77 Final model of the body

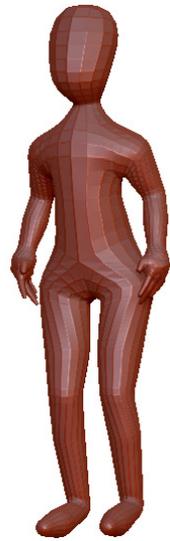


Figure 5-78 Skinned preview of the body



Figure 5-79 Basic shape of the head of stag deer

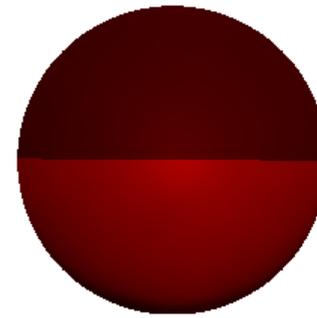


Figure 5-80 ZSphere created in the canvas

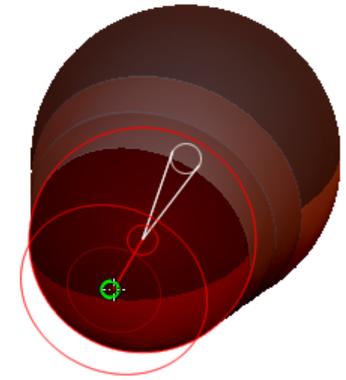


Figure 5-81 ZSphere created at the center

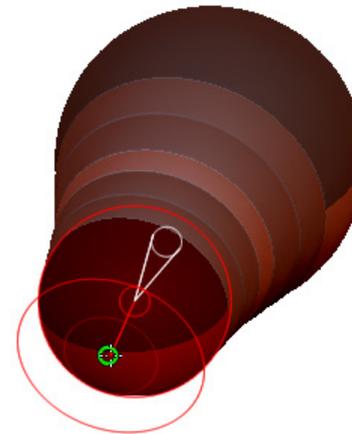


Figure 5-82 Third Zsphere created

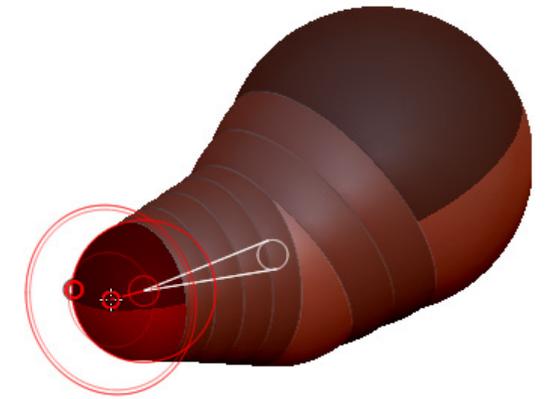


Figure 5-83 ZSphere moved upward

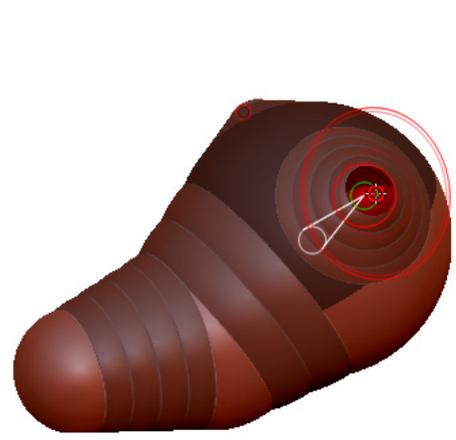


Figure 5-84 ZSphere drawn for the ear

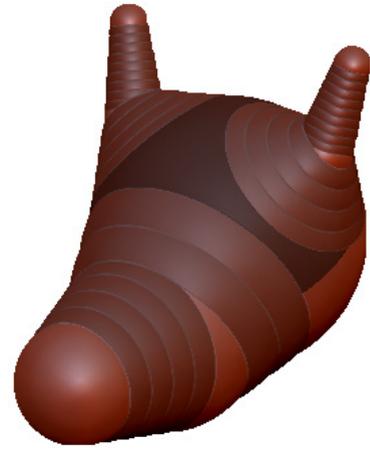


Figure 5-85 ZSphere drawn and moved up

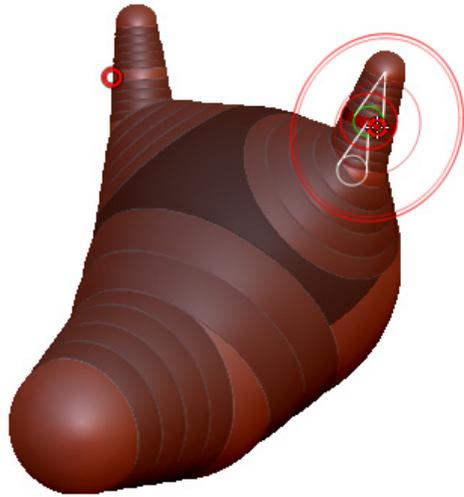


Figure 5-86 ZSphere inserted at the centre

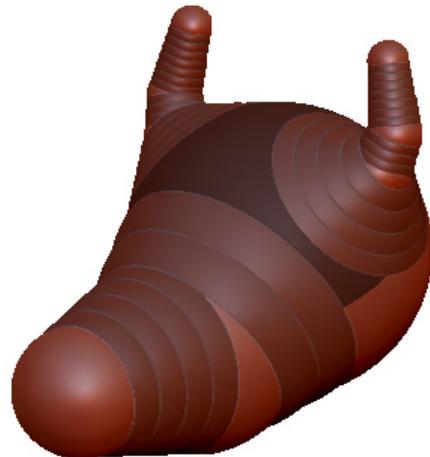


Figure 5-87 ZSphere moved outward

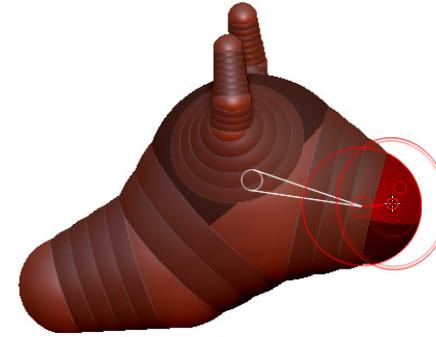


Figure 5-88 ZSphere created for the neck

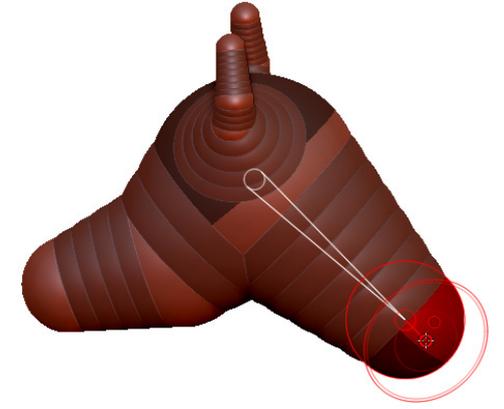


Figure 5-89 ZSphere moved outward

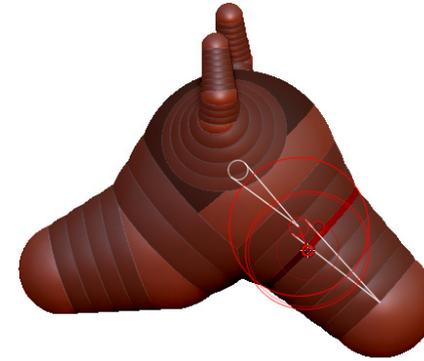


Figure 5-90 ZSphere inserted in the neck and scaled down

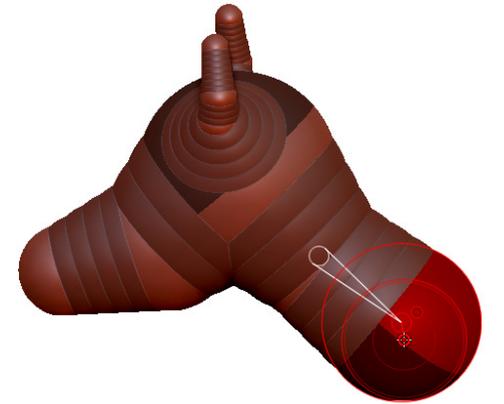


Figure 5-91 ZSphere scaled up

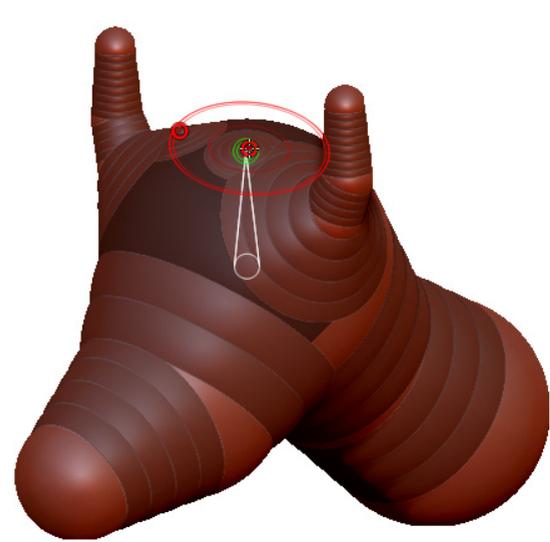


Figure 5-92 ZSphere created for the antler

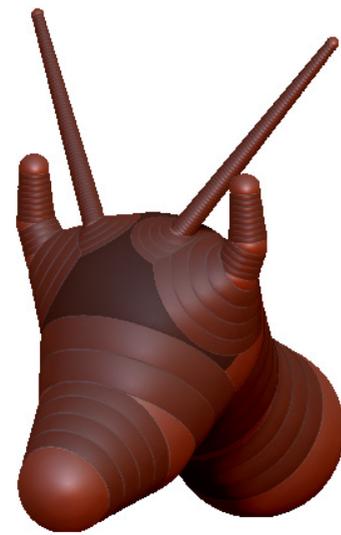


Figure 5-93 ZSphere created and moved up



Figure 5-94 New ZSpheres created and moved



Figure 5-95 Antlers of the deer created



Figure 5-96 Model of a tree



Figure 5-97 Scene to be created for Exercise 2

Chapter 6

DynaMesh, NanoMesh, and ZRemesher

Learning Objectives

After completing this chapter, you will be able to:

- *Work with DynaMesh*
- *Work with ZRemesher*
- *Create different models using the DynaMesh tool*





Figure 6-1 DynaMesh area in the Geometry subpalette

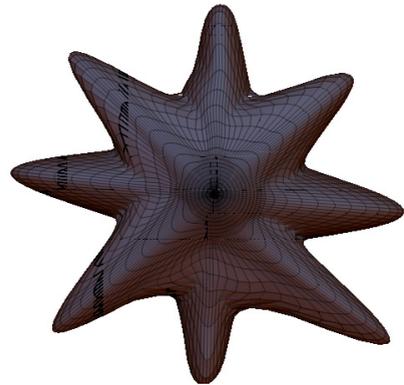


Figure 6-2 The sphere deformed using the Move brush

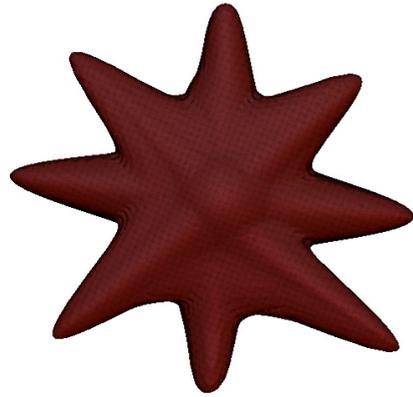


Figure 6-3 The stretched polygons distributed uniformly

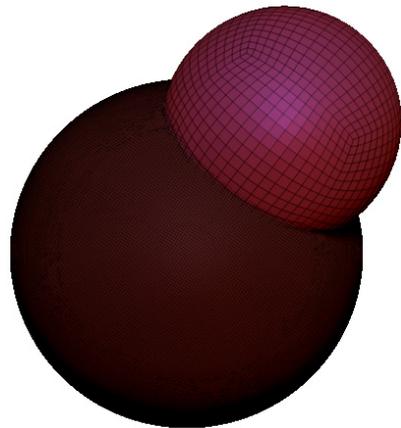


Figure 6-4 A sphere inserted using the InsertSphere brush

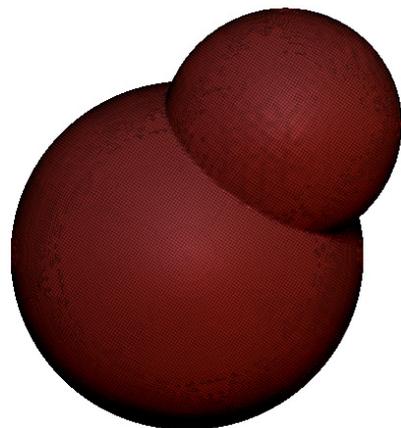


Figure 6-5 Inserted sphere merged with the existing sphere

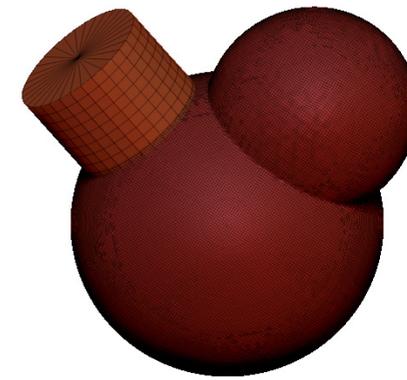


Figure 6-6 Cylinder inserted using the InsertCylinder brush

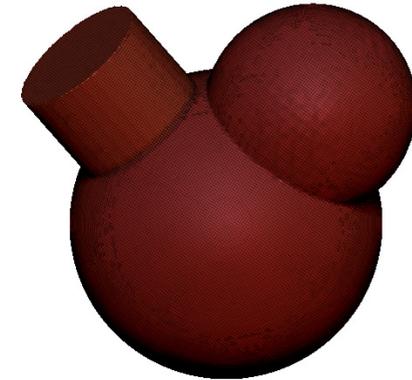


Figure 6-7 New group created for the inserted cylinder

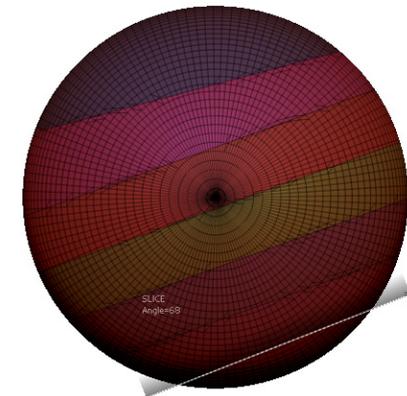


Figure 6-8 Groups created using the SliceCurve brush



Figure 6-9 Split groups visible in the sphere

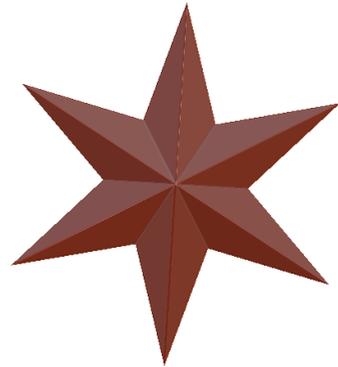


Figure 6-10 The PolyMesh3D primitive created in the canvas

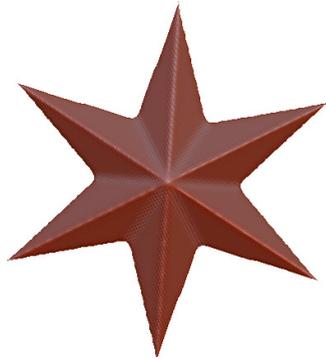


Figure 6-11 The PolyMesh3D primitive converted into DynaMesh



Figure 6-12 The DynaMesh and Polish buttons chosen

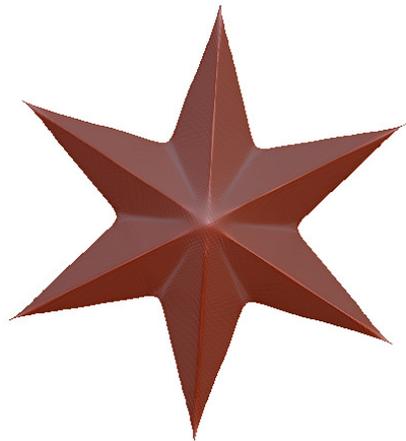


Figure 6-13 The primitive converted into DynaMesh

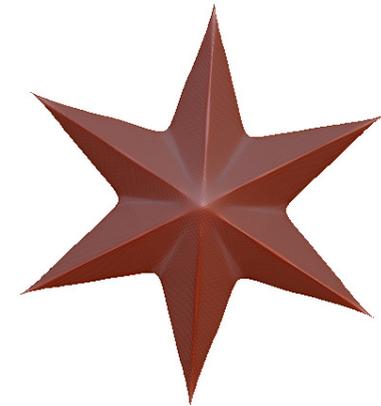


Figure 6-14 The DynaMesh with the value of Blur slider set to 4

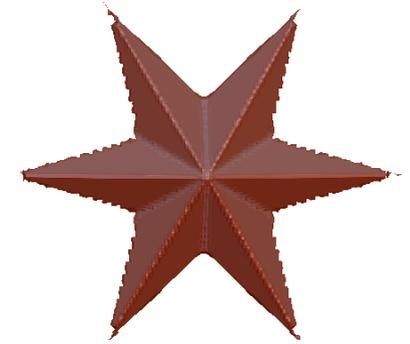


Figure 6-15 The DynaMesh with the value of Blur slider set to 100



Figure 6-16 The DemoHead.ZTL file created in the canvas

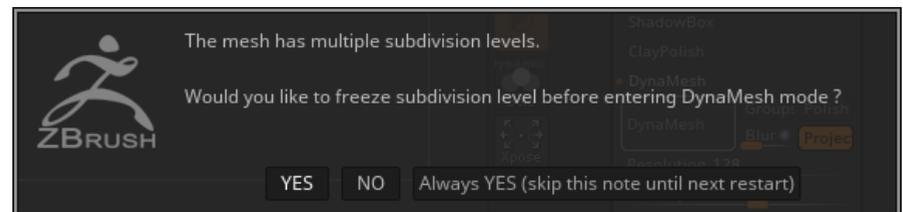


Figure 6-17 The message box displayed on choosing the DynaMesh button

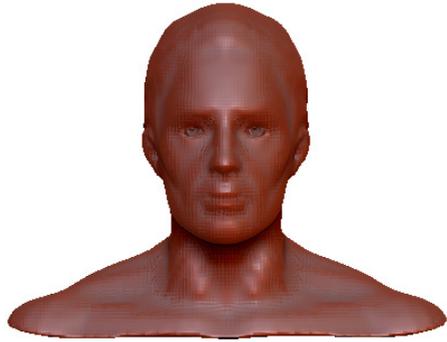


Figure 6-18 The details lost on choosing the DynaMesh button

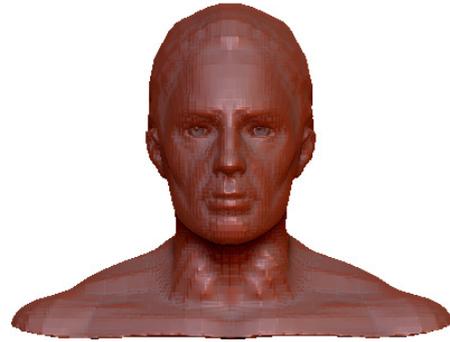


Figure 6-19 The details retained on choosing the DynaMesh button with the Project button

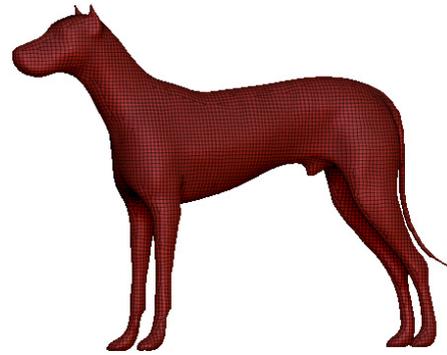


Figure 6-20 Dynamesh created with the default value of Resolution slider

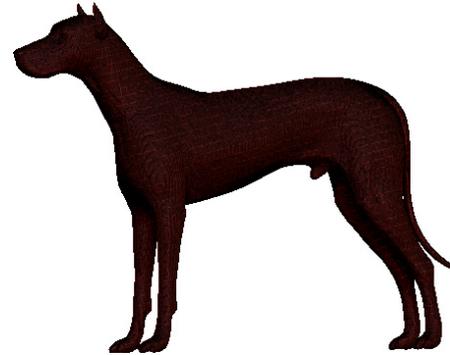


Figure 6-21 Dynamesh created with the value of Resolution slider set to 1000

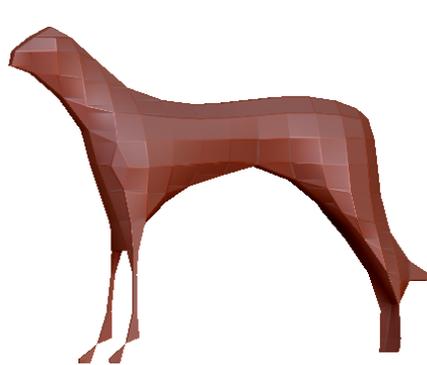


Figure 6-22 The detail lost on setting the value of Resolution slider to 8

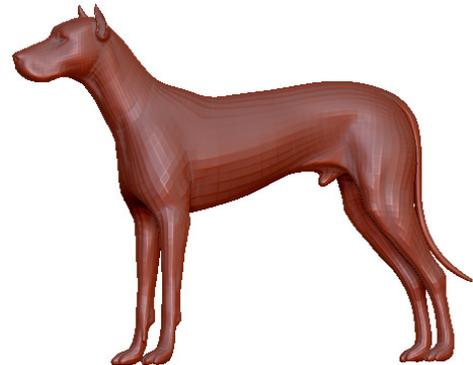


Figure 6-23 The detail retained on setting the value of Resolution slider to 1024



Figure 6-24 The ring created on the surface of the sphere

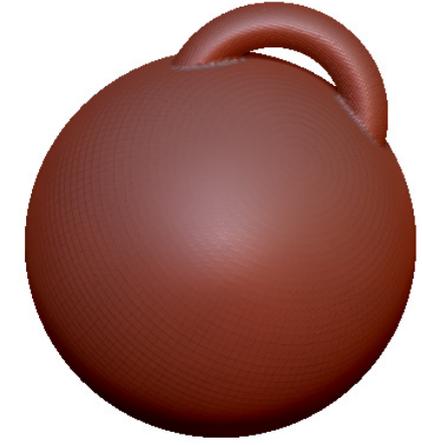


Figure 6-25 The ring merged with the sphere



Figure 6-26 The cylinder created on the surface of the sphere with ALT key pressed



Figure 6-27 The Double button chosen from the Display Properties subpalette

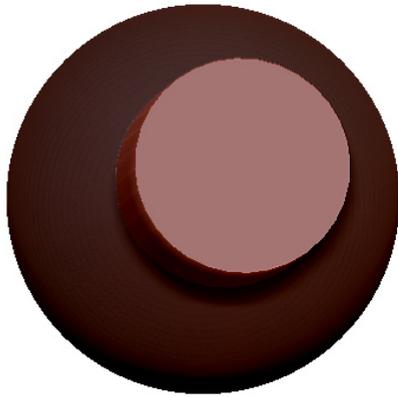


Figure 6-28 The complete cylinder displayed

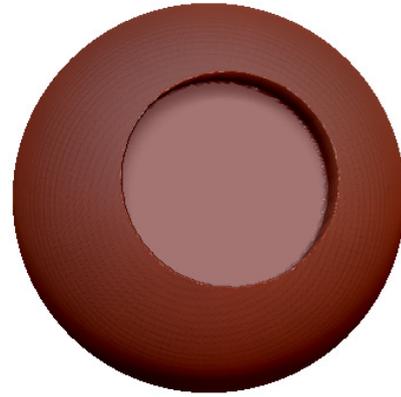


Figure 6-29 A hole created on sphere

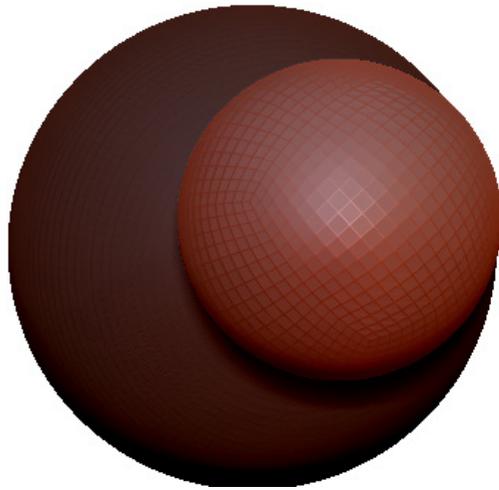


Figure 6-30 The complete sphere displayed

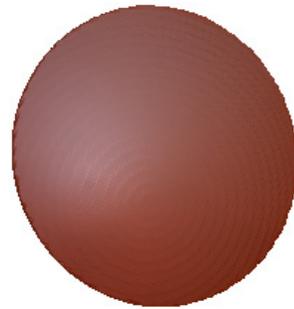


Figure 6-31 Intersecting geometry retained

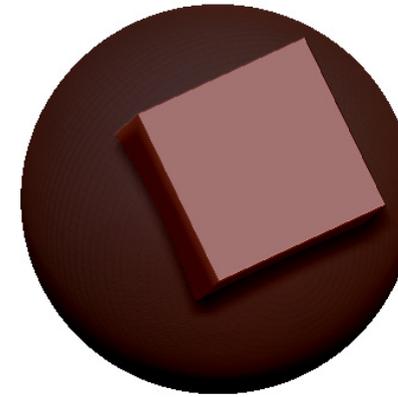


Figure 6-32 The cube created on the surface of the sphere

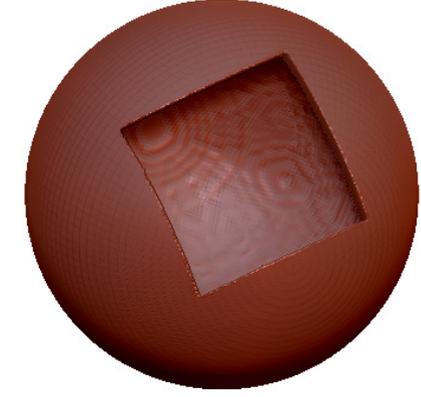


Figure 6-33 The hole created on the surface of the sphere

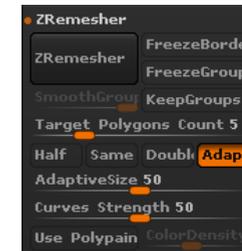


Figure 6-34 Different buttons and sliders in the ZRemesher area

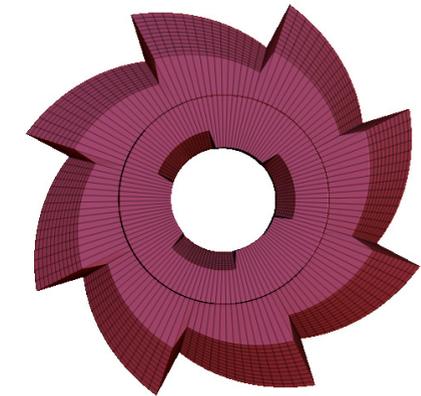


Figure 6-35 The Gear3D primitive created in the canvas



Figure 6-36 The orange colored bar showing the status

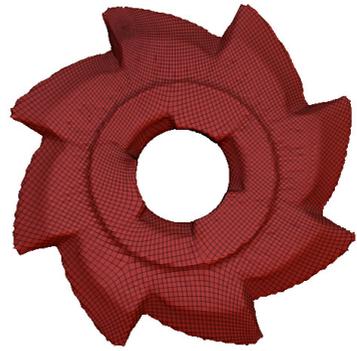


Figure 6-37 Flow of polygons changed on choosing the ZRemesher button

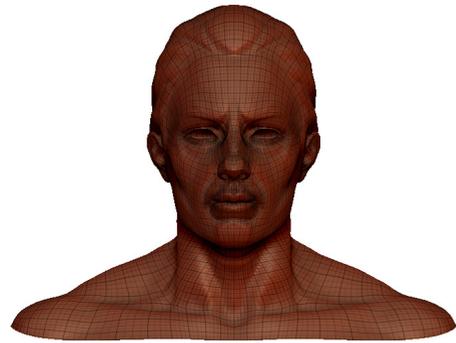


Figure 6-38 The DemoHead.ZTL model created in the canvas

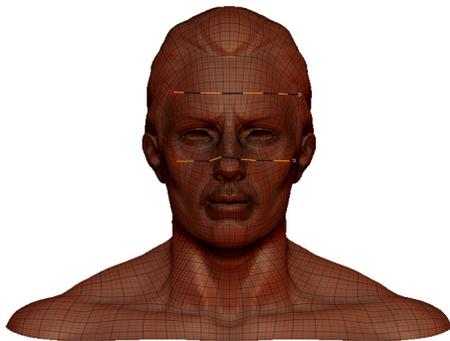


Figure 6-39 Guide curves created using the ZRemesher Guide brush

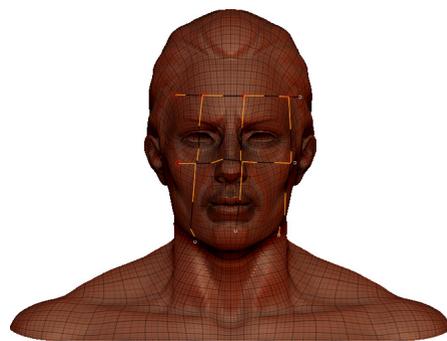


Figure 6-40 Guide curves created for the flow of polygons

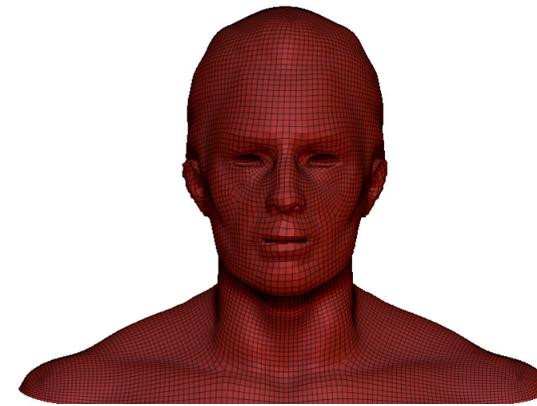


Figure 6-41 Flow of the polygons changed according to the guide curves

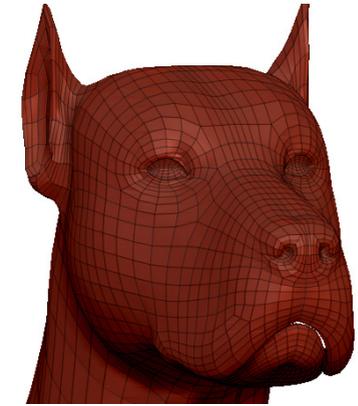


Figure 6-42 Polygons in the Dog.ZTL



Figure 6-43 Details lost on choosing the ZRemesher button

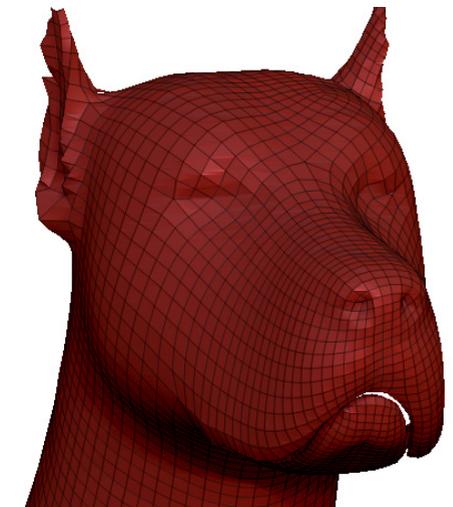


Figure 6-44 Details around nose and mouth retained on choosing the AutoMask button

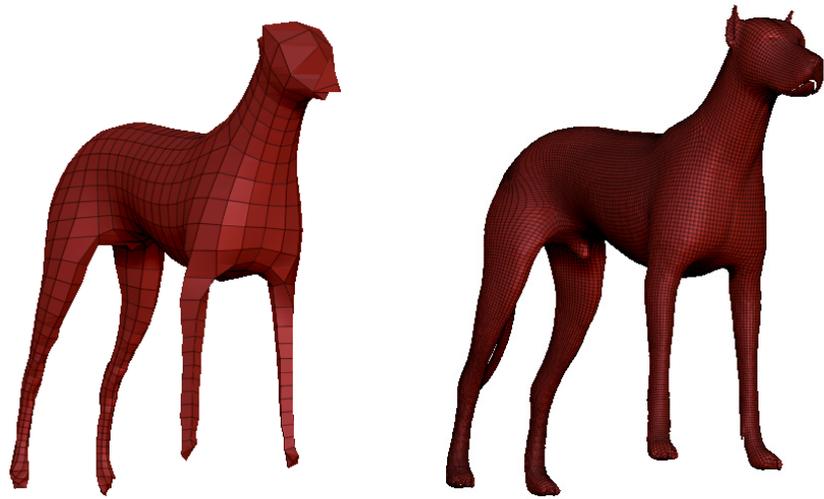


Figure 6-45 Retopologized model with the Target Polygons Count slider set to 1

Figure 6-46 Retopologized model with the Target Polygons Count slider set to 30

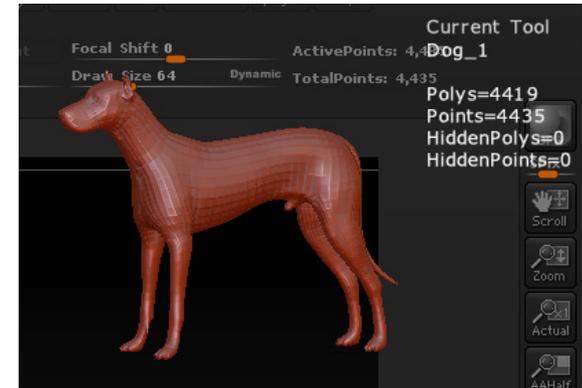


Figure 6-48 The number of polygons reduced to 4419 after choosing the Half button

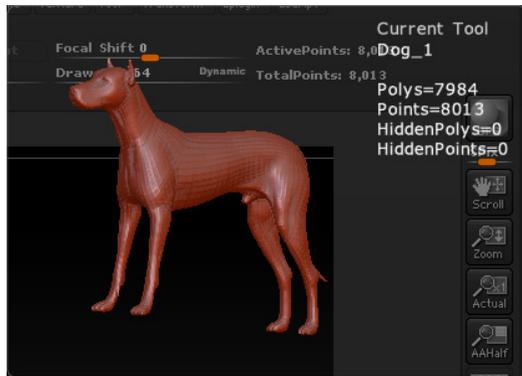


Figure 6-47 The number of polygons equal to 7984



Figure 6-49 The NanoMesh subpalette

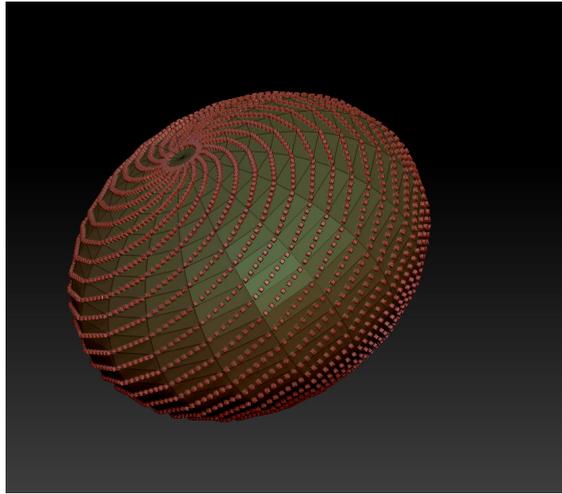


Figure 6-50 The distribution of pattern of Nanomesh



Figure 6-51 A coffee mug

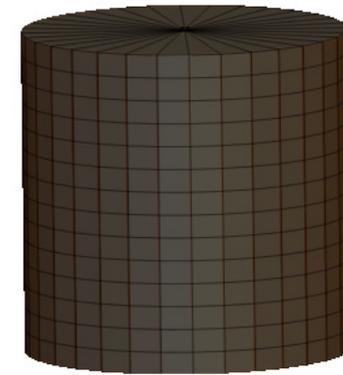


Figure 6-52 The polygon edges displayed on choosing the PolyF button



Figure 6-53 The polygon distribution modified

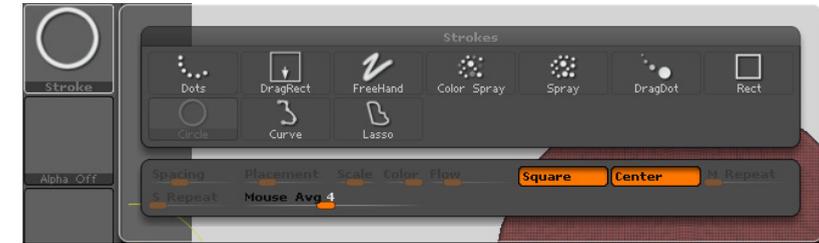


Figure 6-54 The Square and Center buttons chosen from the flyout

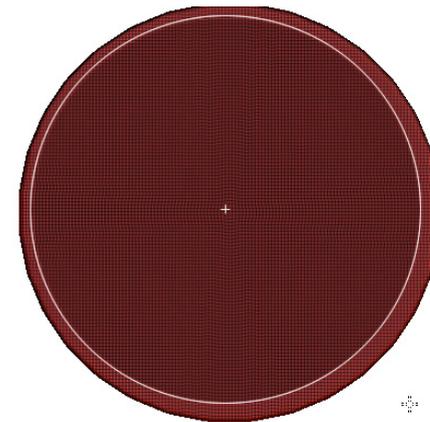


Figure 6-55 A circular stroke created on the top of the coffee mug

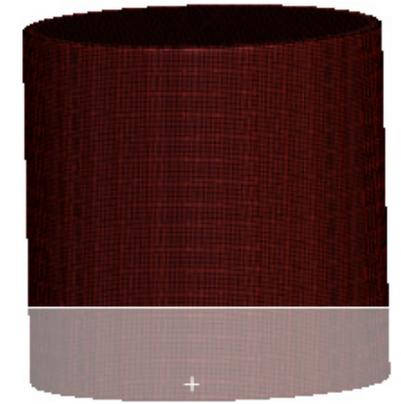


Figure 6-56 A rectangular stroke created at the bottom of the coffee mug



Figure 6-57 Polygon edges disappeared from the surface



Figure 6-58 The mask inverted on the surface

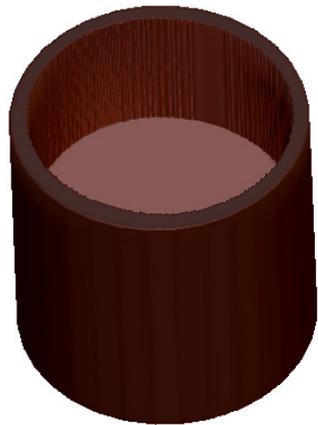


Figure 6-59 The unmasked area moved downward

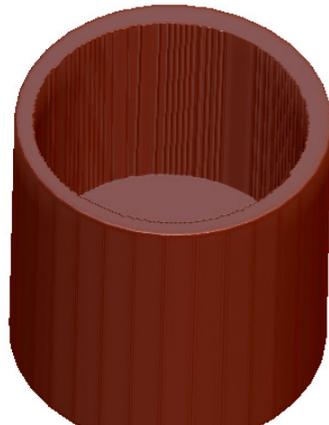


Figure 6-60 The distorted geometry of the coffee mug



Figure 6-61 The surface of the coffee mug smoothed

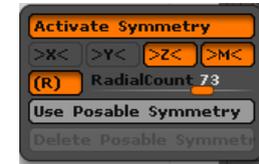


Figure 6-62 The value of the RadialCount slider set to 73



Figure 6-63 The lower part of the coffee mug moved inward

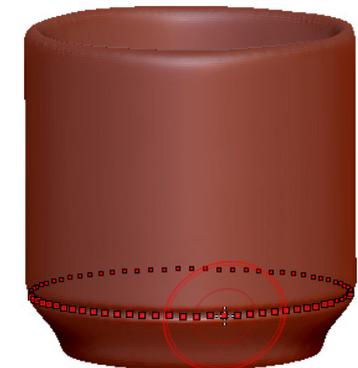


Figure 6-64 A pattern created on the coffee mug



Figure 6-65 The same pattern created on the coffee mug



Figure 6-66 A handle created using the **InsertHRing** brush



Figure 6-67 The shape of the handle modified using the **Move** brush



Figure 6-68 The final model of the coffee mug

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Figure 6-69 The final model of the cartoon octopus

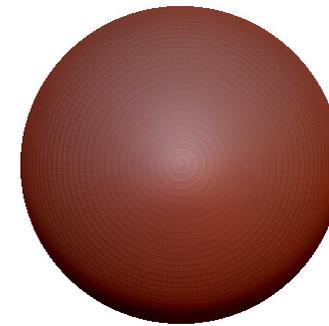


Figure 6-70 The sphere created in the canvas

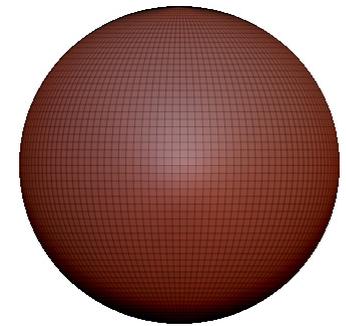


Figure 6-71 The sphere rotated in the canvas

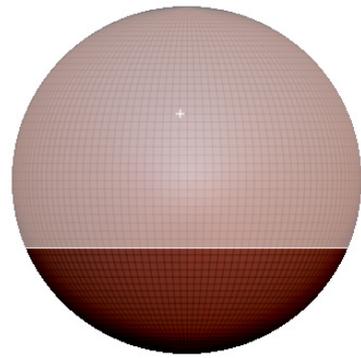


Figure 6-72 The rectangular marquee selection created on the surface of sphere

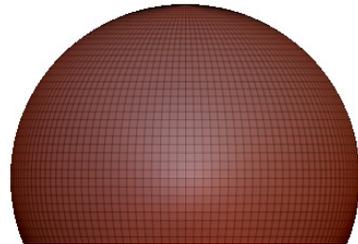


Figure 6-73 The lower part of the sphere deleted

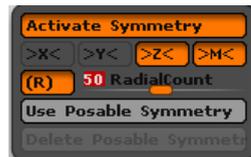


Figure 6-74 The value of the RadialCount slider set to 50

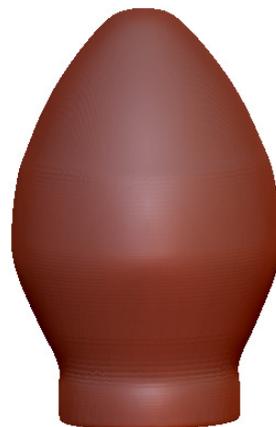


Figure 6-75 The shape modified using the Move brush



Figure 6-76 The value of the RadialCount slider set to 8



Figure 6-77 Base for the tentacles created using the Inflat brush



Figure 6-78 The surface of the octopus smoothed

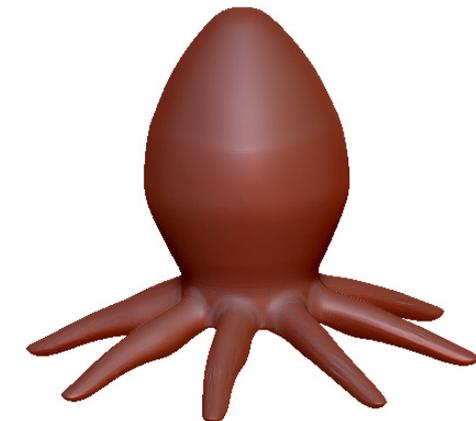


Figure 6-79 The tentacles dragged out using the Move brush



Figure 6-80 Ends of the tentacles moved toward left

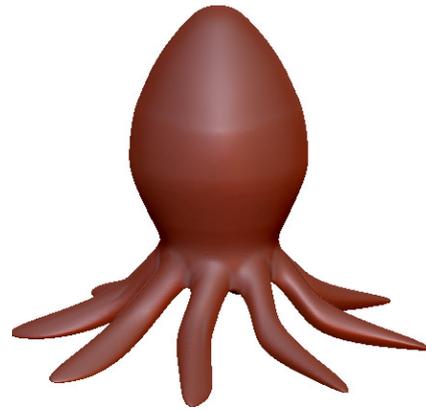


Figure 6-81 Ends of the tentacles smoothed using the **Smooth** brush



Figure 6-82 Ends of the tentacles moved toward left using the **SnakeHook** brush

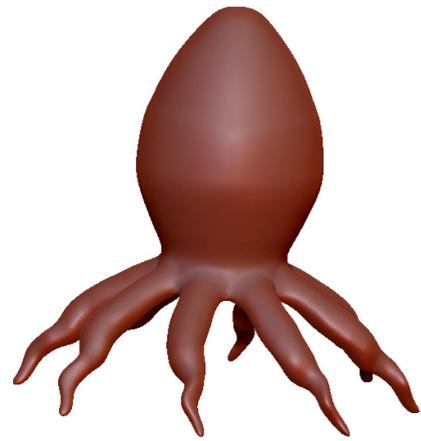


Figure 6-83 Depth added to the tentacles using the **Inflat** brush



Figure 6-84 Eye socket created using the **Standard** brush



Figure 6-85 Eye ball created using the **InsertSphere** brush

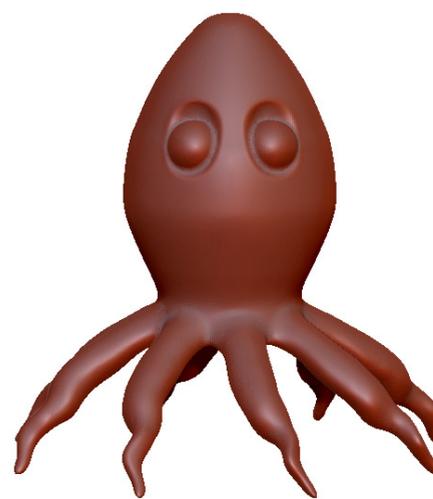


Figure 6-86 Eyeball merged with the socket

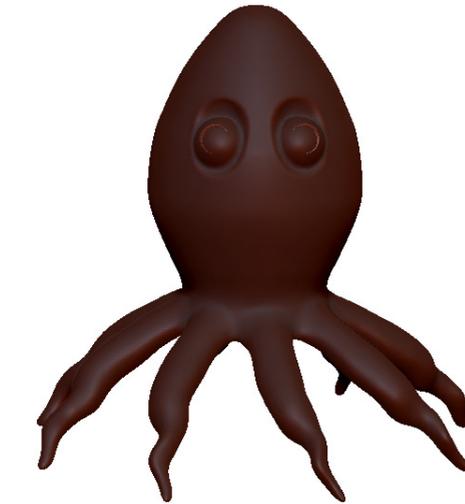


Figure 6-87 A sphere created on eyeball with the **ALT** key pressed

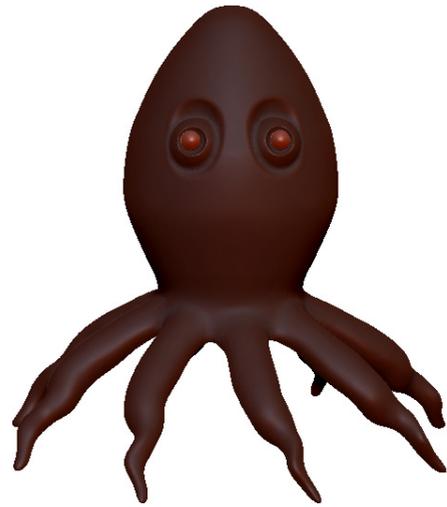


Figure 6-88 Sphere created on the surface of the hole

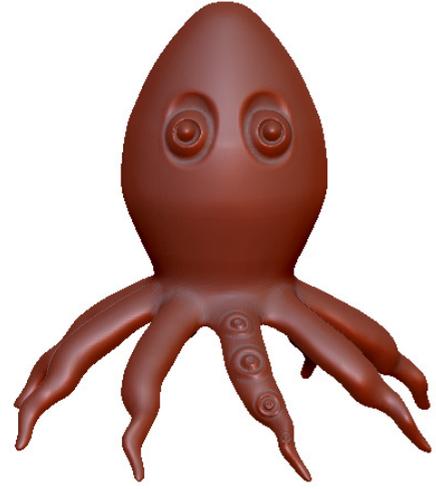


Figure 6-89 Pattern created on a tentacle



Figure 6-90 Pattern created on all the tentacles



Figure 6-91 Noise pattern created on the body of the octopus

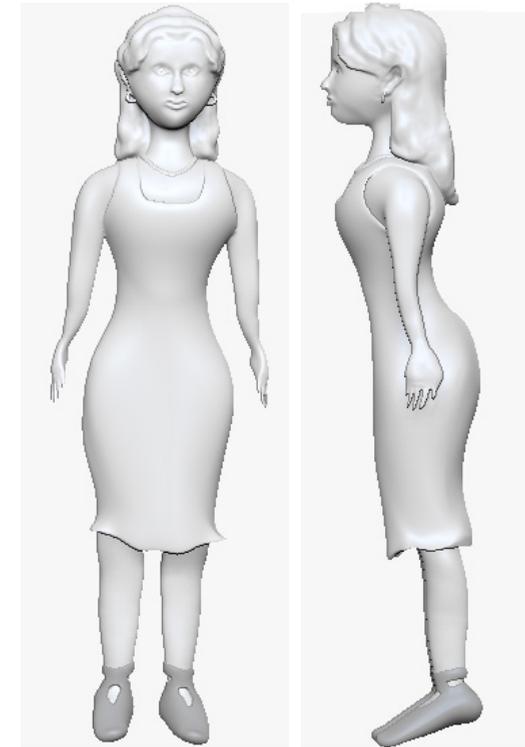


Figure 6-92 The final model of the mannequin

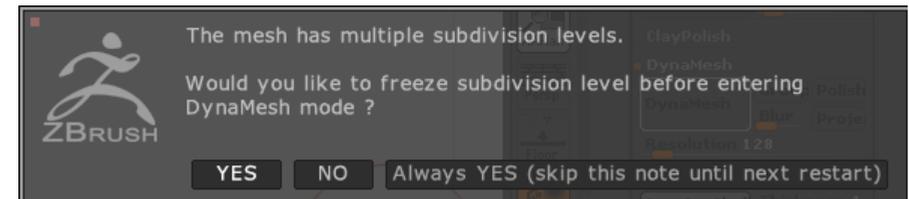


Figure 6-93 The dialog box displayed on choosing the DynaMesh button

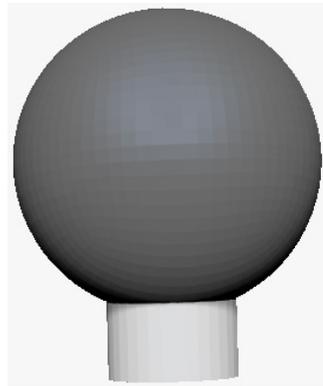


Figure 6-94 A cylinder inserted using the *InsertCylinder* brush

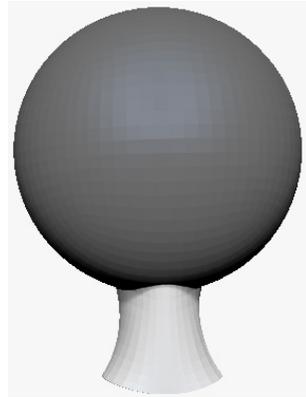


Figure 6-95 Shape of the cylinder modified to create neck

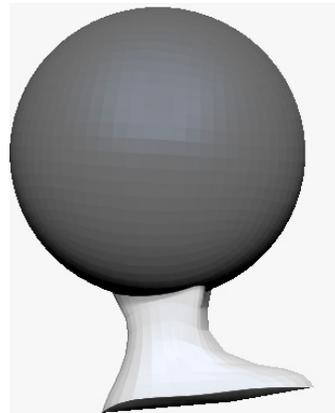


Figure 6-96 Shape of the neck modified in side view

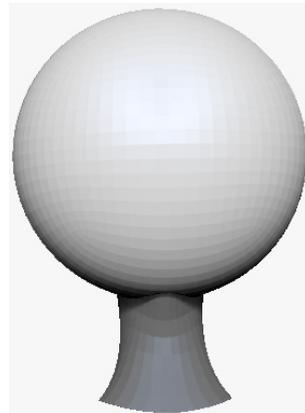


Figure 6-97 The mask inverted

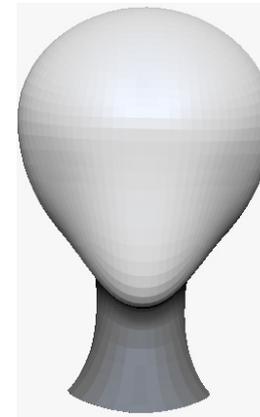


Figure 6-98 Shape of the sphere modified in front view

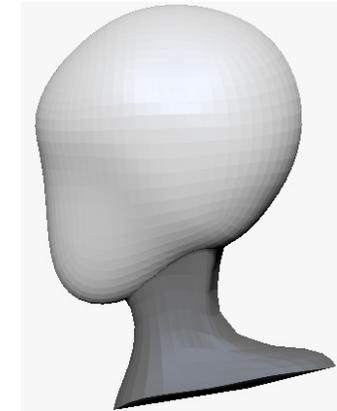


Figure 6-99 Shape of the sphere modified in side view

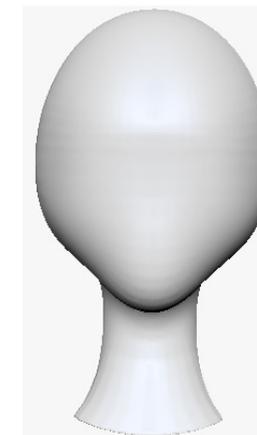


Figure 6-100 The neck merged with the head

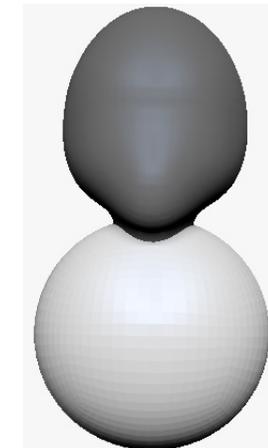


Figure 6-101 A sphere created using the *InsertSphere* brush



Figure 6-102 Shape of the sphere modified to create a torso



Figure 6-103 A curve created using the **Move** brush



Figure 6-104 The shape modified in the side view



Figure 6-105 The seam below the neck removed

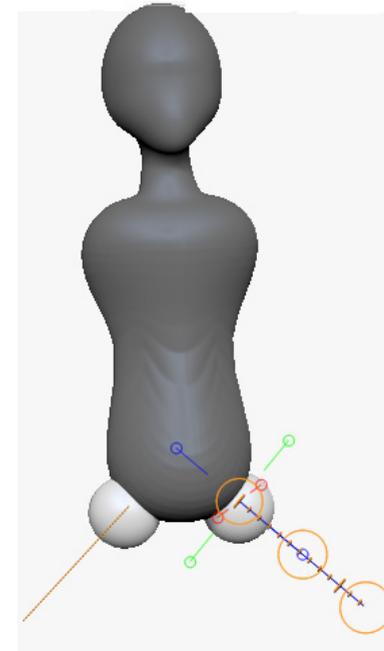


Figure 6-106 Sphere moved using the action line



Figure 6-107 The shape modified using the **Move** brush



Figure 6-108 The shape modified to create legs



Figure 6-109 The mask removed from the head and torso

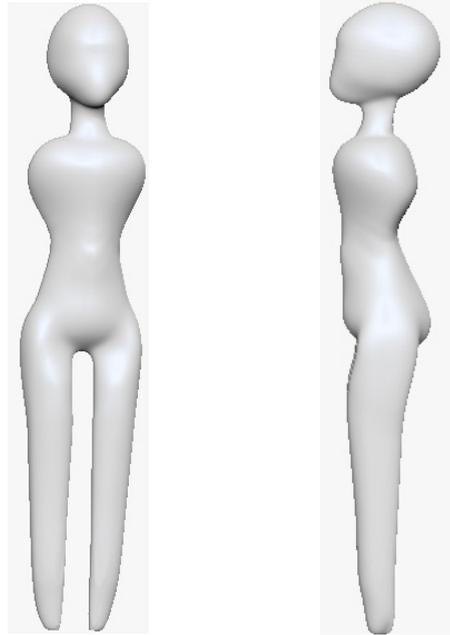


Figure 6-110 The seam below the torso removed

Figure 6-111 The body adjusted in the side view

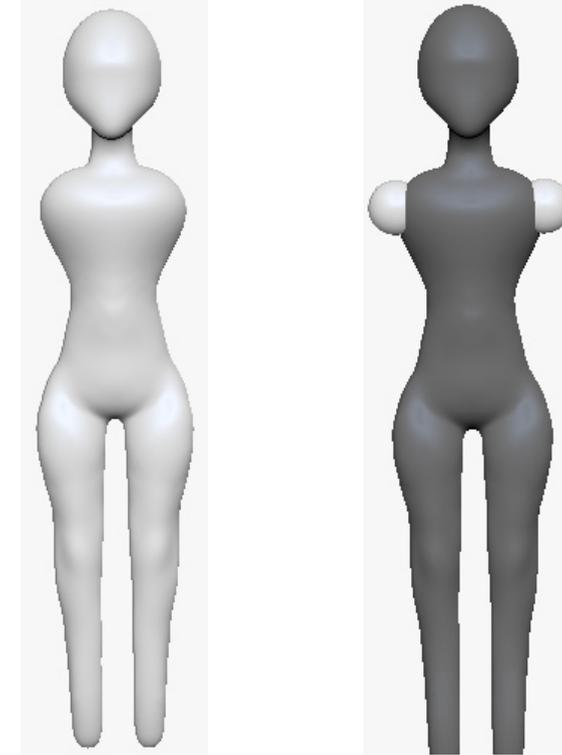


Figure 6-112 Depth added to thighs and knees

Figure 6-113 Sphere created for the shoulders

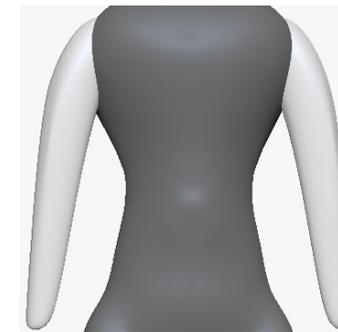


Figure 6-114 Shape modified to create arms



Figure 6-115 Shape modified in side view

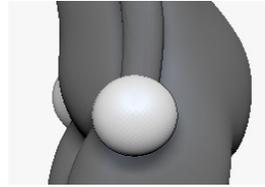


Figure 6-116 Sphere created for hand

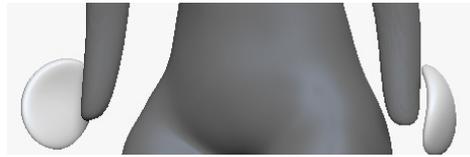


Figure 6-117 Shape of the sphere modified to create palm



Figure 6-118 Shape of the arm adjusted according to the palm



Figure 6-119 Sphere created for the thumb

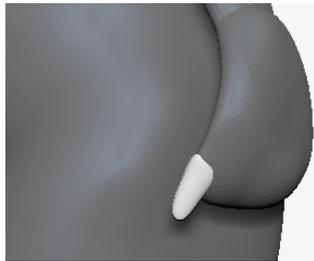


Figure 6-120 Shape modified using the **Move** brush to create a thumb

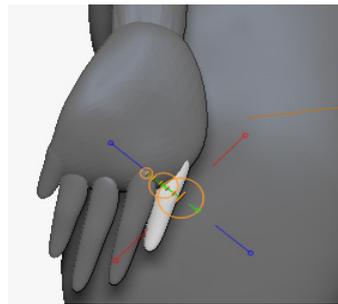


Figure 6-121 Fingers created using the spheres



Figure 6-122 Sphere created for the feet



Figure 6-123 Shape modified using the **Move** brush

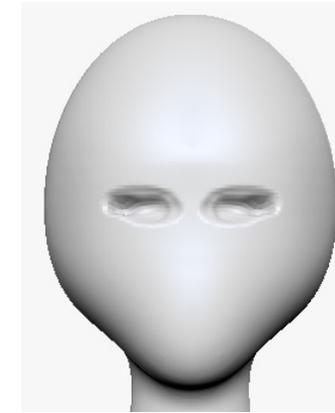


Figure 6-124 Eye sockets created using the **Standard** brush

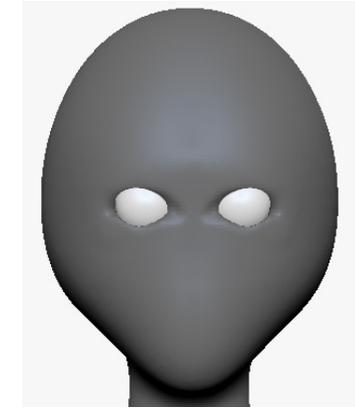


Figure 6-125 Sphere inserted for the eyes

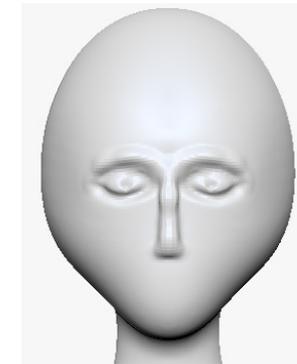


Figure 6-126 Eyes and nose created using the **Standard** brush



Figure 6-127 Shape of the nose created in side view

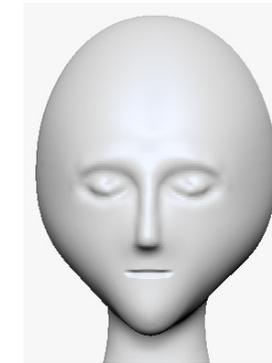


Figure 6-128 Partition created for the lips using the **Dam_Standard** brush



Figure 6-129 Depth created for the lips using the **Standard** brush

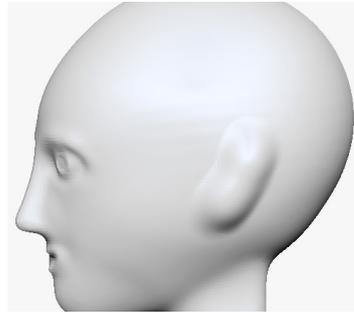


Figure 6-130 Base for the ear created using the **Standard** brush

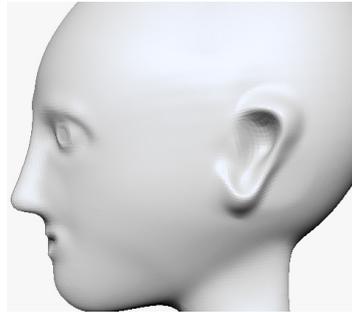


Figure 6-131 Shape of the ear created using the **Standard** brush



Figure 6-132 Mask created for the outfit



Figure 6-133 The **Extract** area expanded

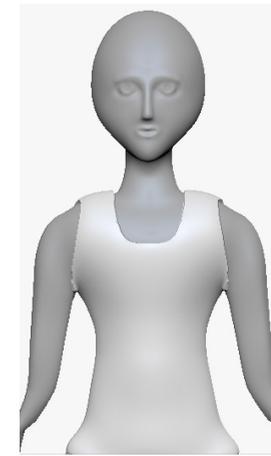


Figure 6-134 The mask removed from the surface



Figure 6-135 The dress created using the **Move** brush



Figure 6-136 Mask created for the hair



Figure 6-137 Mask displayed on the surface



Figure 6-138 Shape of the hair created using the **Move** brush

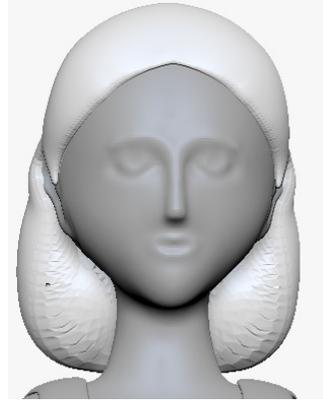


Figure 6-139 Depth added using the **Inflat** brush

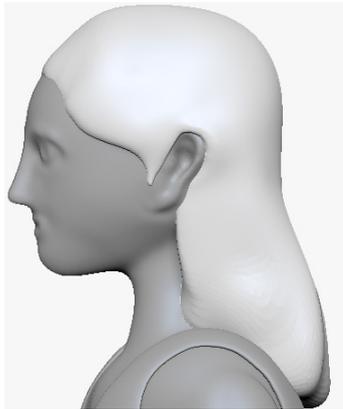


Figure 6-140 Shape of the hair modified using the **Move** brush

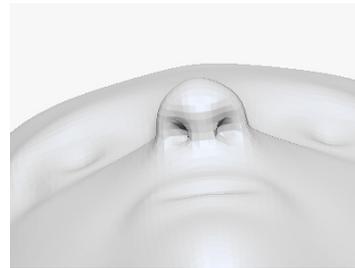


Figure 6-141 Nostrils created using the **Dam_Standard** brush



Figure 6-142 Lips created using the **Standard** brush



Figure 6-143 Shape of the lips refined using the **Pinch** brush



Figure 6-144 Depth added to the eyes using the **Standard** brush



Figure 6-145 Depth added to the hair using the **Standard** brush

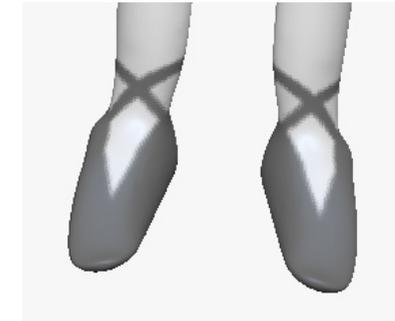


Figure 6-146 Mask created for the shoes

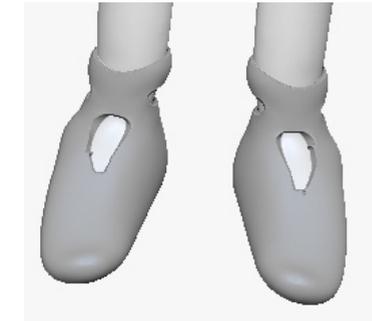


Figure 6-147 The mask extracted from the surface



Figure 6-148 Earrings created using the *InsertHRing* brush

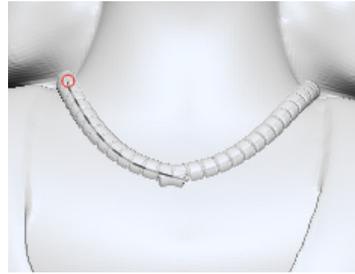


Figure 6-149 Necklace created using the *InsertCylndrExt* brush



Figure 6-150 The model of bangle

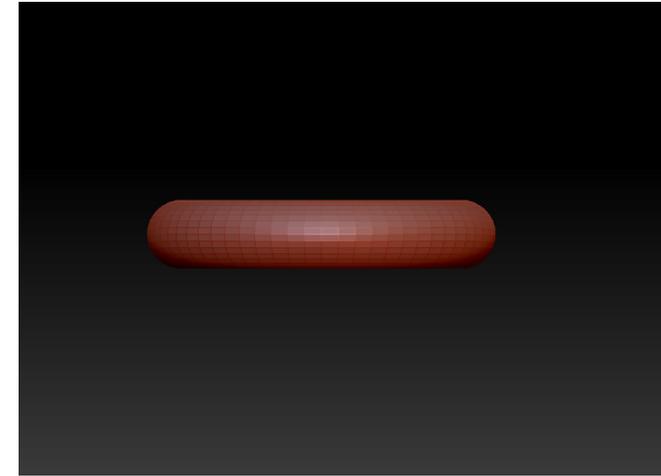


Figure 6-151 The *Ring3D* created in the canvas



Figure 6-152 Ring is snapped at right angle in the canvas

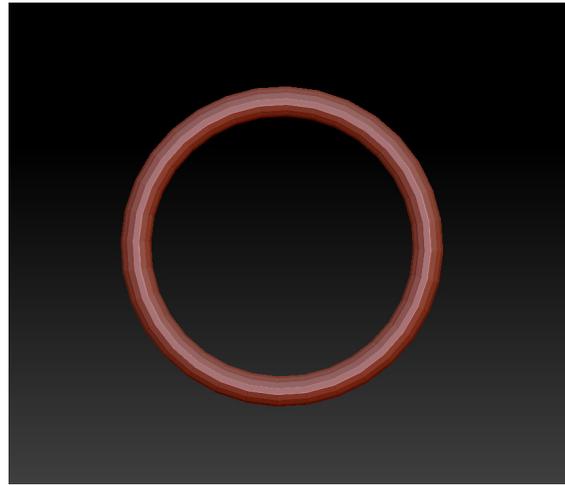


Figure 6-153 Shape of the ring changed



Figure 6-154 The **Insert NanoMesh** and **All Polygons** options chosen from the **ZMODELER** window

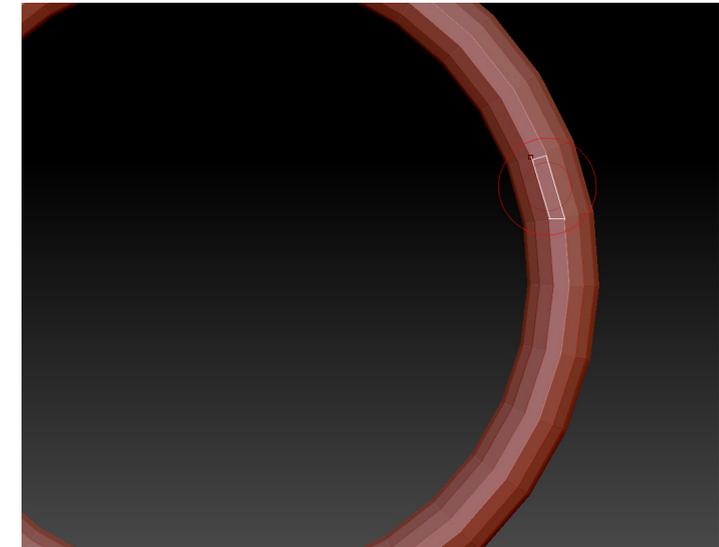


Figure 6-155 Hover the cursor on the polygon



Figure 6-156 The instances of **PolyMesh3D**

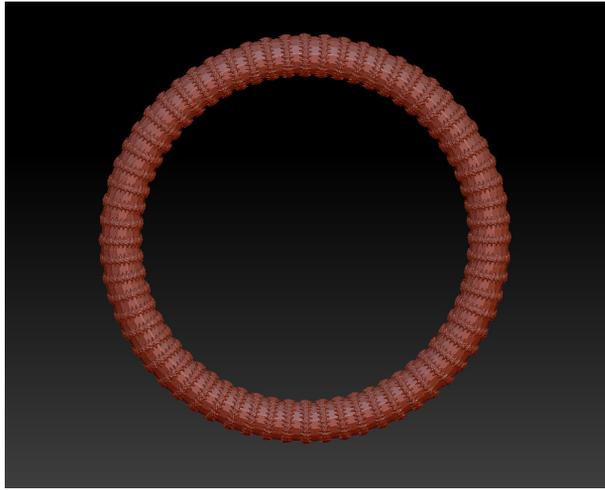


Figure 6-157 The bangle is created

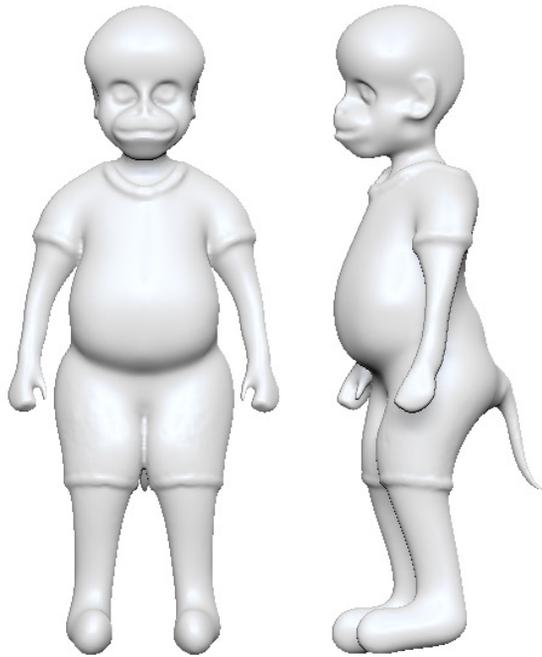


Figure 6-158 Model of the cartoon monkey

Chapter 7

ShadowBox

Learning Objectives

After completing this chapter, you will be able to:

- *Work with the ShadowBox*
- *Create different models using the ShadowBox*



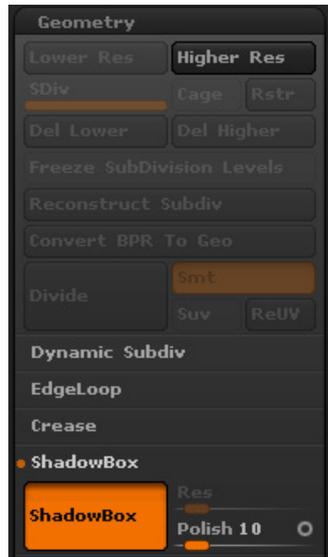


Figure 7-1 The ShadowBox button chosen in the Geometry subpalette



Figure 7-2 ShadowBox displayed in the canvas

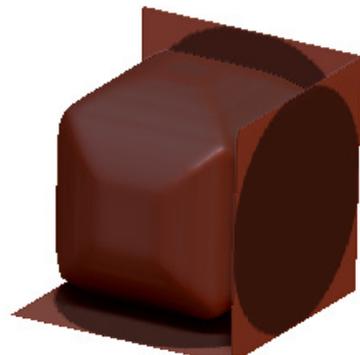


Figure 7-3 The cubic ShadowBox

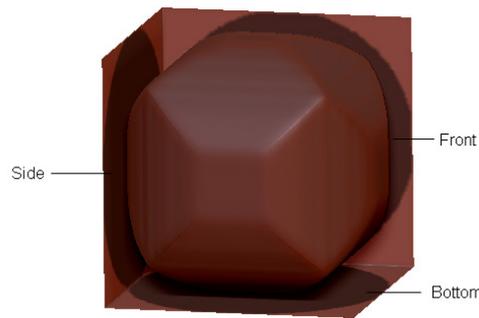


Figure 7-4 The front, side, and bottom projections of the sphere in the ShadowBox

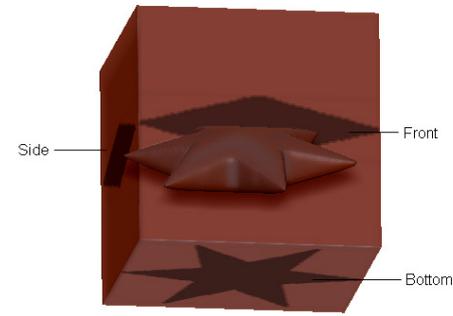


Figure 7-5 The front, side, and bottom projections of the PolyMesh3D_1 primitive

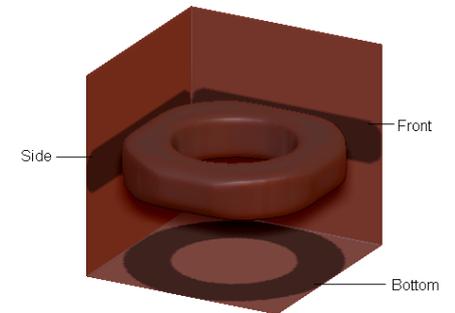


Figure 7-6 The front, side, and bottom projections of the Ring3D primitive

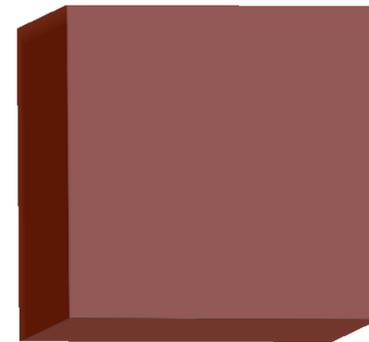


Figure 7-7 The projections and 3D object cleared from the ShadowBox

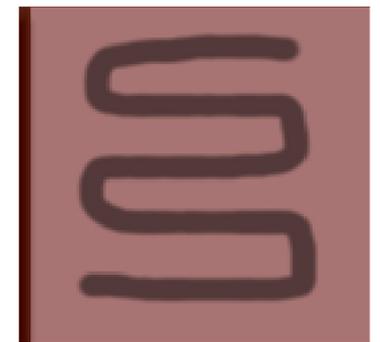


Figure 7-8 Projection created in the front plane using the MaskPen brush

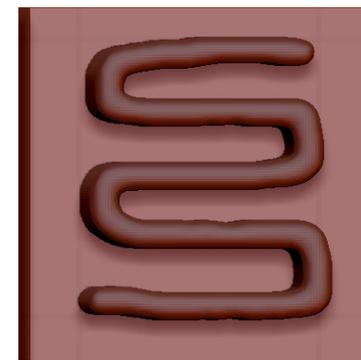


Figure 7-9 3D mesh created inside the ShadowBox

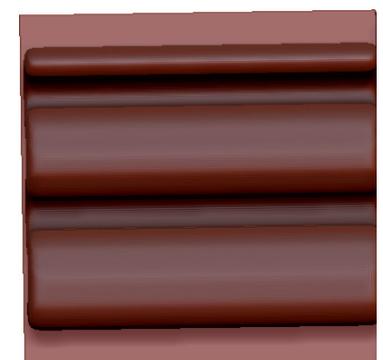


Figure 7-10 Side view of the 3D mesh



Figure 7-11 Top view of the 3D mesh

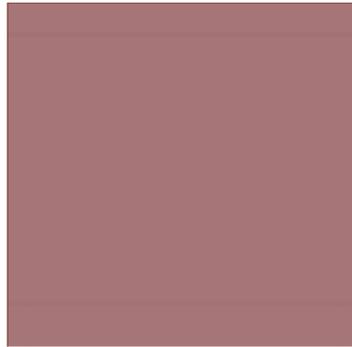


Figure 7-12 Side plane of the ShadowBox snapped to the canvas

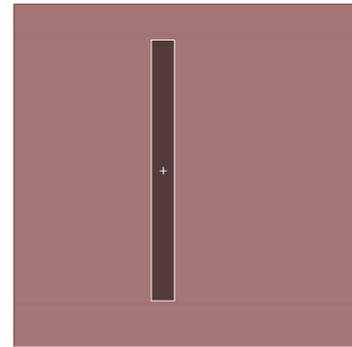


Figure 7-13 Rectangular stroke created in the side plane of the ShadowBox

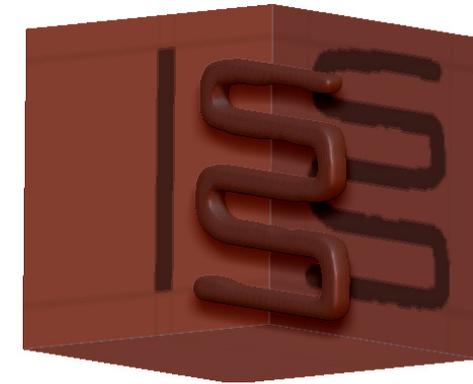


Figure 7-14 Depth of the 3D mesh decreased according to the mask

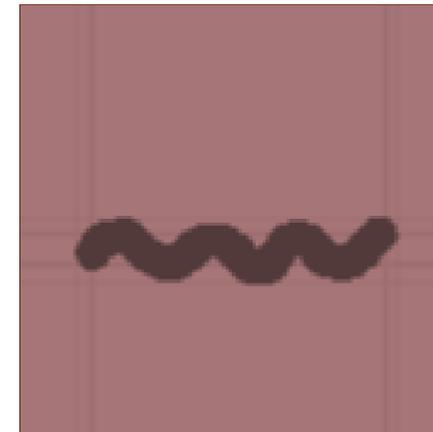


Figure 7-15 Mask created in the bottom plane of the ShadowBox

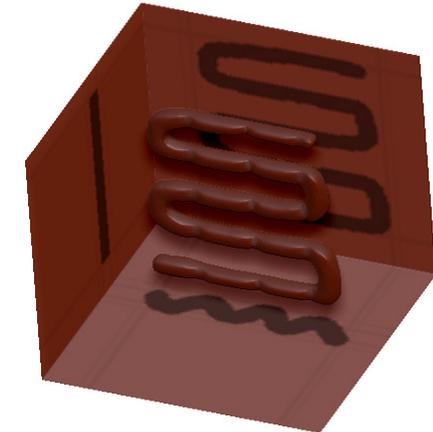


Figure 7-16 Top view of the 3D mesh modified according to the mask

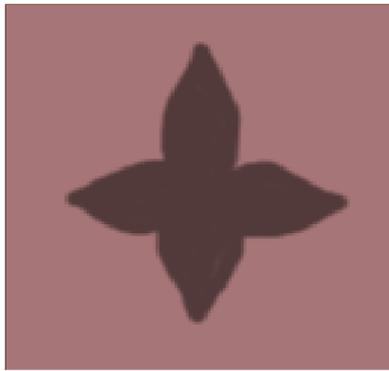


Figure 7-17 Mask created in the front plane of the ShadowBox

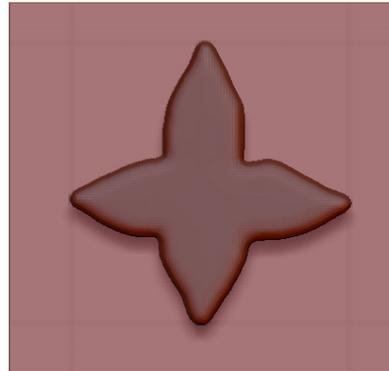


Figure 7-18 3D mesh created in the ShadowBox

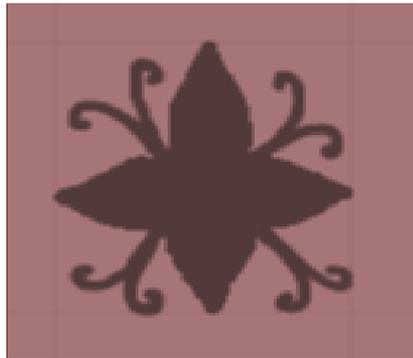


Figure 7-19 Shape of the mask modified in the back side of the front plane

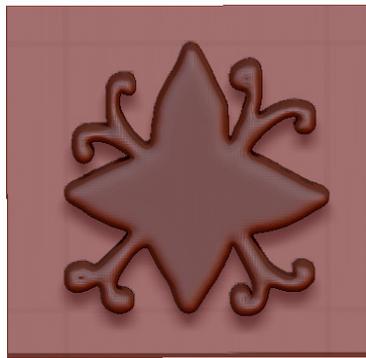


Figure 7-20 Shape of the 3D mesh modified

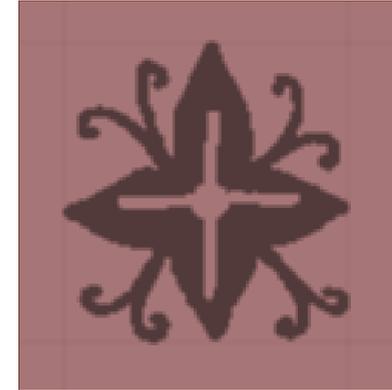


Figure 7-21 Shape of the mask modified in the back side of the front plane

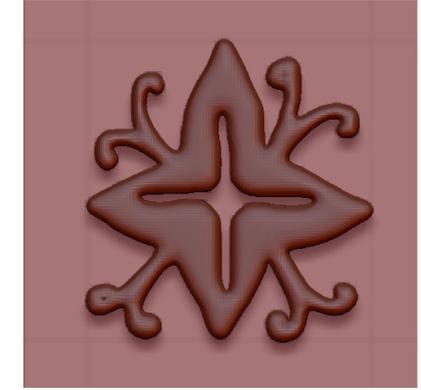


Figure 7-22 Shape of the 3D object modified

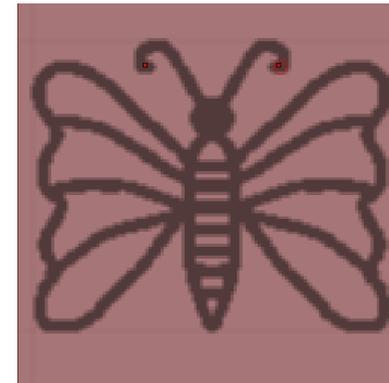


Figure 7-23 Mask created with the symmetry activated in X-axis



Figure 7-24 3D object created in the ShadowBox



Figure 7-25 The value of the **RadialCount** slider set to 20

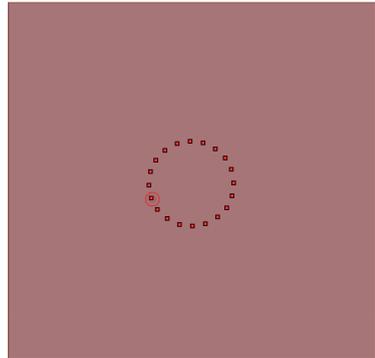


Figure 7-26 Radial symmetry activated in the Y-axis

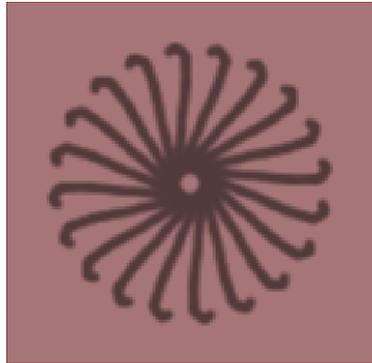


Figure 7-27 Mask created in the front plane of the ShadowBox

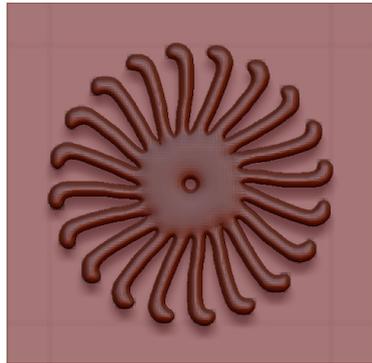


Figure 7-28 A circular 3D mesh created in the ShadowBox

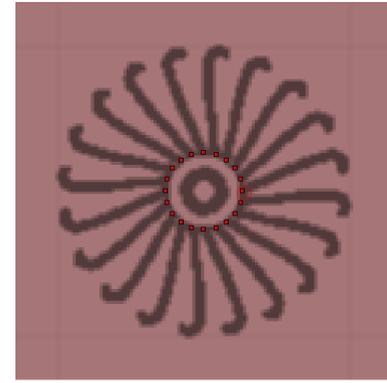


Figure 7-29 Shape of the mask modified in the back side of the front plane

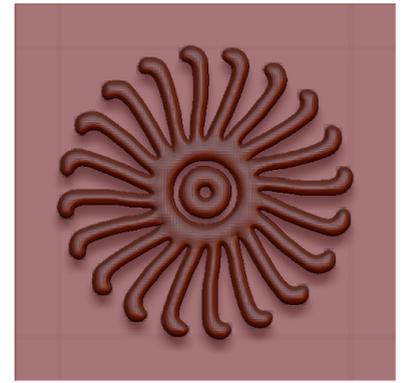


Figure 7-30 Shape of the 3D object modified

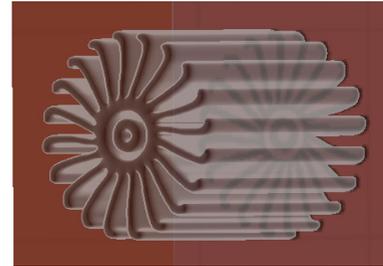


Figure 7-31 Ghost transparency activated

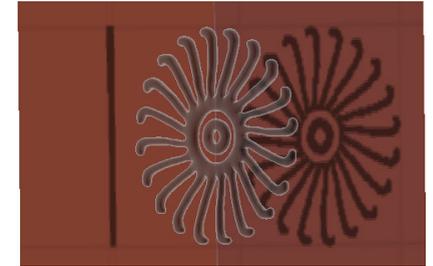


Figure 7-32 Depth of the object modified

6.

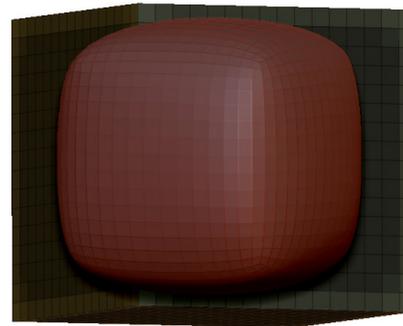


Figure 7-33 Polygon edges displayed on the ShadowBox

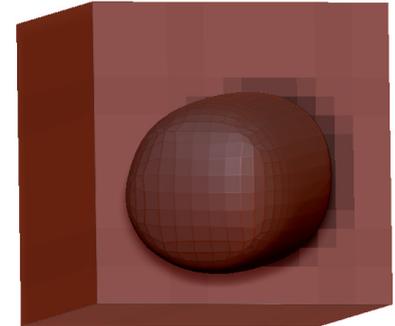


Figure 7-34 Low resolution 3D mesh created in the ShadowBox

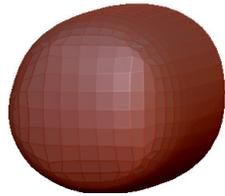


Figure 7-35 Low resolution 3D object displayed in the canvas

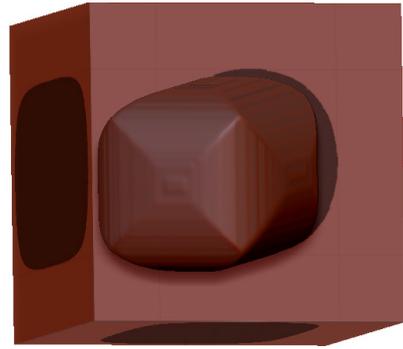


Figure 7-36 High resolution 3D mesh created in the ShadowBox

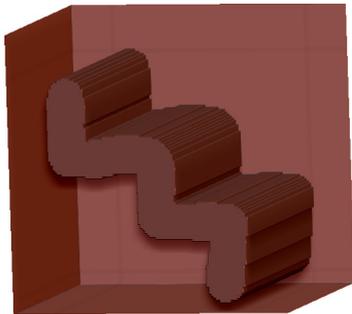


Figure 7-37 The 3D object created with the value of the Polish slider set to 0

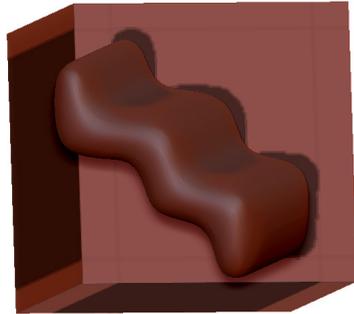


Figure 7-38 The 3D object created with the value of the Polish slider set to 100

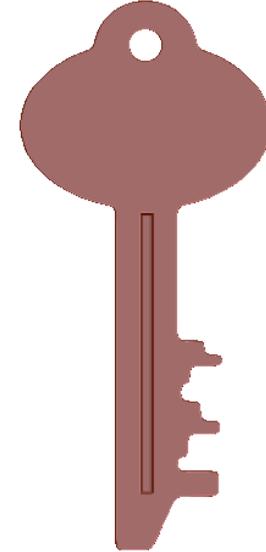


Figure 7-39 The model of a key



Figure 7-40 The value of the Res slider set to 400



Figure 7-41 The front view of the ShadowBox displayed in the canvas

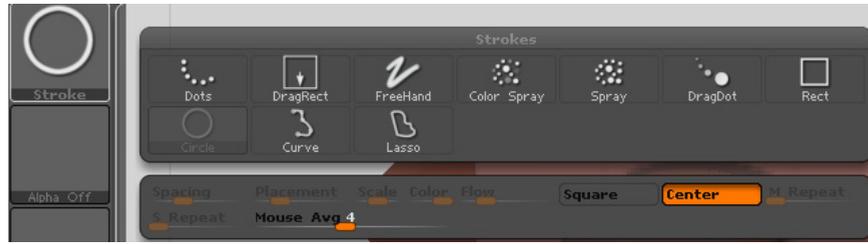


Figure 7-42 The Center button chosen from the flyout

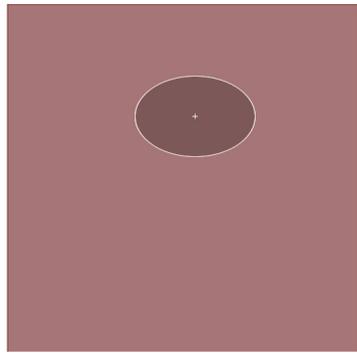


Figure 7-43 An elliptical stroke created in the backside of the front plane

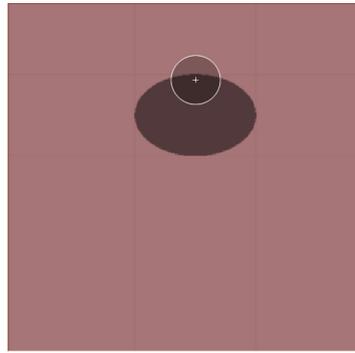


Figure 7-44 A circular stroke created above the elliptical mask

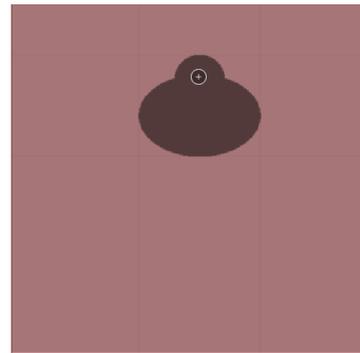


Figure 7-45 A circular stroke created on the mask with the ALT key pressed

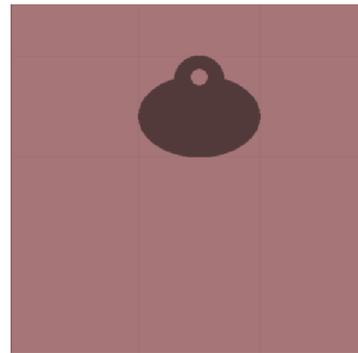


Figure 7-46 A hole created in the mask



Figure 7-47 A rectangular mask created using the MaskRect brush

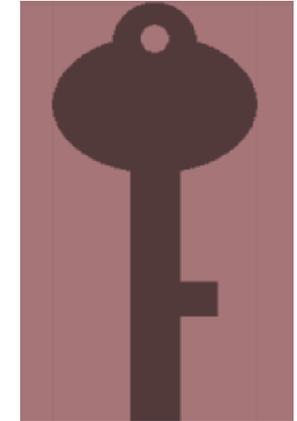


Figure 7-48 A rectangular mask created on the right side of the mask

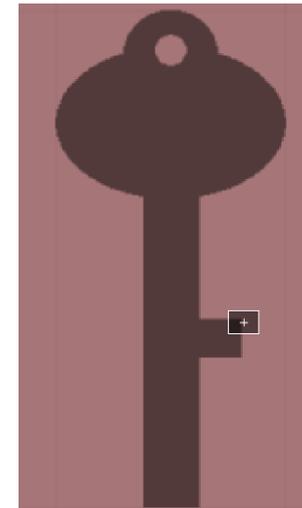


Figure 7-49 A rectangular stroke created on the mask with ALT key pressed

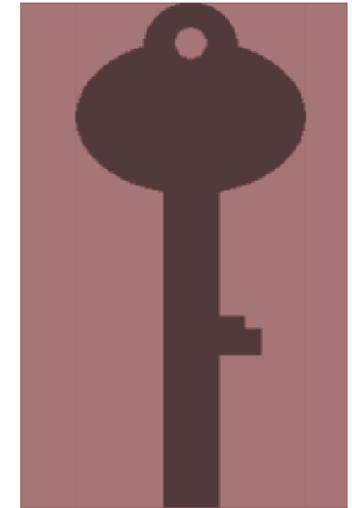


Figure 7-50 The shape of the mask modified

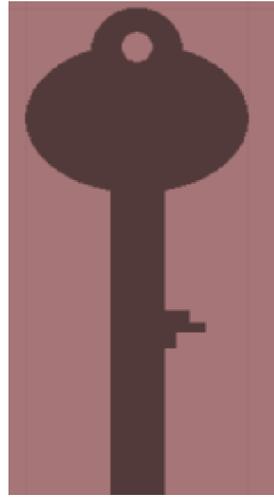


Figure 7-51 Shape of the mask modified using the **MaskRect** brush

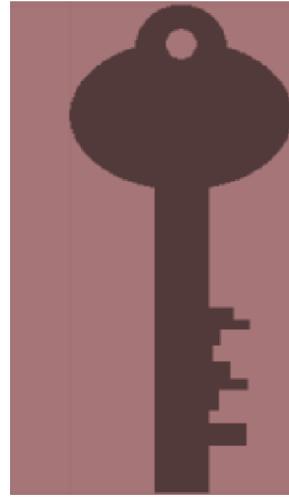


Figure 7-52 Bottom part of the key created using the **MaskRect** brush

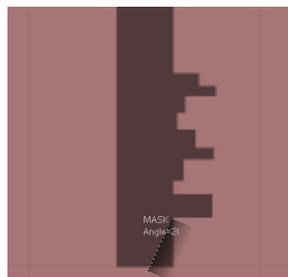


Figure 7-53 Curved stroke created using the **MaskCurve** brush

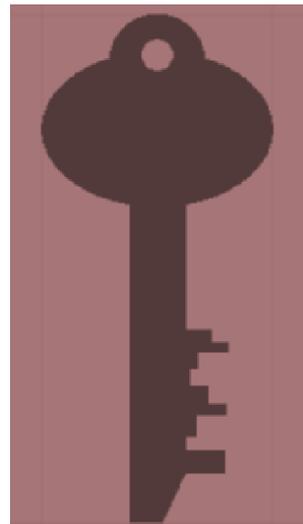


Figure 7-54 Shape of the mask modified



Figure 7-55 A key created in the ShadowBox

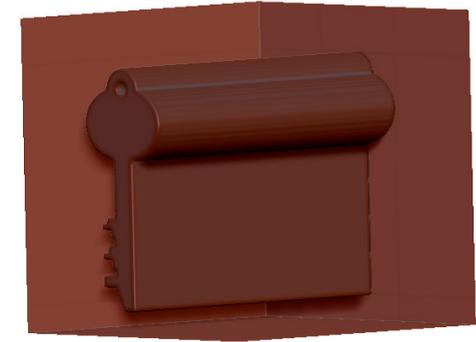


Figure 7-56 Side view of the key

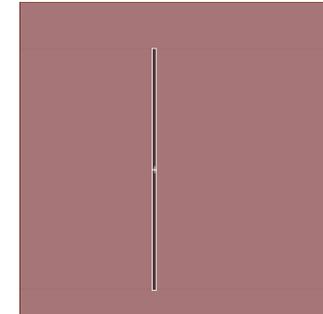


Figure 7-57 A rectangular stroke created in the side plane



Figure 7-58 The depth of the key decreased

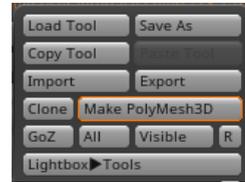


Figure 7-59 The **Make PolyMesh3D** button chosen

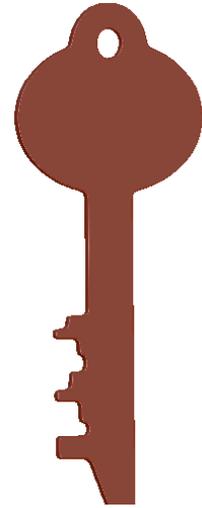


Figure 7-60 The key displayed in the canvas

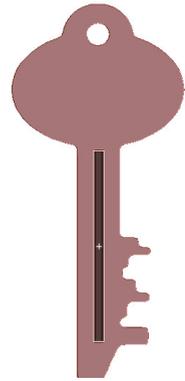


Figure 7-61 Rectangular stroke created using the **MaskRect** brush

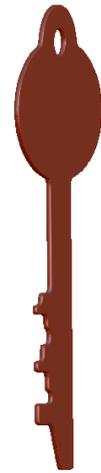


Figure 7-62 Mask removed from the back side of the key

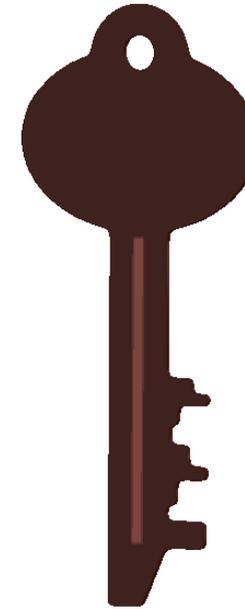


Figure 7-63 The mask inverted



Figure 7-64 The **Offset** slider

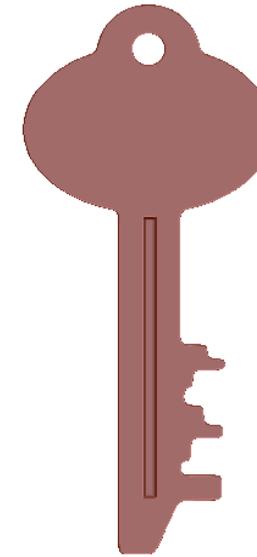


Figure 7-65 The final model of the key



Figure 7-66 The model of a guitar



Figure 7-67 The ShadowBox

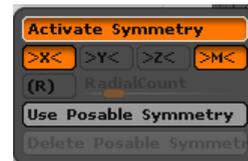


Figure 7-68 The symmetry activated in X-axis

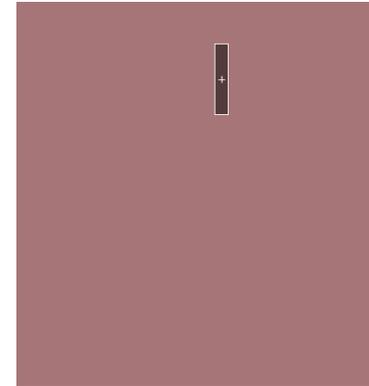


Figure 7-69 A rectangular stroke created in the front plane

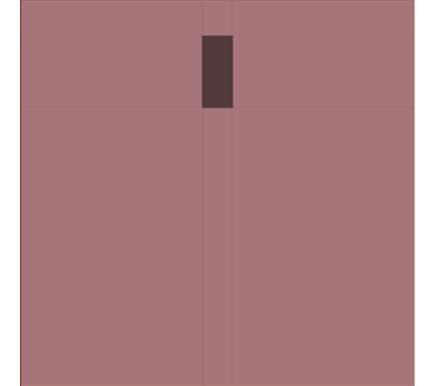


Figure 7-70 A mask created in the front plane

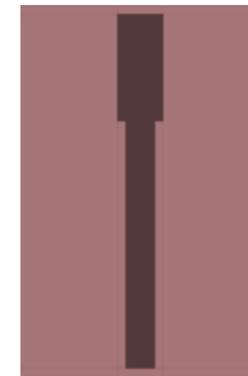


Figure 7-71 Another rectangular mask created in the front plane

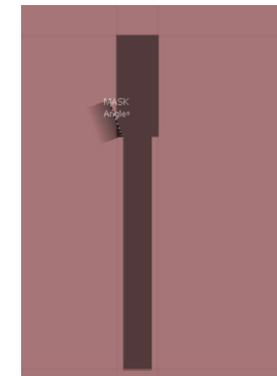


Figure 7-72 Curved stroke created using the MaskCurve brush

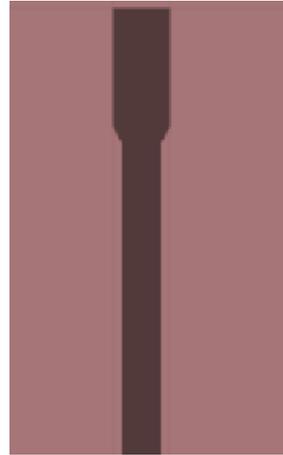


Figure 7-73 Shape of the mask modified

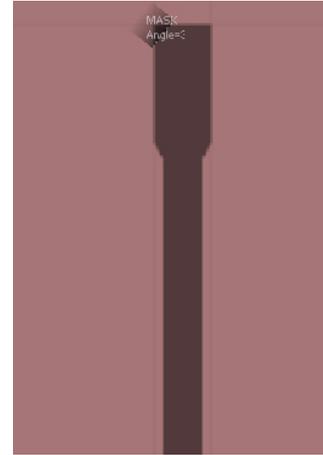


Figure 7-74 Curved stroke created using the **MaskCurve** brush

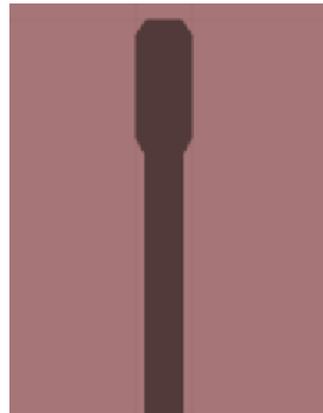


Figure 7-75 Shape of the mask modified

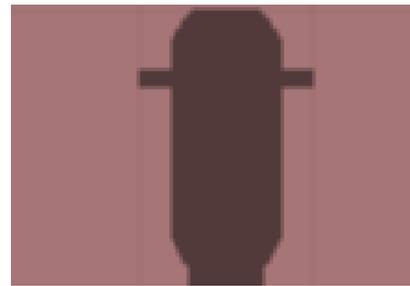


Figure 7-76 Rectangular mask created

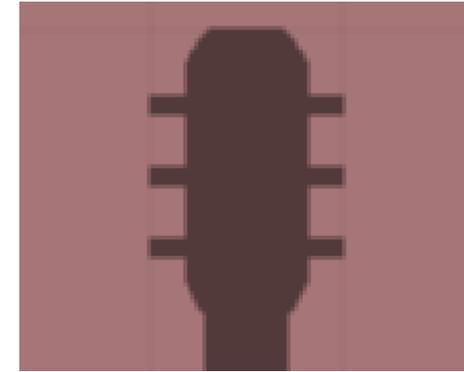


Figure 7-77 Two more rectangular masks created

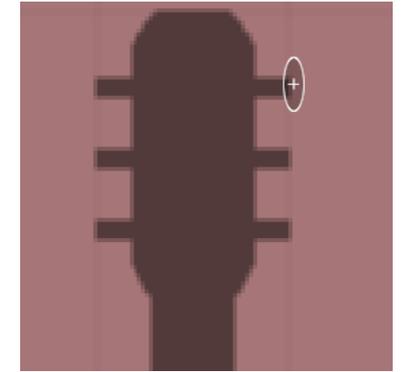


Figure 7-78 An elliptical stroke created using the **MaskCircle** brush

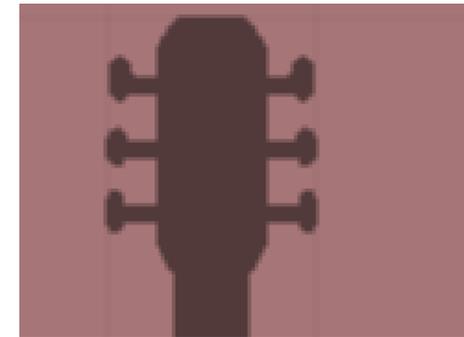


Figure 7-79 Two more elliptical masks created

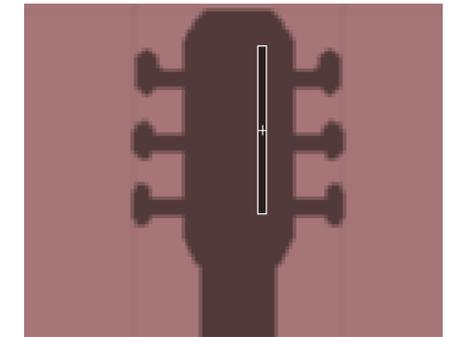


Figure 7-80 A rectangular stroke created with the **ALT** key pressed

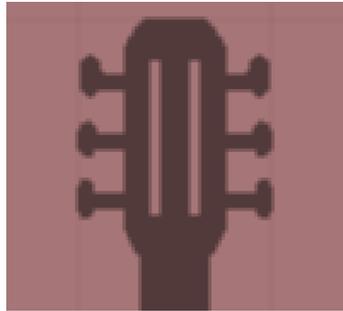


Figure 7-81 Shape of the mask modified

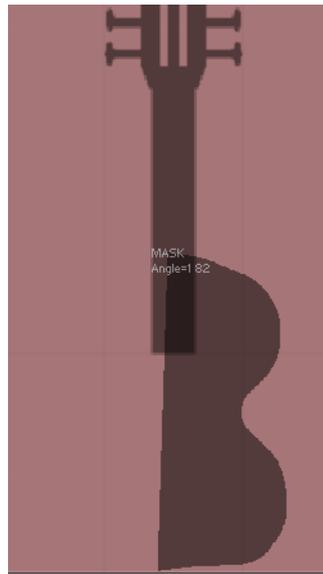


Figure 7-82 A mask created using the MaskLasso brush



Figure 7-83 A mask created for the guitar

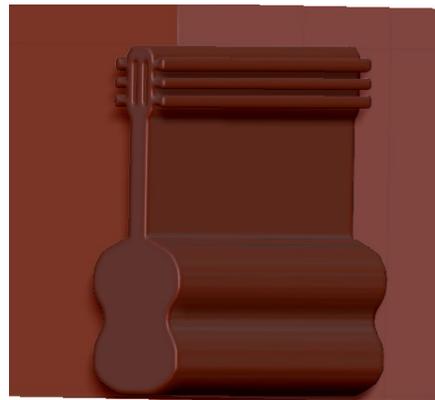


Figure 7-84 A 3D mesh for a guitar created in the ShadowBox

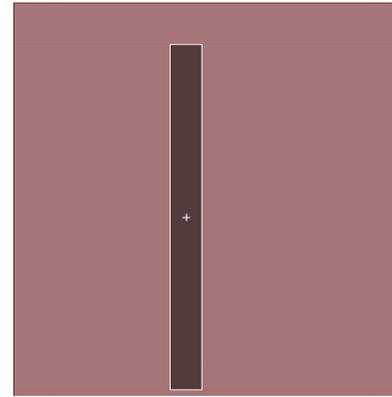


Figure 7-85 A rectangular stroke created in the side plane



Figure 7-86 Width of the guitar decreased

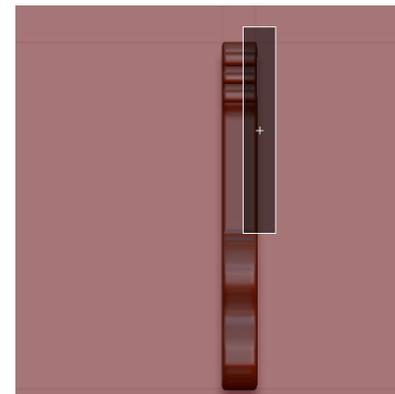


Figure 7-87 A rectangular stroke created with the ALT key pressed



Figure 7-88 The shape of the guitar modified



Figure 7-89 The Make PolyMesh3D button chosen



Figure 7-90 The guitar displayed in the canvas



Figure 7-91 A rectangular stroke created with the ALT key pressed



Figure 7-92 The smoothness in the model removed

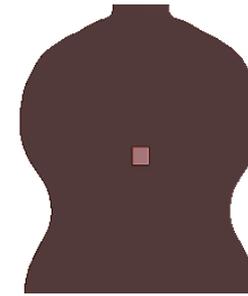


Figure 7-93 A cube inserted using the InsertCube brush

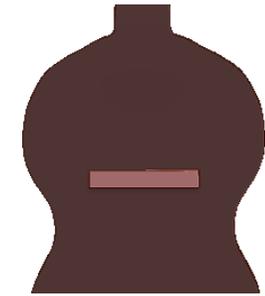


Figure 7-94 Width of the cube increased

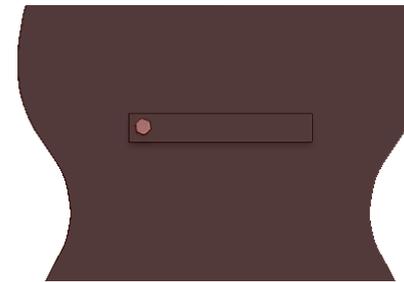


Figure 7-95 A cylinder inserted using the InsertCylinder brush

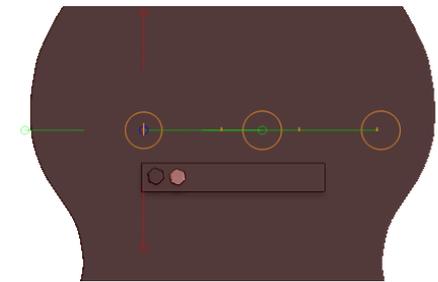


Figure 7-96 A duplicated copy of the cylinder created

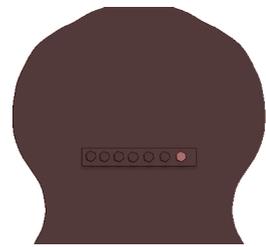


Figure 7-97 More copies of cylinder created

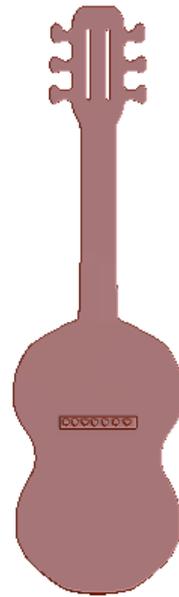


Figure 7-98 The mask removed from the guitar

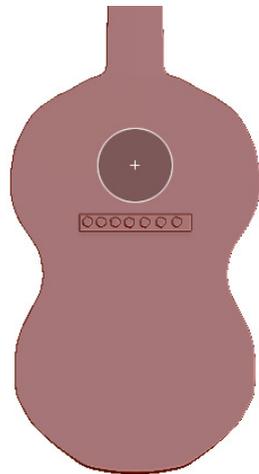


Figure 7-99 The circular mask created using the MaskCircle brush

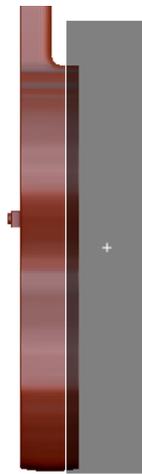


Figure 7-100 A rectangular stroke created with the ALT key pressed



Figure 7-101 The mask inverted



Figure 7-102 The HidePt button chosen in the Visibility subpalette

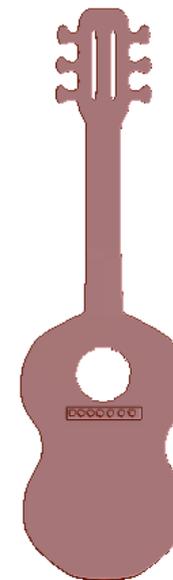


Figure 7-103 A hole created in the guitar



Figure 7-104 The Double button chosen



Figure 7-105 The hole in the backside of the guitar filled

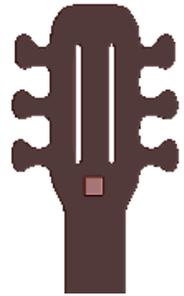


Figure 7-106 A cube inserted using the *InsertCube* brush

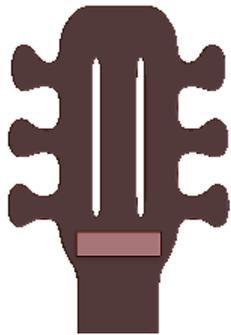


Figure 7-107 Width of the cube increased



Figure 7-108 The mask removed from the guitar



Figure 7-109 The *Append* button chosen

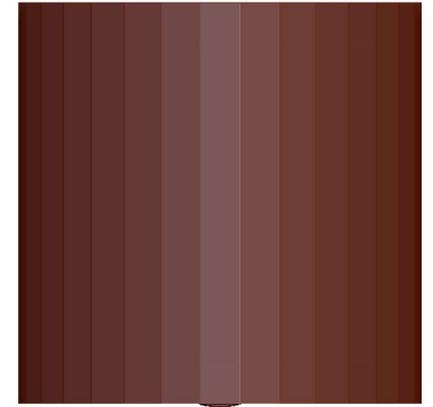


Figure 7-110 A cylinder created in the canvas

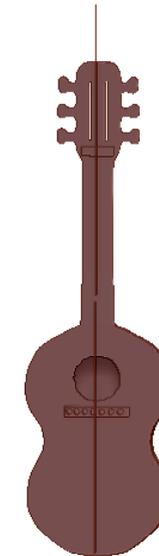


Figure 7-111 The size of the cylinder decreased along the X and Y axes



Figure 7-112 The height of the cylinder decreased



Figure 7-113 The side view of the guitar

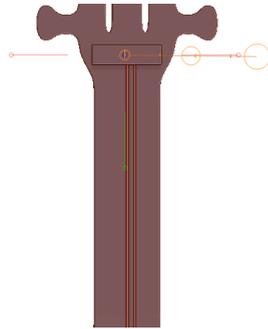


Figure 7-114 Duplicate copy of the cylinder created

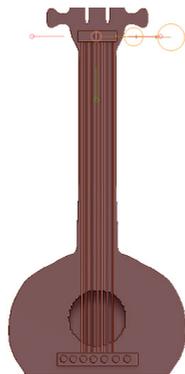


Figure 7-115 More copies of the cylinder created



Figure 7-116 Mask removed from the guitar



Figure 7-117 Shape of the guitar refined using the Move brush



Figure 7-118 A pattern created using the Alpha 29 alpha image



Figure 7-119 Model of a chair



Figure 7-120 Model of a hut

Chapter 8

Materials in ZBrush

Learning Objectives

After completing this chapter, you will be able to:

- *Understand the working of the MatCap materials*
- *Understand the working of the Standard materials*
- *Work with the Material palette*
- *Assign different materials to the objects*





Figure 8-1 The flyout displayed on choosing the Current Material button



Figure 8-2 The Chrome BrightBlue Tint material applied to the sphere

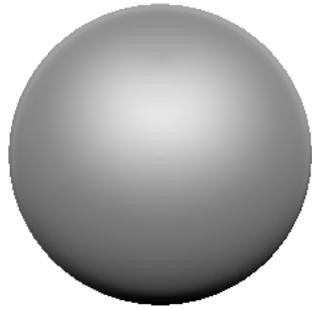


Figure 8-3 The MatCap Pearl Cavity material applied to the sphere

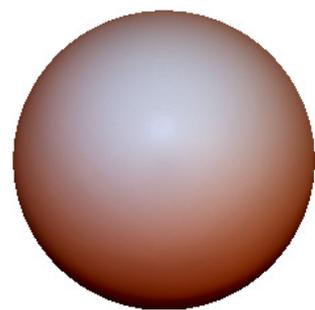


Figure 8-4 The MatCap Skin06 material applied to the sphere



Figure 8-5 The ReflectOrange material applied to the sphere



Figure 8-6 The FlatSketch01 material applied to the sphere



Figure 8-7 The SketchToyPlastic material applied to the sphere



Figure 8-8 The preview of the object with a material



Figure 8-9 The GelShaderA material applied to the sphere



Figure 8-10 The GradientMap2 material applied to the sphere

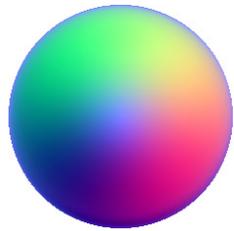


Figure 8-11 The NormalRGBMat material applied to the sphere



Figure 8-12 The ReflectedMap material applied to the sphere



Figure 8-13 The Material palette

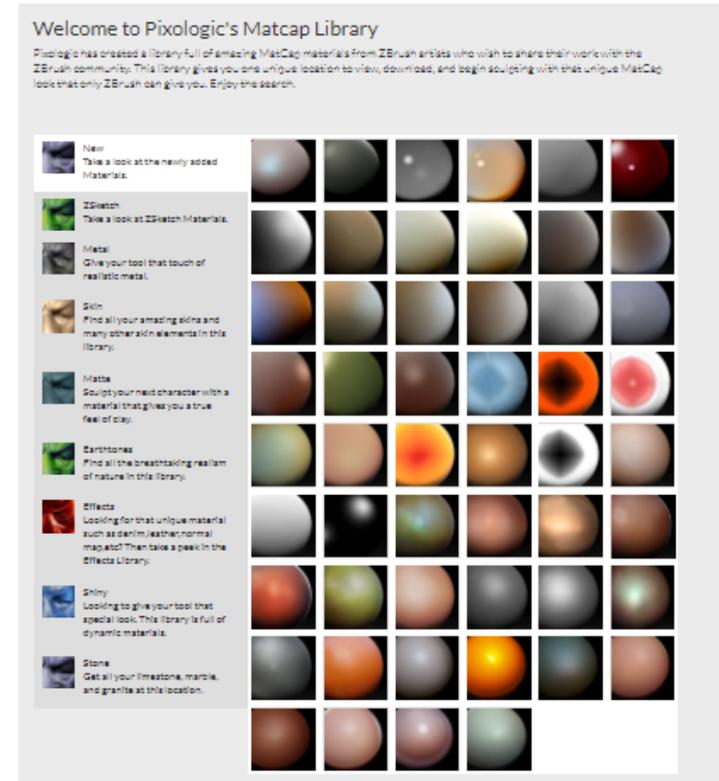


Figure 8-14 The MatCap library

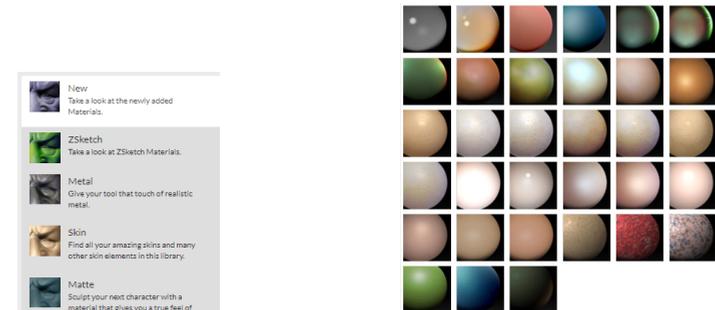


Figure 8-15 Different skin categories Figure 8-16 The different skin materials



Figure 8-17 The Download Now link

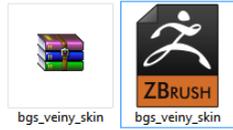


Figure 8-18 The material file extracted from the zip file

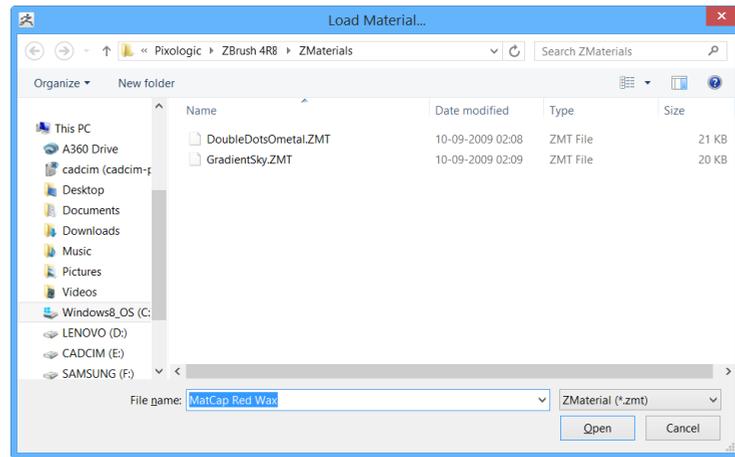


Figure 8-19 The Load Material dialog box



Figure 8-20 The default material replaced by the downloaded material

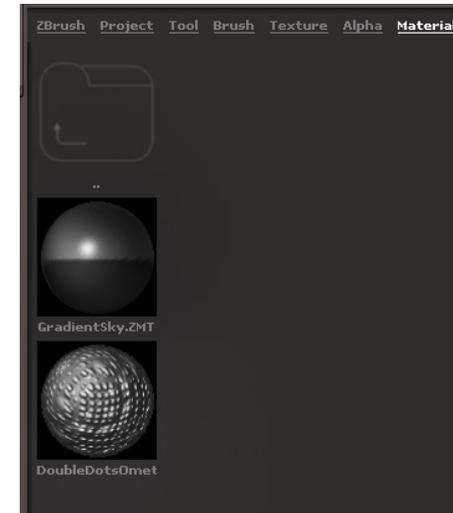


Figure 8-21 The materials in the LightBox browser



Figure 8-22 The Item Info slider

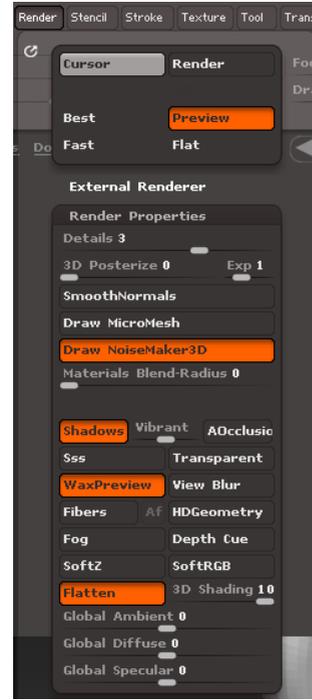


Figure 8-23 The WaxPreview button chosen

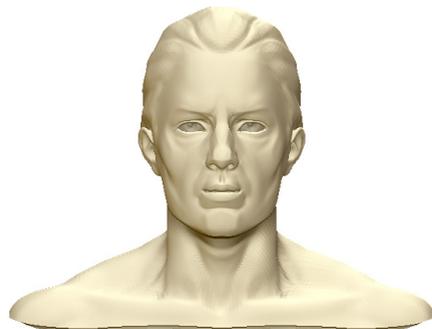


Figure 8-24 The material applied to the model

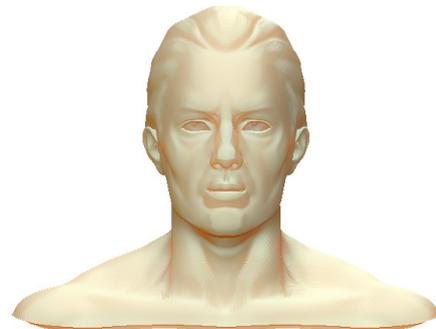


Figure 8-25 Wax effect at Strength value 100

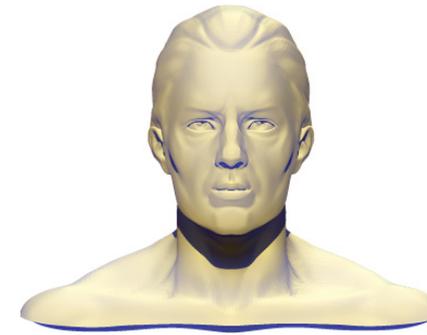


Figure 8-26 Blue tint at Temperature value -100

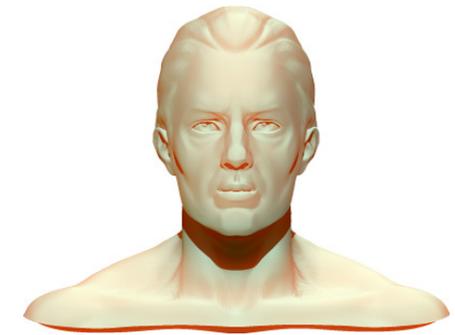


Figure 8-27 Red tint at Temperature value 100



Figure 8-28 Partial view of the Modifiers subpalette for MatCap materials



Figure 8-29 Partial view of the Modifiers subpalette for Standard materials

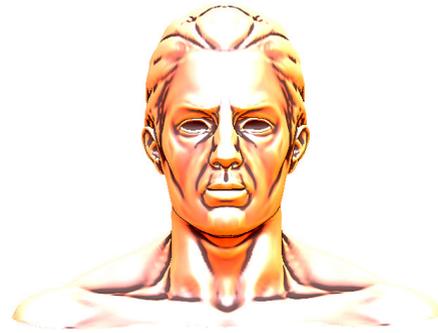


Figure 8-30 Brightness displayed in the raised surfaces of an object



Figure 8-31 Brightness displayed in the cavities of an object

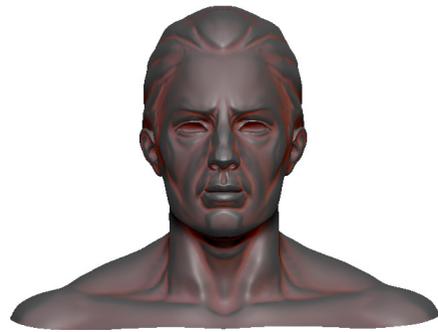


Figure 8-32 Color of the raised surfaces converted to gray



Figure 8-33 Color of the cavities converted to gray

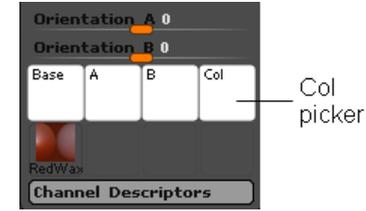


Figure 8-34 The Col picker in the Modifiers subpalette

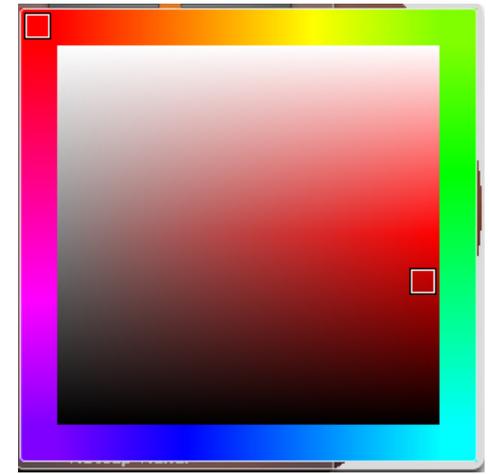


Figure 8-35 Choosing a color from the color swatch



Figure 8-36 The surface facing the canvas filled with color

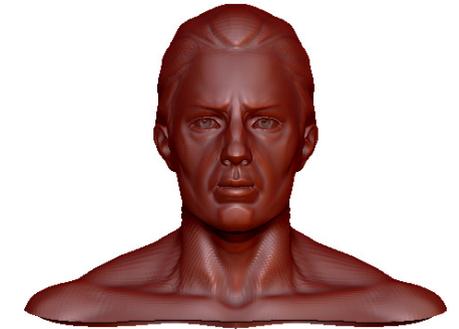


Figure 8-37 The surface facing away from the canvas filled with color

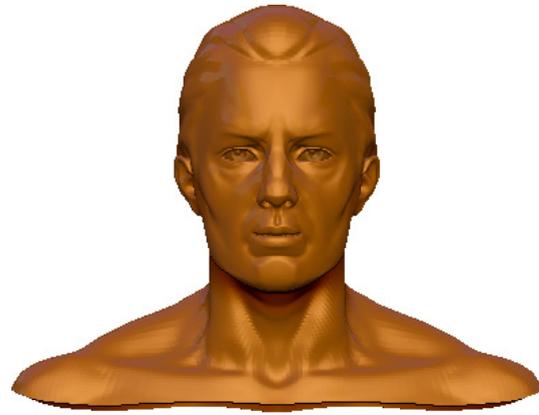


Figure 8-38 The ReflectYellow material assigned to the model

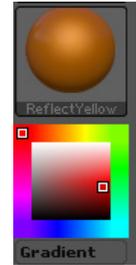


Figure 8-39 Red color chosen from the color picker



Figure 8-40 Red color applied to the model

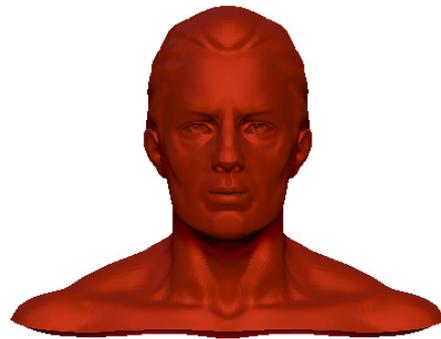


Figure 8-41 Red and yellow colors blended together

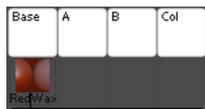


Figure 8-42 The Material Texture button



Figure 8-43 The flyout displayed on choosing the Material Texture button



Figure 8-44 The texture applied to the model



Figure 8-45 The texture blurred using the Blur slider



Figure 8-46 Yellow color applied to the raised surfaces of the model

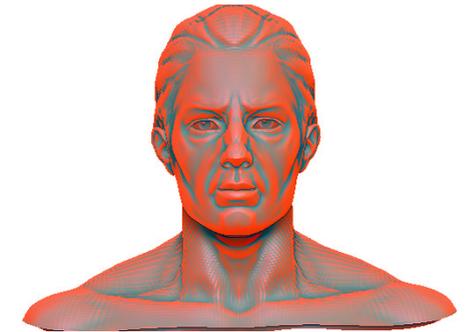


Figure 8-47 Blue color applied to the cavities of the model

1.



Figure 8-48 The color of the model desaturated

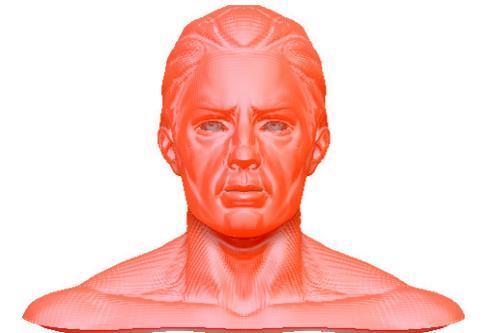


Figure 8-49 The intensity of the color increased

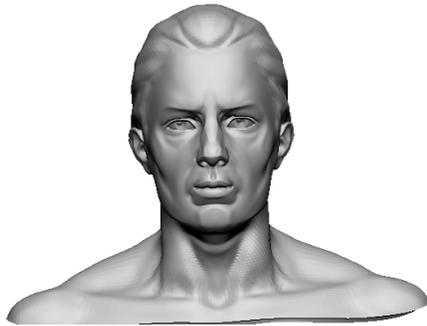


Figure 8-50 The BasicMaterial material applied to the model

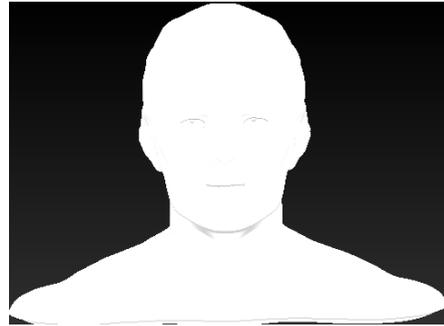


Figure 8-51 Ambient light applied to the material



Figure 8-52 Disappearance of red color from the model

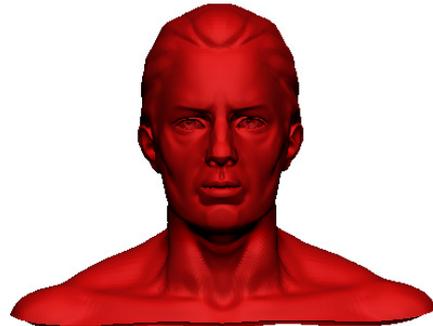


Figure 8-53 Intensity of the red color increased

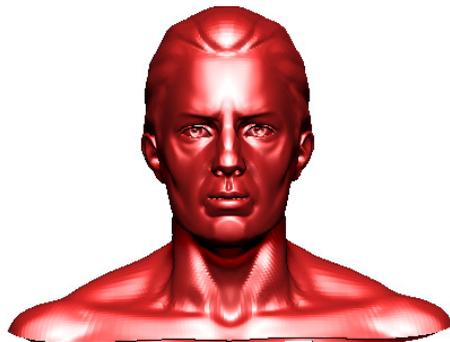


Figure 8-54 Specularity applied to the material



Figure 8-55 The GradientMap2 material applied to the plane



Figure 8-56 A new layer created in the Layer palette

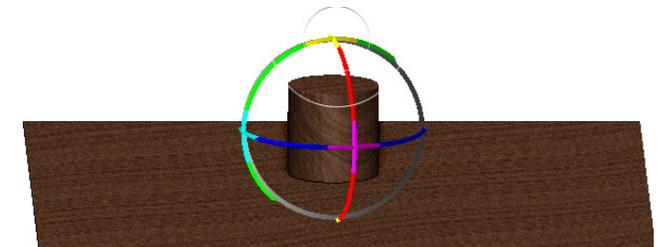


Figure 8-57 The cylinder moved up using the gyro



Figure 8-58 The M button chosen in the top shelf

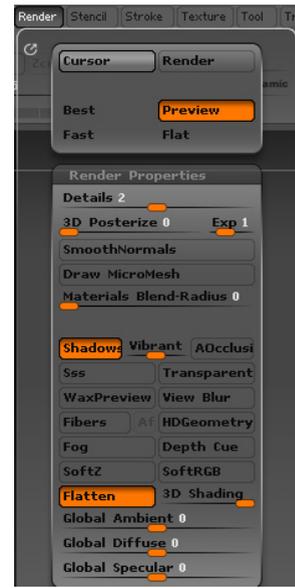


Figure 8-59 The Flatten button chosen in the Render palette

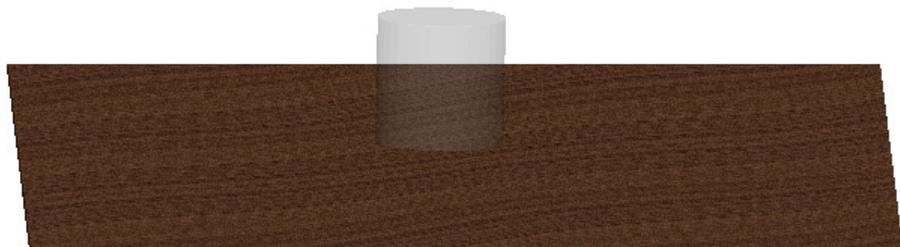


Figure 8-60 Transparency displayed in the cylinder



Figure 8-61 The Material Texture 1 button chosen

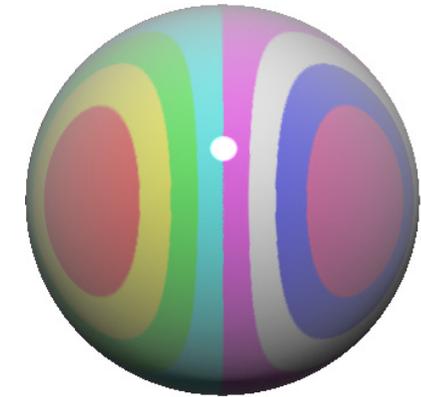


Figure 8-62 The texture reflected from the surface of the model

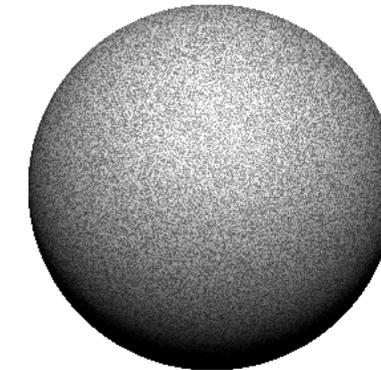


Figure 8-63 The value of the Noise slider set to 0.4



Figure 8-64 The value of the Noise Radius slider set to 75



Figure 8-65 Bumpiness displayed in the noise applied to the material

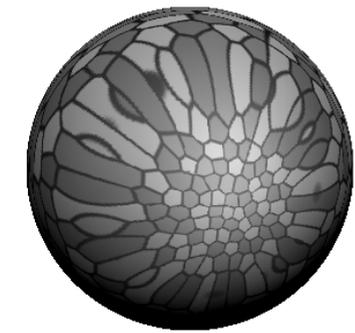


Figure 8-66 Bumpiness displayed in the texture

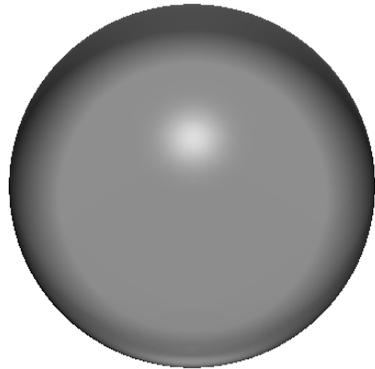


Figure 8-67 Gel shading applied to the sphere



Figure 8-68 The Render palette



Figure 8-69 The environmental reflection displayed on rendering



Figure 8-70 The FillObject button in the Color palette



Figure 8-71 Different materials painted on the surface of the sphere

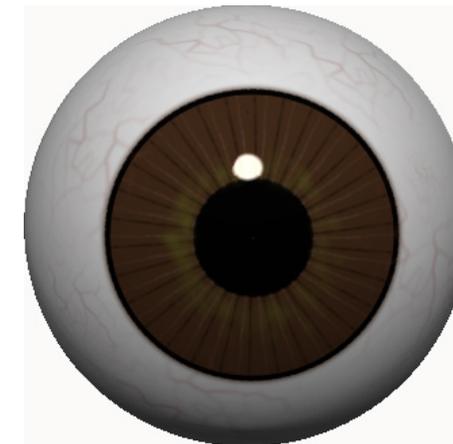


Figure 8-72 The model of an eyeball

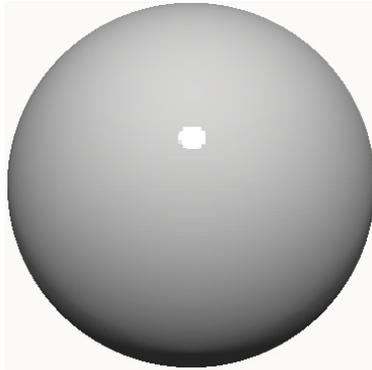


Figure 8-73 The white color applied to the sphere



Figure 8-74 The value of the RadialCount slider set to 82



Figure 8-75 The FillObject button chosen in the Color palette

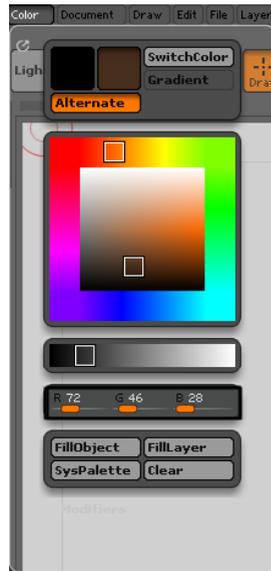


Figure 8-76 Setting the values of R, G, and B sliders

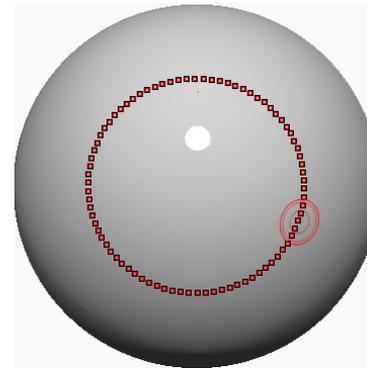


Figure 8-77 The cursor hovered on the surface of the sphere

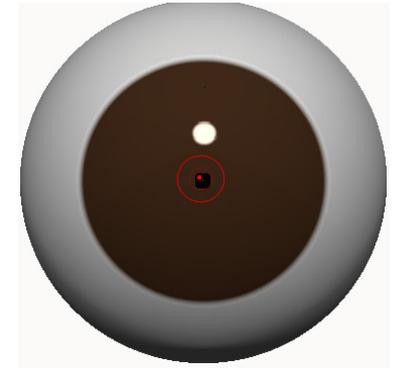


Figure 8-78 The iris created for the eyeball

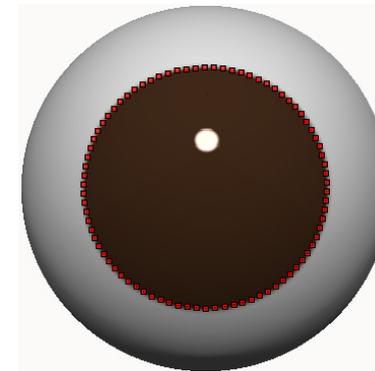


Figure 8-79 The cursor hovered on the circumference of the iris

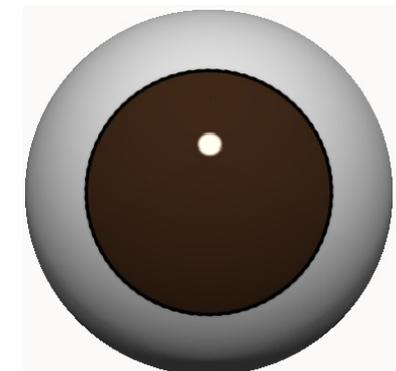


Figure 8-80 An outline created for the iris

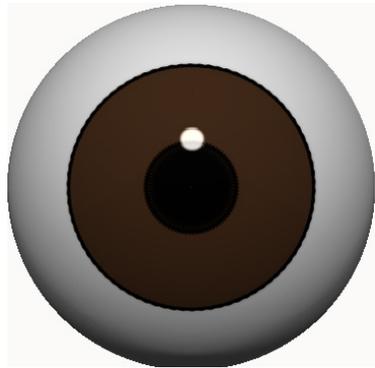


Figure 8-81 Pupil created for the eyeball



Figure 8-82 The value of the *Rgb Intensity* slider set to 20

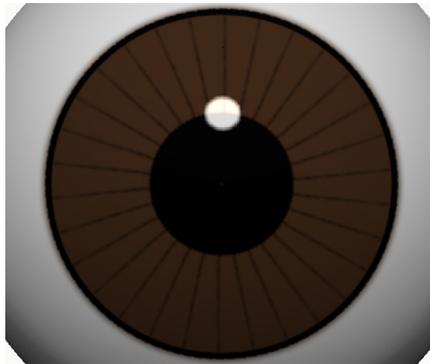


Figure 8-83 Thin lines created on the surface of the iris

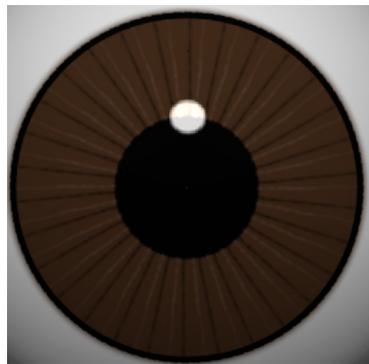


Figure 8-84 More lines created on the surface of the iris

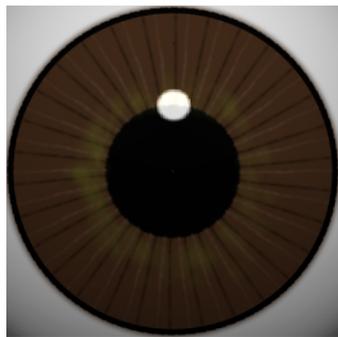


Figure 8-85 Detail added to the iris

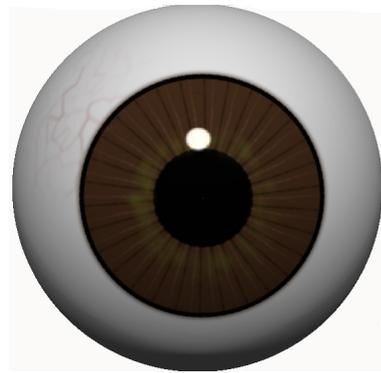


Figure 8-86 A pattern created on the white area of the eyeball

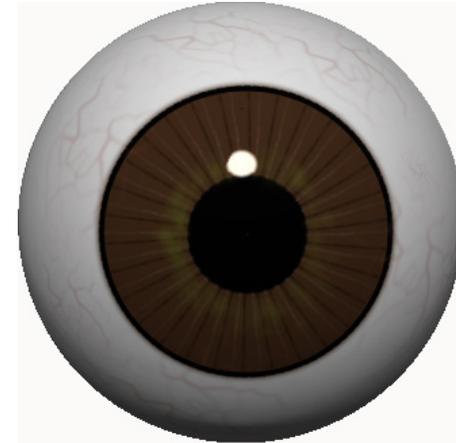


Figure 8-87 More patterns created on the white area of the eyeball



Figure 8-88 The model of the ring



Figure 8-89 The value of the SRadius slider set to 14



Figure 8-90 The shape of the ring changed



Figure 8-91 A rectangular stroke created on the surface of the ring



Figure 8-92 The mask removed from the ring



Figure 8-93 The gold material applied to the ring



Figure 8-94 The value of the Intensity A slider set to 5

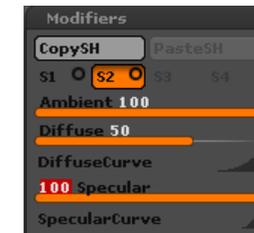


Figure 8-95 The values of the Ambient and Specular sliders set to 100

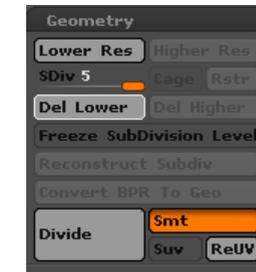


Figure 8-96 The Del Lower button chosen in the Geometry subpalette



Figure 8-97 Diamonds created in the recessed area of the ring



Figure 8-98 Ring snapped horizontally with the canvas

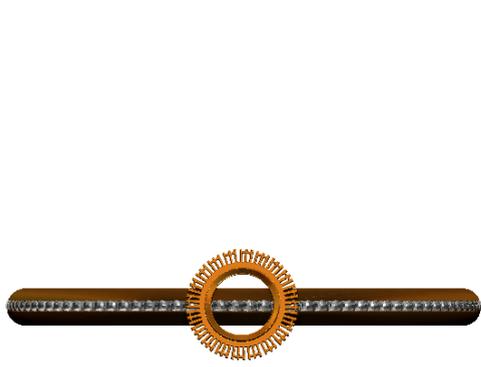


Figure 8-99 A golden mesh inserted in the ring

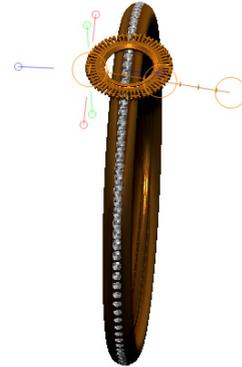


Figure 8-100 The golden mesh adjusted using the action line



Figure 8-101 The size of the golden mesh increased along the Z-axis



Figure 8-102 The red stone fitted inside the golden mesh



Figure 8-103 The ring placed inside the ring box



Figure 8-104 The final output of the scene

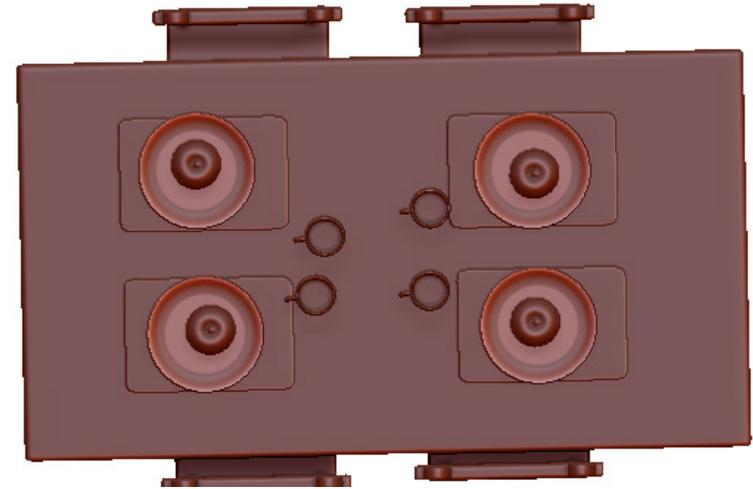


Figure 8-105 The scene displayed in the canvas



Figure 8-106 The view of the canvas rotated

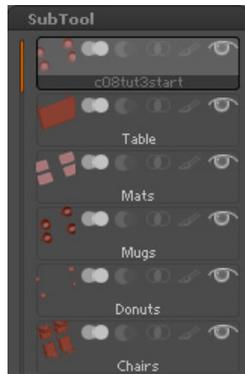


Figure 8-107 The first subtool chosen from the list

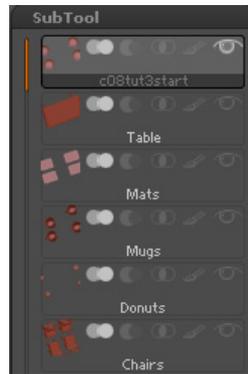


Figure 8-108 Visibility of other subtools turned off



Figure 8-109 The plates displayed in the canvas



Figure 8-110 The FillObject button chosen



Figure 8-111 The values of the R, G, and B sliders set



Figure 8-112 The material applied to the plates



Figure 8-113 The GradientMap2 material applied to the table



Figure 8-114 The values of the Diffuse and Specular sliders set

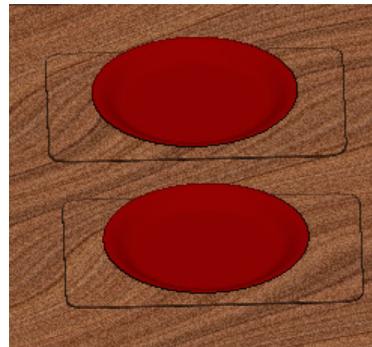


Figure 8-115 The GradientMap2 material applied to the mats



Figure 8-116 The SoftPlastic material applied to the mats



Figure 8-117 The Metallic01 material applied to the mugs

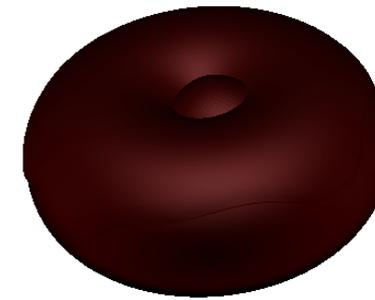


Figure 8-118 The Metallic01 material applied to the donut

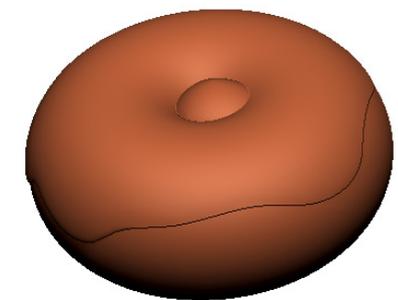


Figure 8-119 The BasicMaterial material applied to the donut



Figure 8-120 The value of the Noise slider set to 0.1152



Figure 8-121 A chocolate layer created on the extruded part of the donut



Figure 8-122 The chocolate layer created on all the donuts

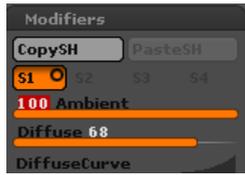


Figure 8-123 The value of the Ambient slider set to 100

Figure 8-124 The JellyBean material painted on the middle part of the donut



Figure 8-125 The visibility of all the subtools turned on



Figure 8-126 The GradientMap2 material applied to the chairs



Figure 8-127 Model of a cake



Figure 8-128 Model of a hut



Figure 8-129 The final output

Chapter 9

Texturing in ZBrush

Learning Objectives

After completing this chapter, you will be able to:

- *Work with the Texture palette*
- *Work with the Spotlight tool*
- *Apply textures on different objects*





Figure 9-1 The flyout displayed on choosing the Current Texture button



Figure 9-2 The textures displayed in the Texture tab of the LightBox browser



Figure 9-3 The textures in the Texture Library tab

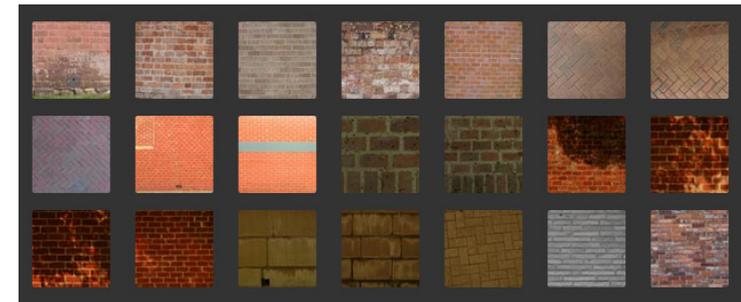


Figure 9-4 The different brick texture displayed

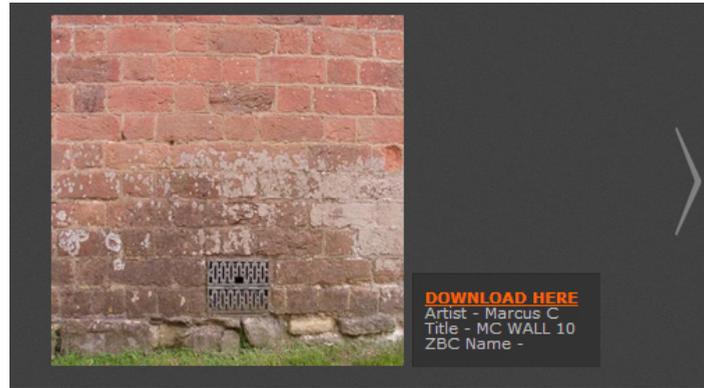


Figure 9-5 The preview of the brick texture



Figure 9-6 The canvas filled with the texture and the material

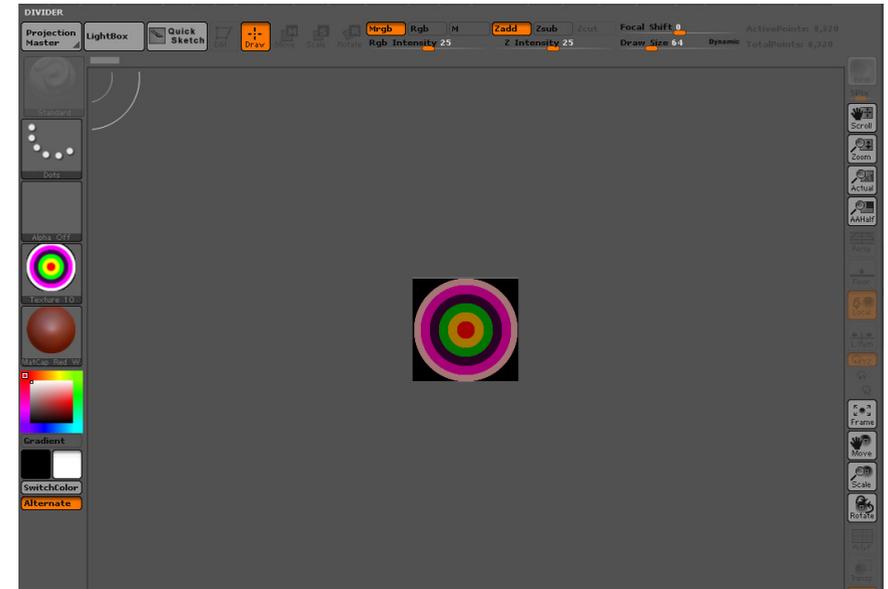


Figure 9-7 The document cropped and filled with Texture 10



Figure 9-8 A new texture image with the name ZGrab01 displayed in the flyout



Figure 9-9 The Texture palette



Figure 9-11 The flyout displayed on choosing the Current Texture button



Figure 9-12 The texture image displayed



Figure 9-13 The texture image flipped horizontally



Figure 9-10 The texture images displayed in the LightBox browser



Figure 9-14 The texture image displayed



Figure 9-15 The colors in the texture image inverted



Figure 9-16 The Image Plane subpalette

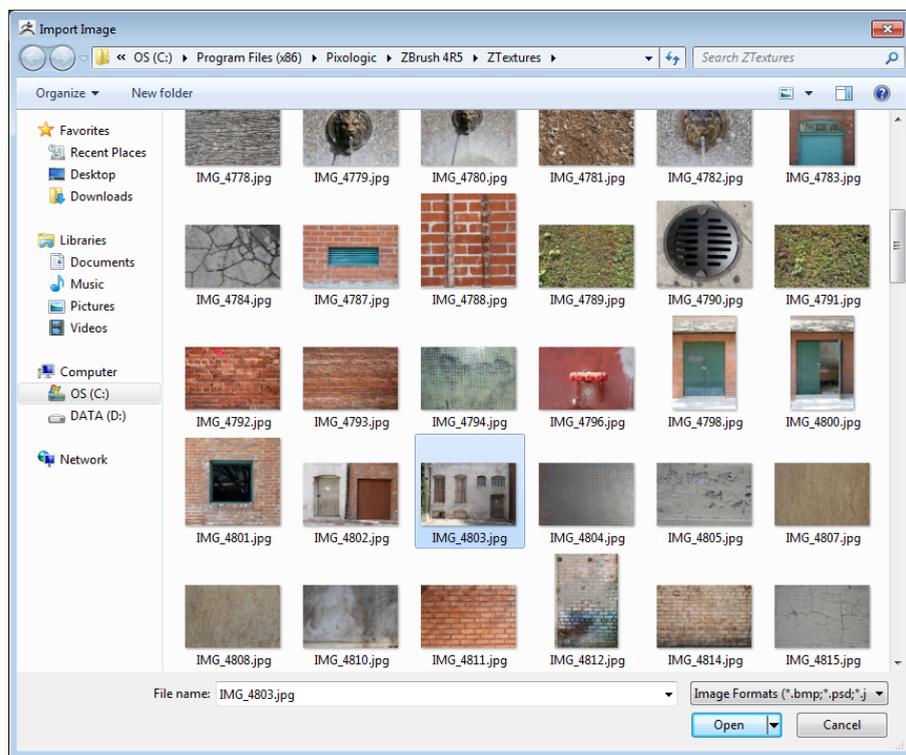


Figure 9-17 The Import Image dialog box

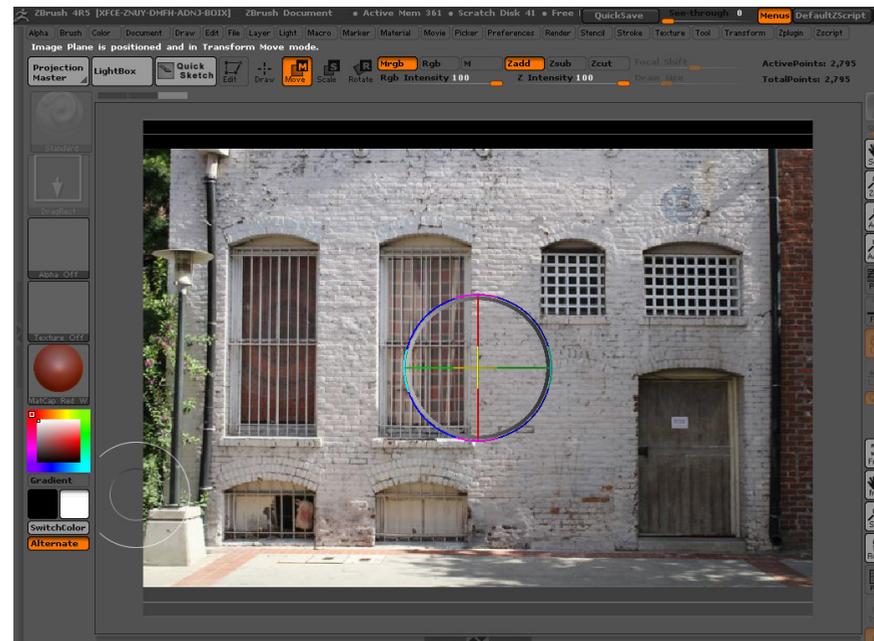


Figure 9-18 The reference image displayed in the canvas

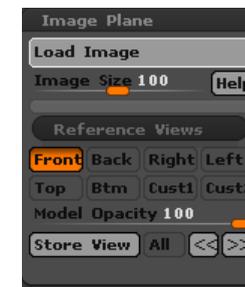


Figure 9-19 The Load Image button chosen

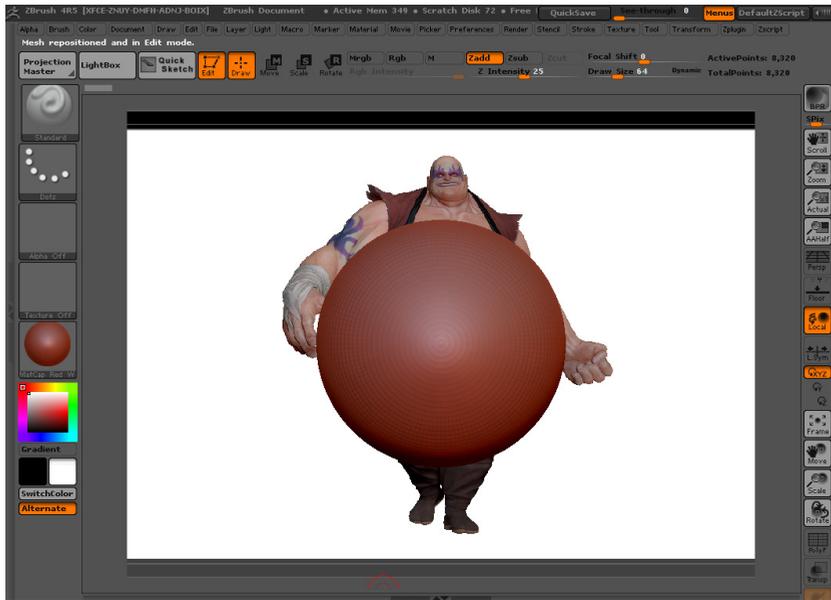


Figure 9-20 The front view of the reference image displayed behind the sphere

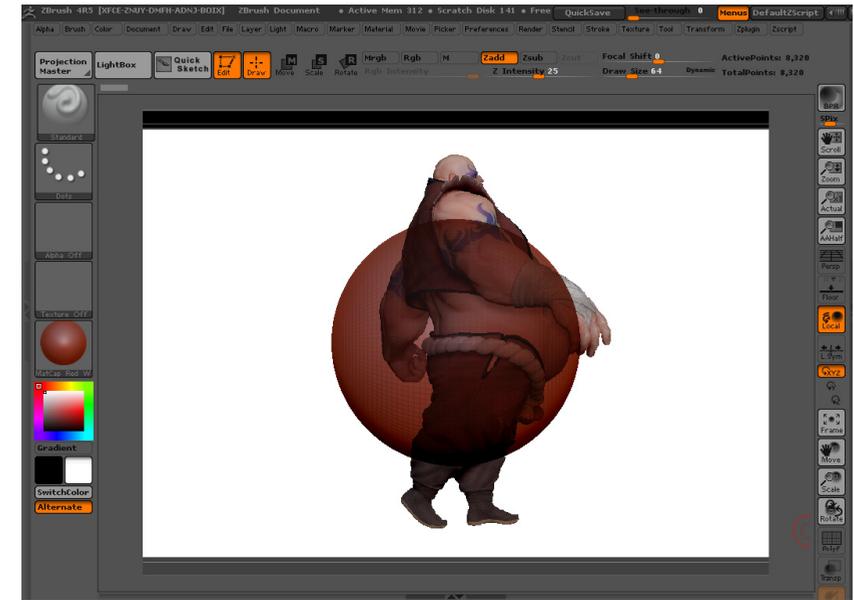


Figure 9-22 The transparency in the sphere displayed

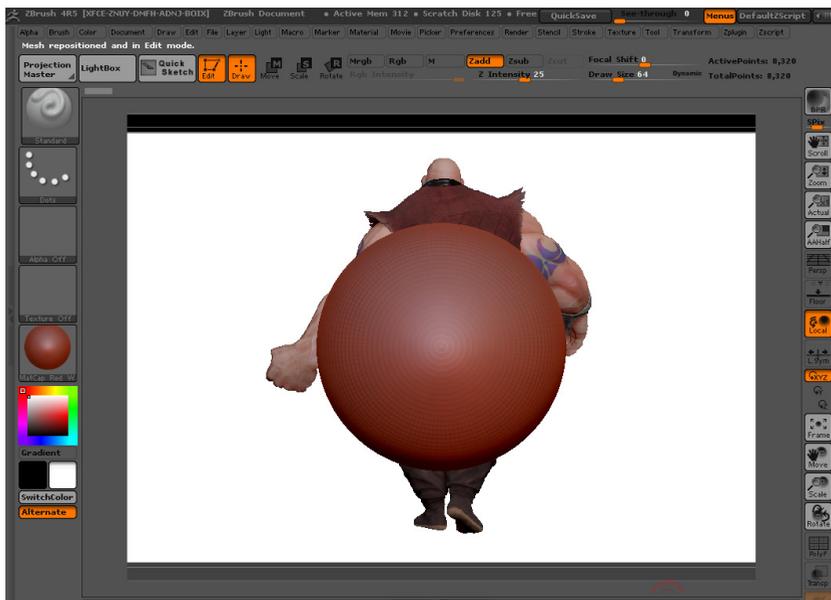


Figure 9-21 The back view of the sphere and the reference image displayed in the canvas

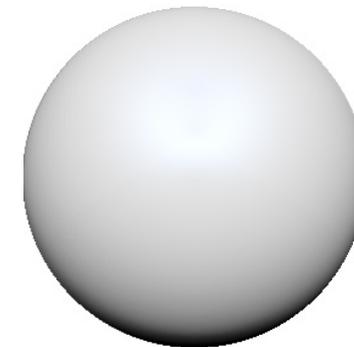


Figure 9-23 The material applied to the sphere



Figure 9-24 The texture image displayed in the Current Texture button

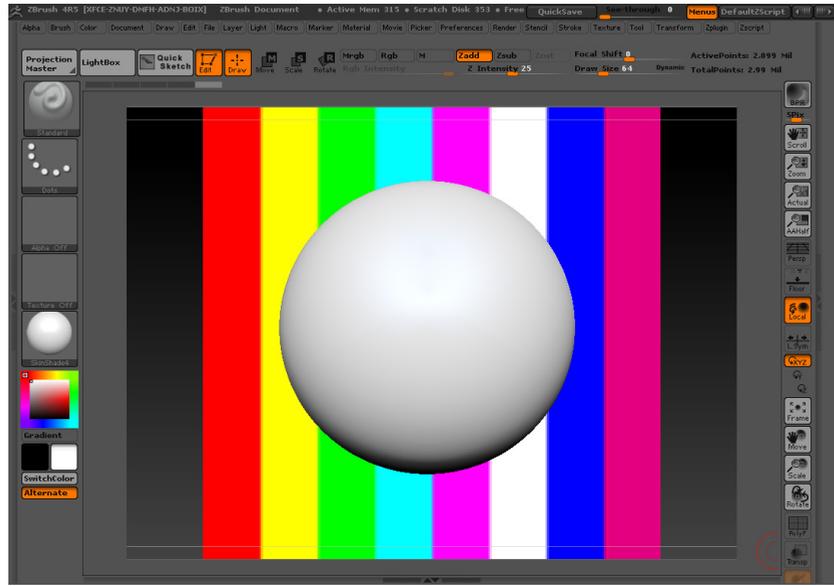


Figure 9-25 The texture image displayed behind the sphere

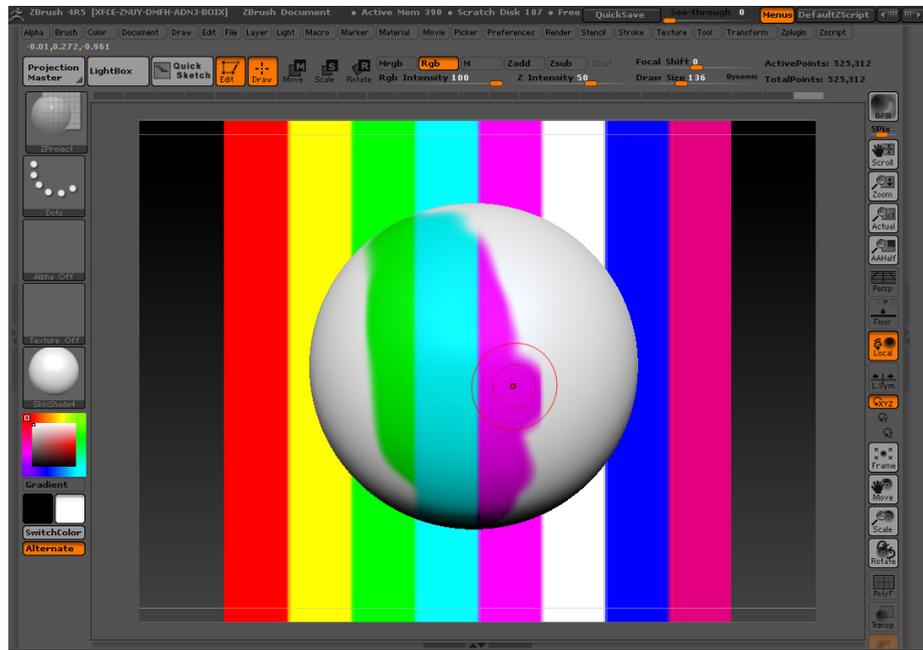


Figure 9-26 The texture projected from the texture image onto the sphere

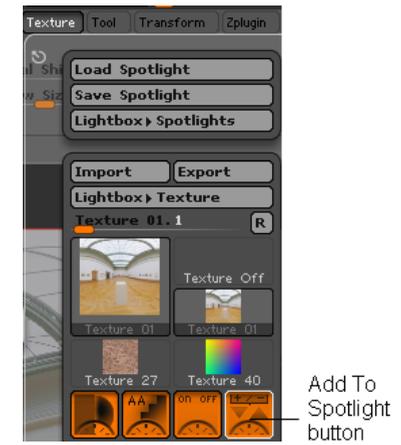


Figure 9-27 The Add To Spotlight button chosen

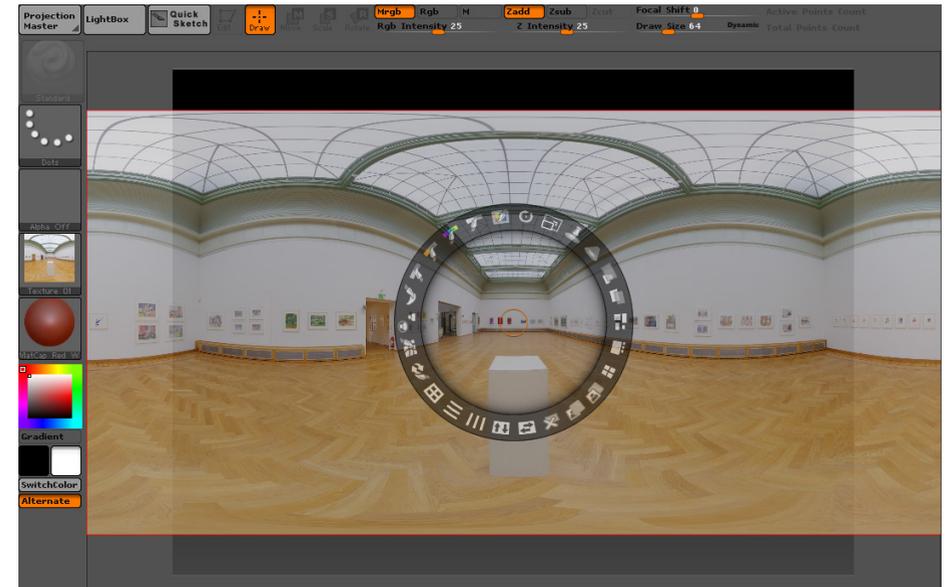


Figure 9-28 The texture image and the ring displayed in the canvas

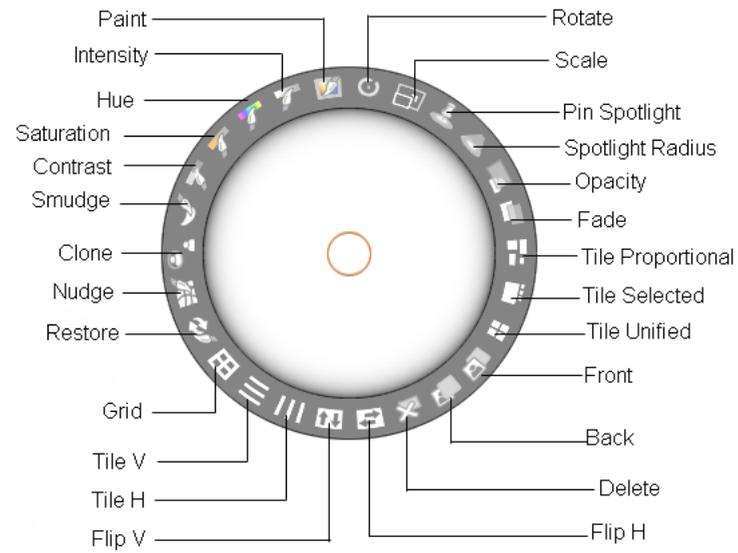


Figure 9-29 The different icons in the ring

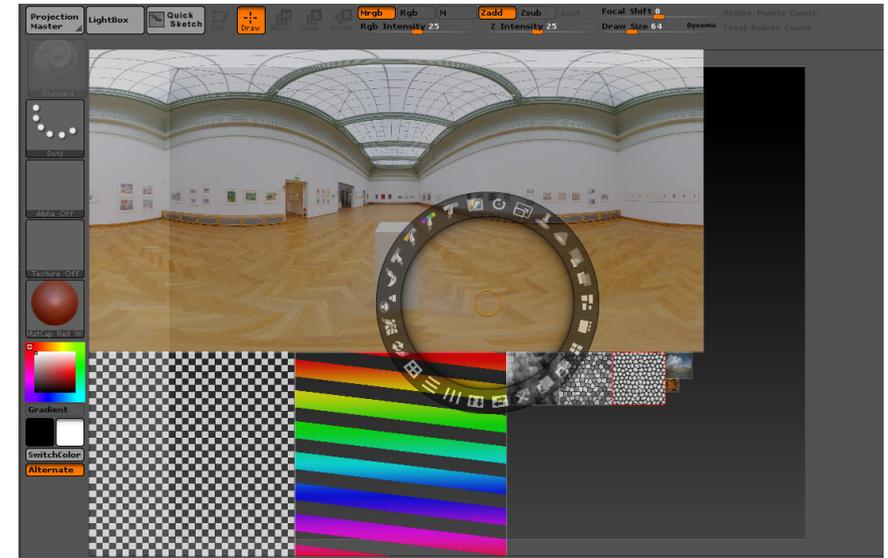


Figure 9-31 The images stacked together proportionately

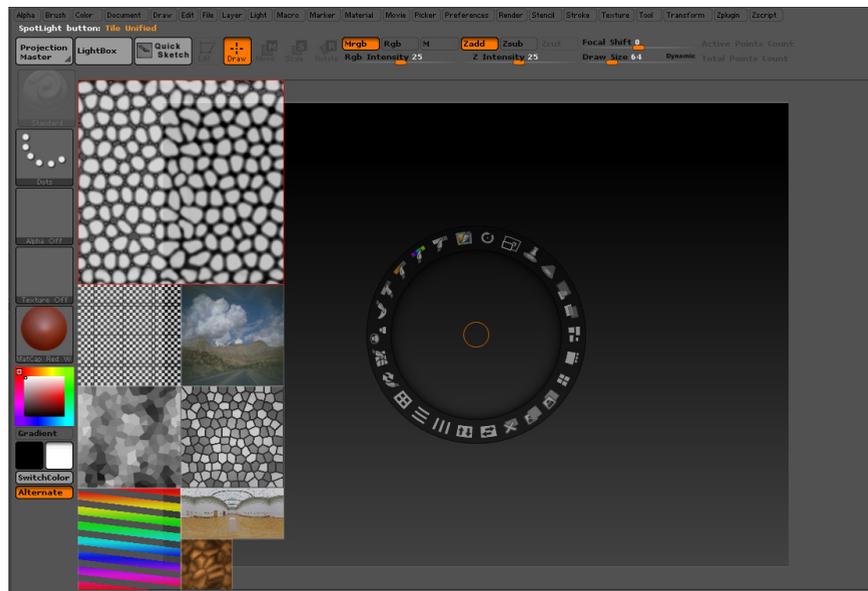


Figure 9-30 The chosen images displayed in the canvas



Figure 9-32 The image flipped horizontally

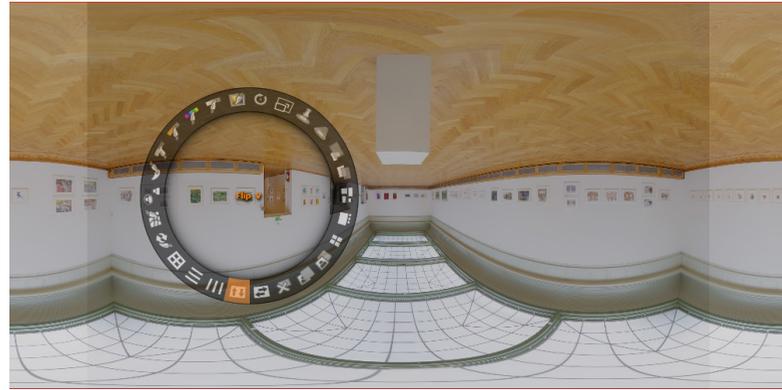


Figure 9-33 The image flipped vertically



Figure 9-34 The image tiled horizontally

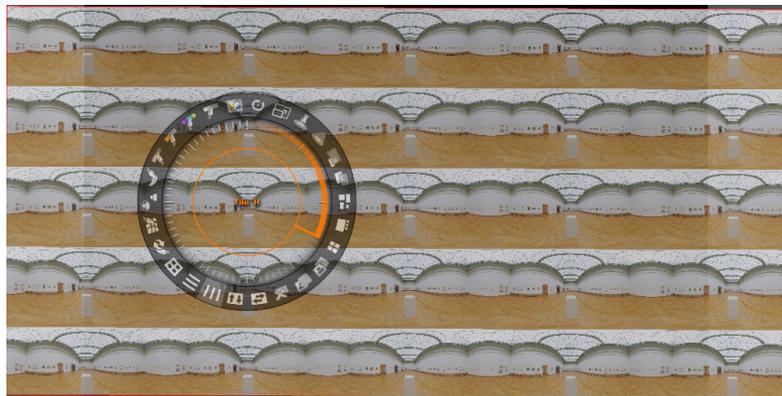


Figure 9-35 The image tiled horizontally and vertically



Figure 9-36 The grid pattern displayed on the image

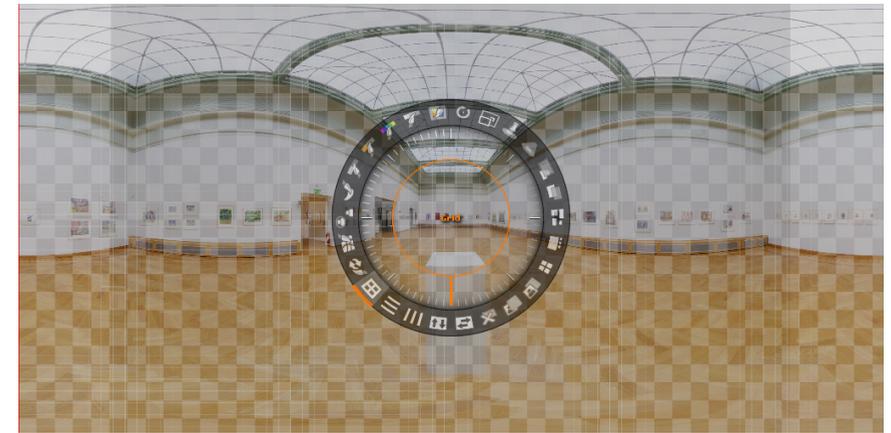


Figure 9-37 The chessboard pattern displayed on the image



Figure 9-38 Texture 01 and Texture 29 images added to the Spotlight



Figure 9-39 Texture images scaled and moved



Figure 9-40 Texture pasted at different locations



Figure 9-41 Blur applied on the selected areas of the image



Figure 9-42 Blur applied on the entire image



Figure 9-43 Contrast applied on the selected areas of the image

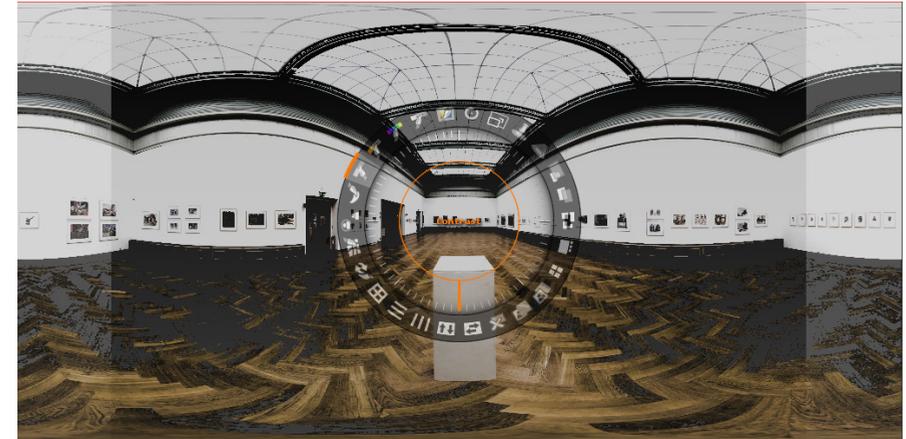


Figure 9-44 Contrast applied on the entire image



Figure 9-45 The saturation increased in the selected areas of the image



Figure 9-46 The saturation decreased in the entire image



Figure 9-47 Brightness increased in the entire image



Figure 9-48 Different colors painted on the image

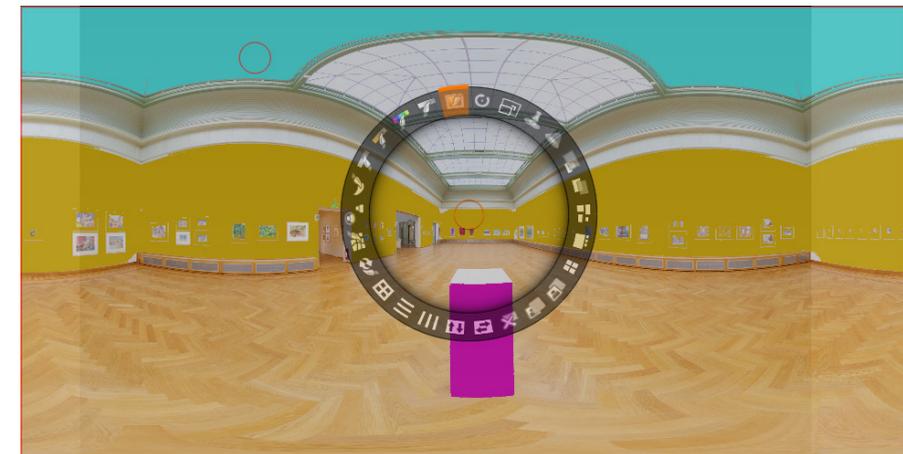


Figure 9-49 Colors filled in the specific areas of the image

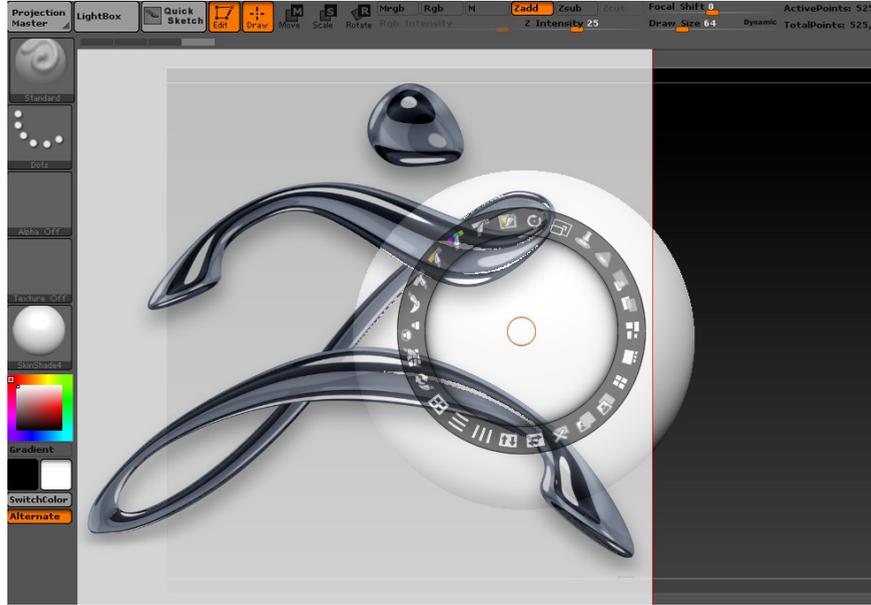


Figure 9-50 The texture image added to the Spotlight



Figure 9-51 The texture image scaled down



Figure 9-52 The Texture 30 texture image projected on the sphere



Figure 9-53 The Texture 29 texture image projected on the sphere

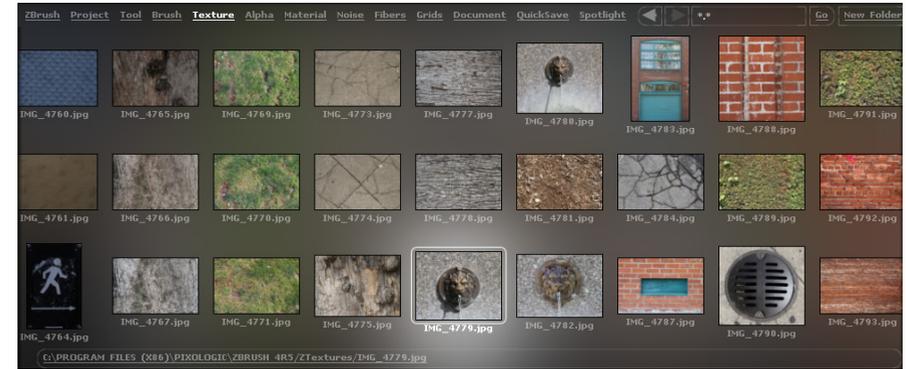


Figure 9-54 The IMG_4779.jpg texture image chosen from the browser



Figure 9-55 The texture image scaled and positioned



Figure 9-56 The selected texture repeated on the surface of the sphere

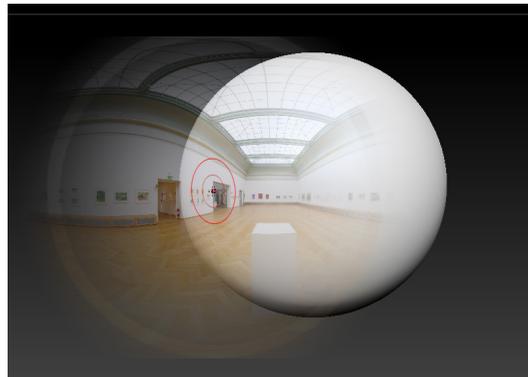


Figure 9-57 The circular preview of the texture image displayed in the canvas

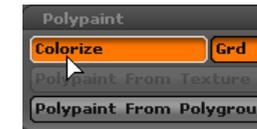


Figure 9-58 The Colorize button chosen



Figure 9-59 Different colors painted on the surface of the sphere



Figure 9-60 The textured model of the hut

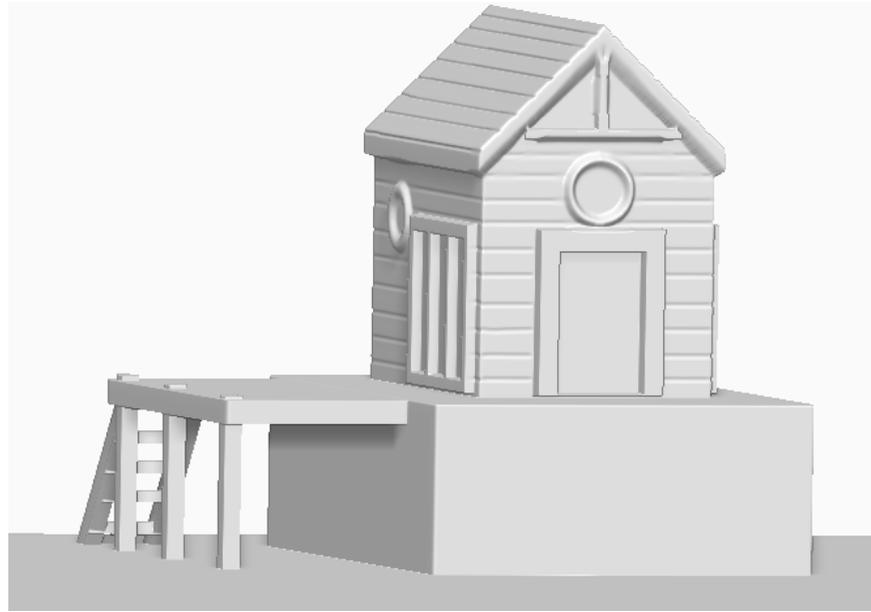


Figure 9-61 The untextured model of the hut



Figure 9-64 Mask created on the top area of the hut



Figure 9-65 The LightBox Texture button chosen



Figure 9-62 Masks created on the door, windows, and ventilators of the hut

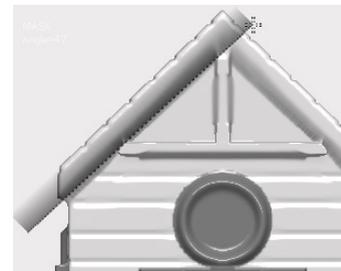


Figure 9-63 Mask created on the roof of the hut using the MaskCurve brush

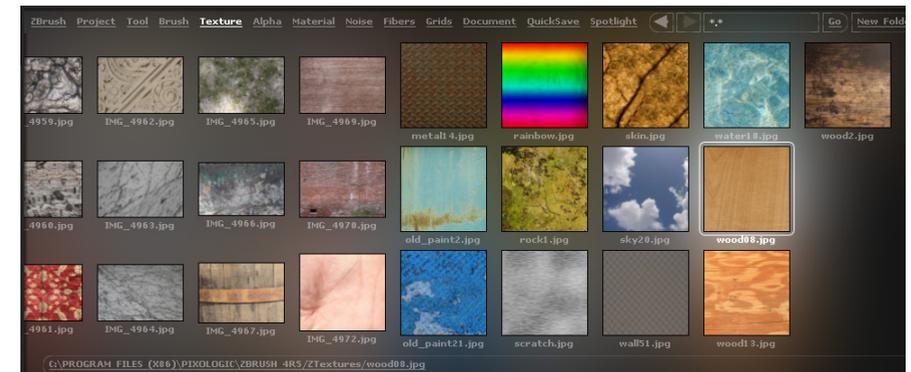


Figure 9-66 The wood08.jpg texture image chosen from the LightBox browser

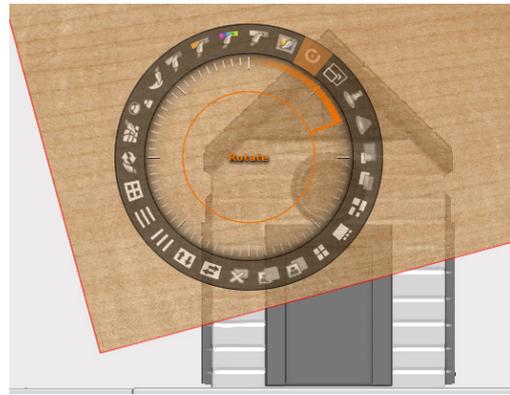


Figure 9-67 The texture image rotated in the canvas



Figure 9-68 The texture projected on the unmasked areas of the hut

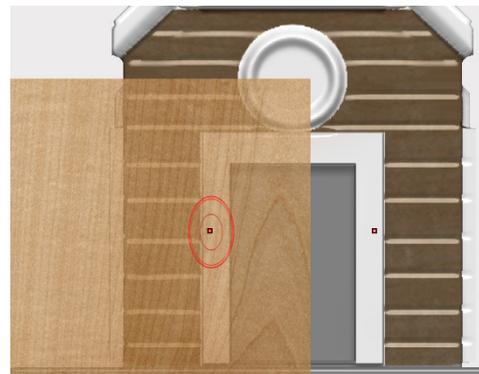


Figure 9-69 The texture image rotated in the canvas



Figure 9-70 The mask removed from the surface of the hut



Figure 9-71 The texture image moved and rotated in the canvas



Figure 9-72 The mask removed from the surface of the hut



Figure 9-73 The values of the R, G, and B sliders set



Figure 9-74 Mask removed from the inner part of the ventilator



Figure 9-75 The frame of the ventilator painted



Figure 9-76 The frame of the window painted



Figure 9-77 The mask removed from the hut



Figure 9-78 The mask applied on the window panes and the inner area of the ventilators



Figure 9-79 The texture image displayed in the canvas



Figure 9-80 The texture projected on the window panes of the hut

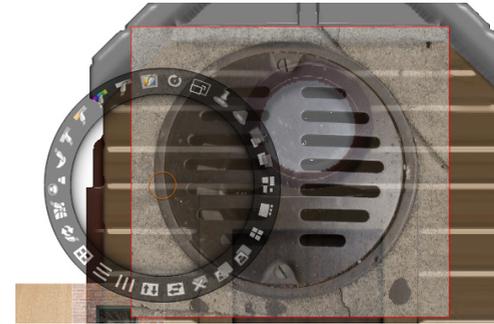


Figure 9-81 The texture image displayed in the canvas



Figure 9-82 The texture displayed on the ventilators



Figure 9-83 The inverted mask



Figure 9-84 The paint applied on the top area of the hut



Figure 9-85 The color painted on the top windows



Figure 9-86 The texture image placed on the staircase area

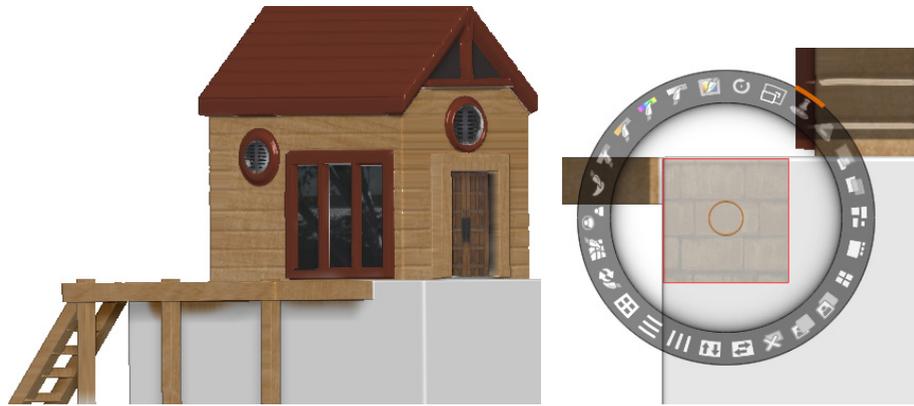


Figure 9-87 The texture projected on the staircase area

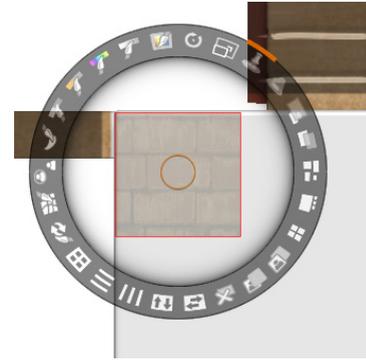


Figure 9-88 The texture image moved and scaled down



Figure 9-89 The texture projected on the front side of the base



Figure 9-90 The texture projected on all the sides of the base



Figure 9-91 The texture projected on the floor of the base



Figure 9-92 A mask created on the top of the ground

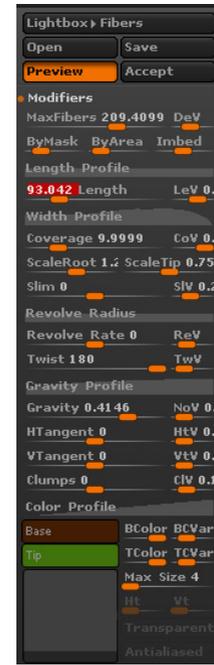


Figure 9-93 The values of the sliders set



Figure 9-94 The grass displayed on the ground



Figure 9-95 The textured face



Figure 9-96 A SkinShade4 material applied to the model



Figure 9-97 A texture image displayed in the canvas



Figure 9-98 The transparency in the image increased



Figure 9-99 The cursor dragged on the surface of the image



Figure 9-100 The image manipulated using the Nudge icon



Figure 9-101 The cursor dragged on the face area of the texture image

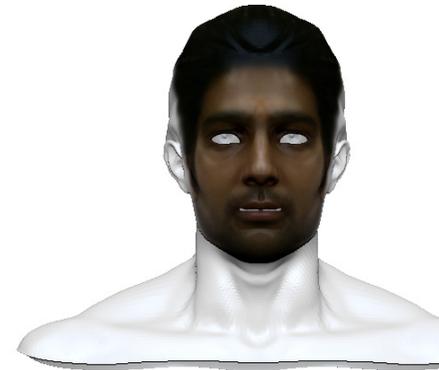


Figure 9-102 The projected texture displayed on the face of the model



Figure 9-103 The texture projected on the neck of the model

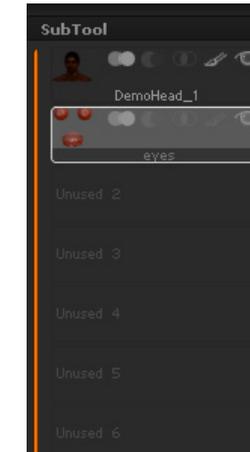


Figure 9-104 The eyes subtool chosen from the list

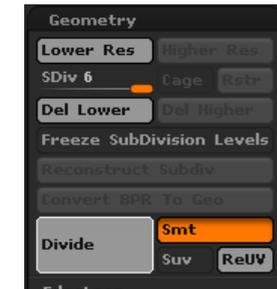


Figure 9-105 The value of the SDiv slider set to 6



Figure 9-106 The texture image moved to match the model

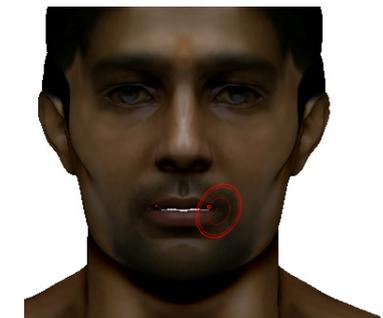


Figure 9-107 Teeth of the model moved inward using the Move brush



Figure 9-108 The values of the Ambient and Diffuse sliders set



Figure 9-109 The texture on the model displayed clearly



Figure 9-110 Model of the hut without textures



Figure 9-111 Textured model of the hut

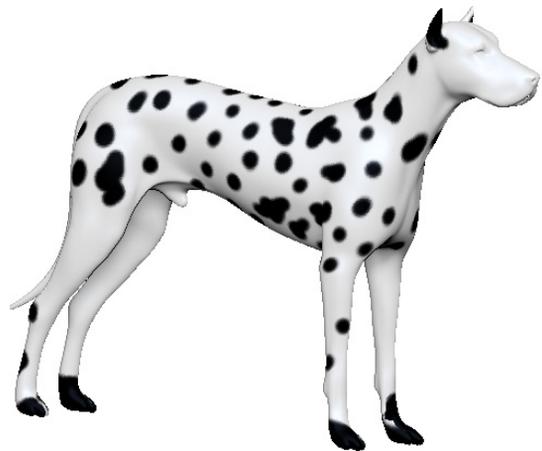
Chapter 10

UV Master

Learning Objectives

After completing this chapter, you will be able to:

- *Work with the UV Master subpalette*
- *Unwrap different 3D models*



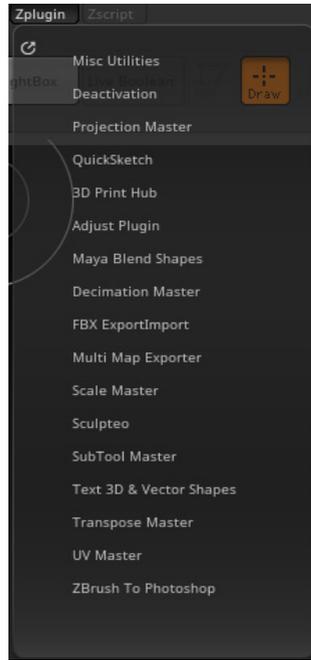


Figure 10-1 The ZPlugin palette



Figure 10-2 The UV Master subpalette

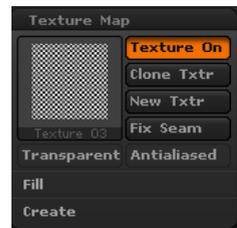


Figure 10-3 The Texture Map subpalette

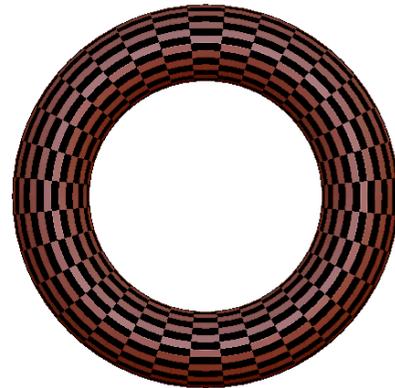


Figure 10-4 The checker texture applied to the model

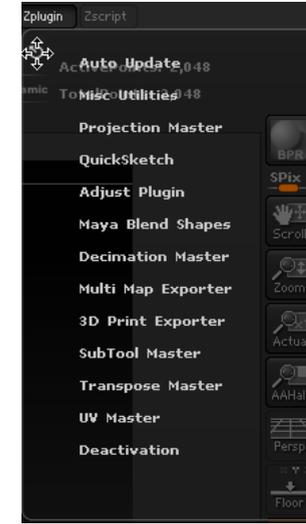


Figure 10-5 The shape of the cursor changed

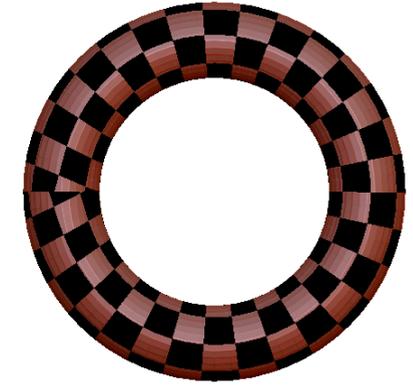


Figure 10-6 The stretching in the texture rectified

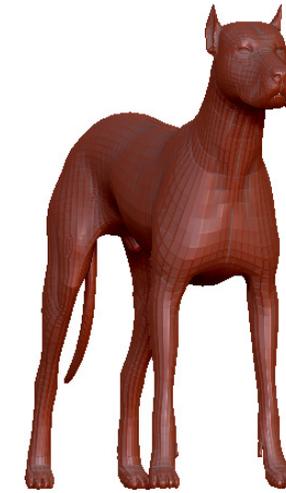


Figure 10-7 The model loaded into the canvas

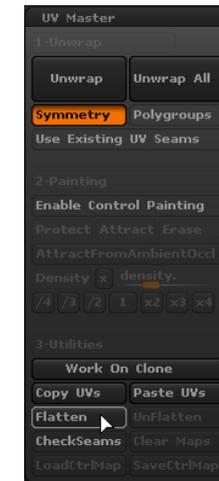


Figure 10-8 The Flatten button chosen

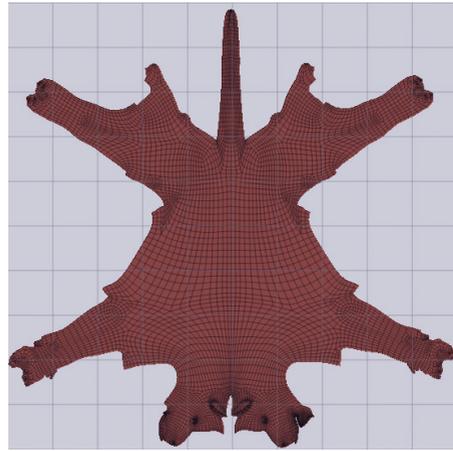


Figure 10-9 The model flattened with the *Symmetry* button chosen

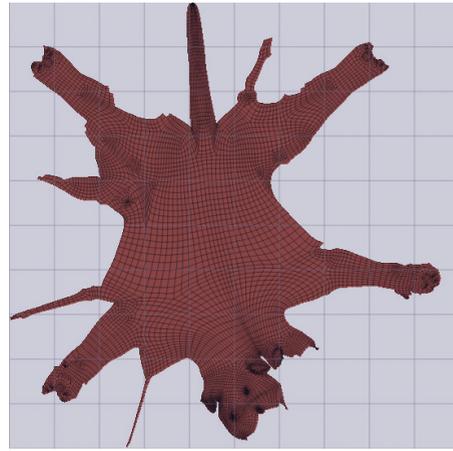


Figure 10-10 The model flattened with the *Symmetry* button not chosen

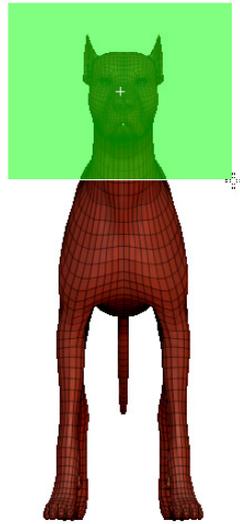


Figure 10-11 A portion of model selected using the *SelectRect* brush

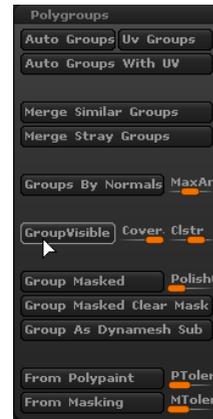


Figure 10-12 The *GroupVisible* button chosen

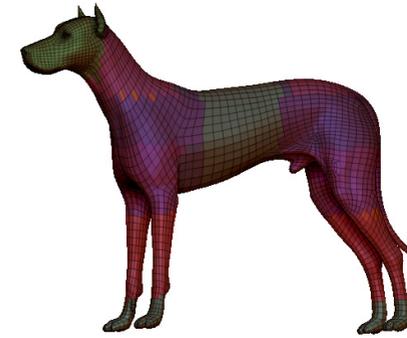


Figure 10-13 Different polygroups created in the model

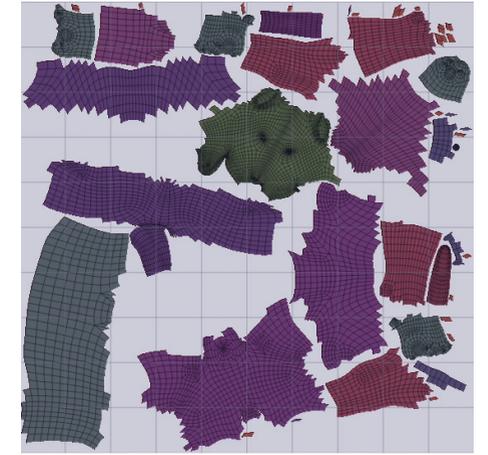


Figure 10-14 Separate UV islands created for different polygroups

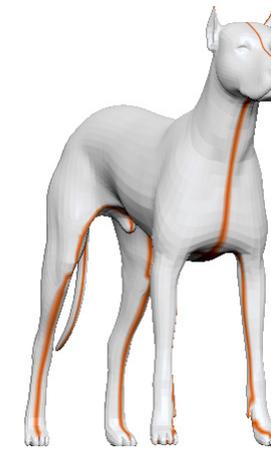


Figure 10-15 The seams in the model displayed

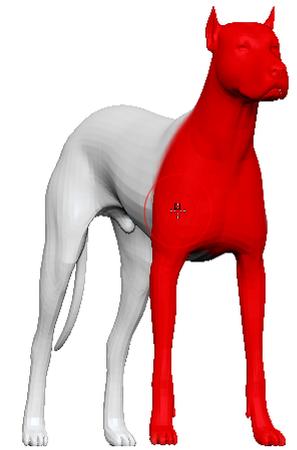


Figure 10-16 The front area of the model protected



Figure 10-17 The seam removed from the painted area

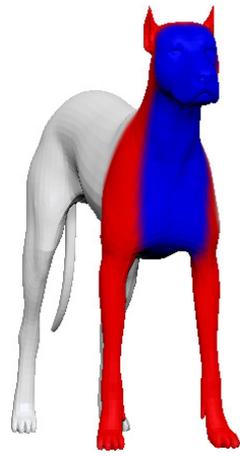


Figure 10-18 The front area of the model painted blue

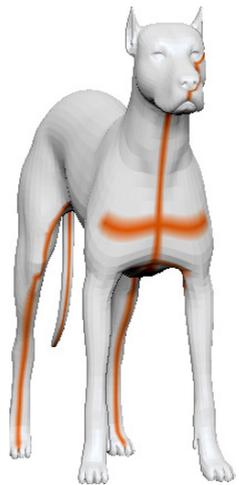


Figure 10-19 A seam created in the painted area

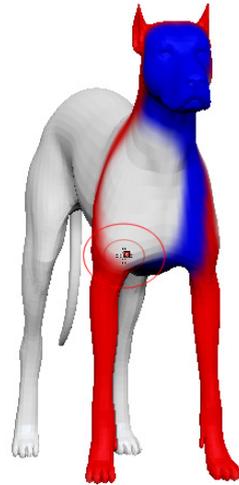


Figure 10-20 A painted area erased using the Erase button

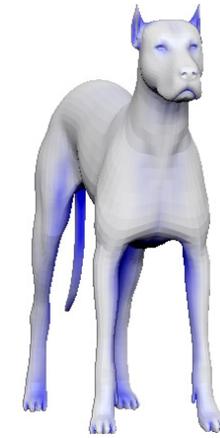


Figure 10-21 A attraction area painted automatically

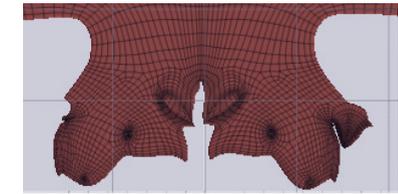


Figure 10-22 The flattened image of the model

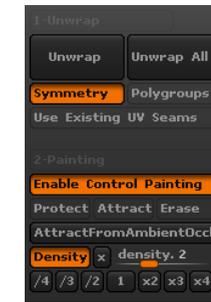


Figure 10-23 The Density button chosen



Figure 10-24 The face of the model painted

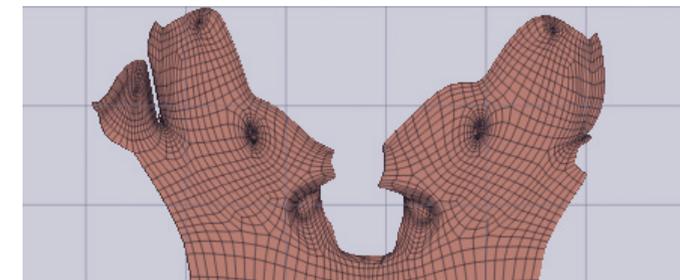


Figure 10-25 The size of the UVs increased in the painted area

This function requires that you be at the lowest subdivision level. Please go to level 1 and try again.

Figure 10-26 The message box displayed on choosing the **Unwrap** button

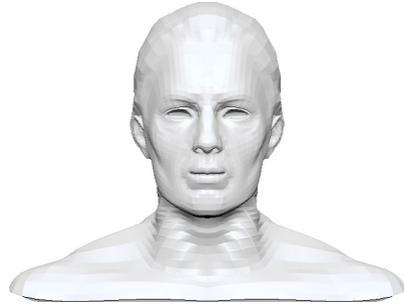


Figure 10-27 The cloned model at its lowest subdivision level



Figure 10-28 The cloned model displayed in the flyout

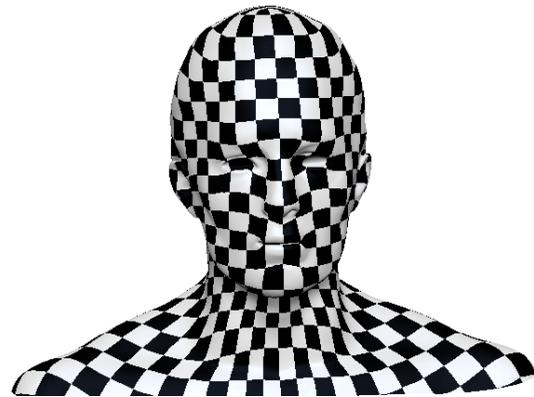


Figure 10-29 The unwrapped model of the head

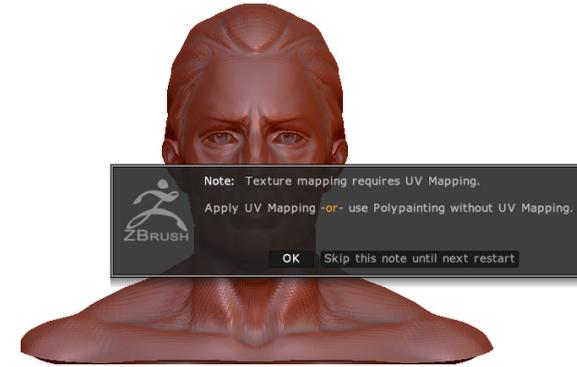


Figure 10-30 The message box displayed on choosing the texture image

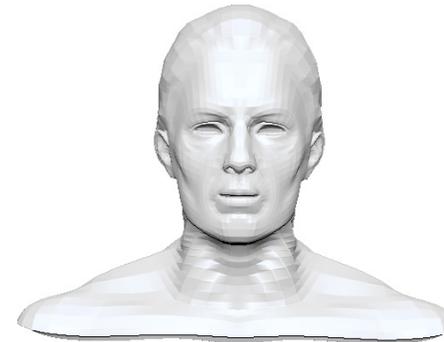


Figure 10-31 The cloned model displayed in the canvas



Figure 10-32 The texture image applied to the model

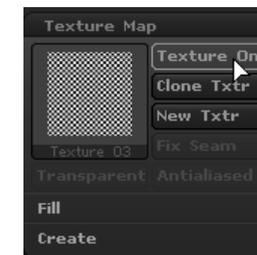


Figure 10-33 The **Texture On** button chosen

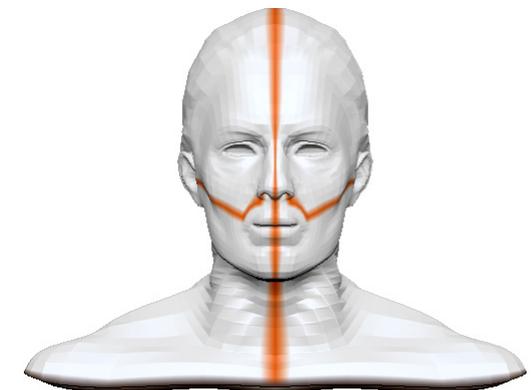


Figure 10-34 The seams displayed on the model

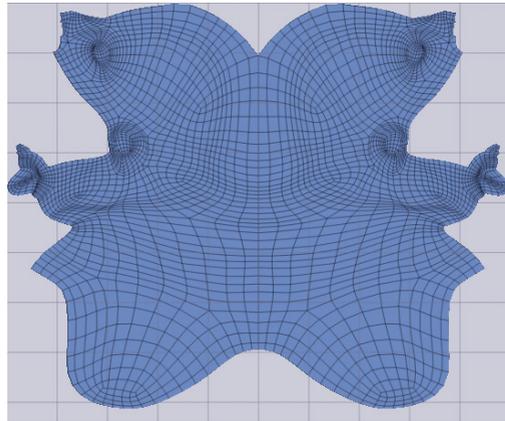


Figure 10-35 The flattened image of the model



Figure 10-36 The front side of the model painted using the **Protect** button

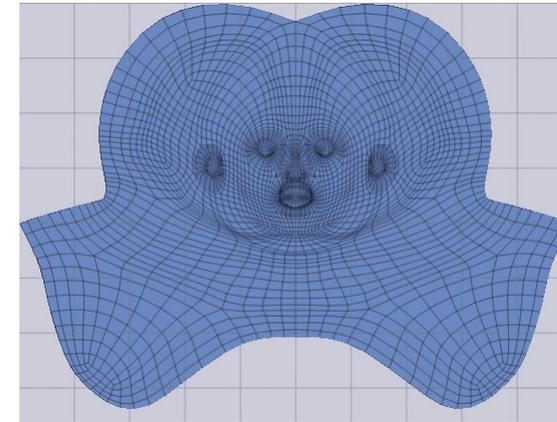


Figure 10-39 The flattened image of the model displayed

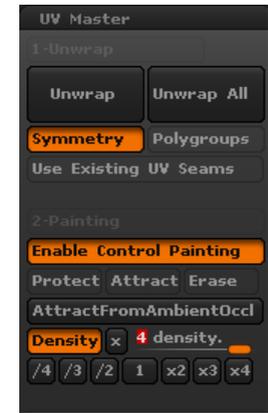


Figure 10-40 The value of the **density** slider set to 4

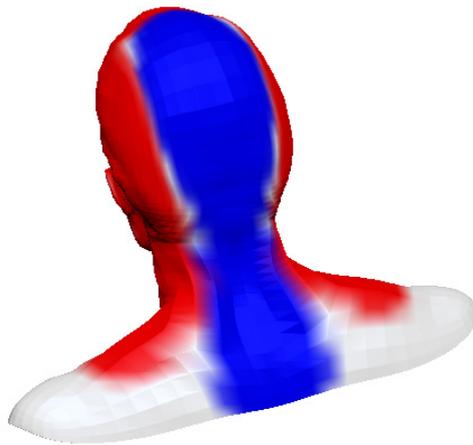


Figure 10-37 The back side of the model painted using the **Attract** button



Figure 10-38 The seam displayed after choosing the **Unwrap** button

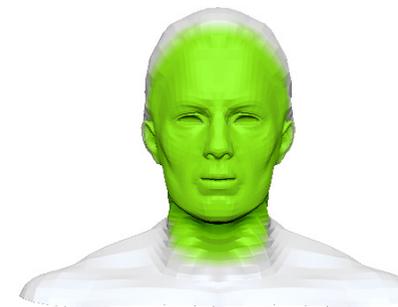


Figure 10-41 The model with face area painted

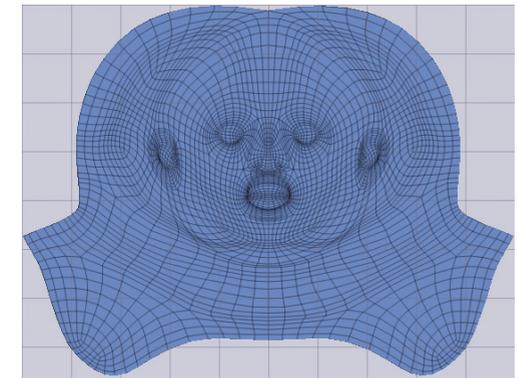


Figure 10-42 The flattened image of the unwrapped model

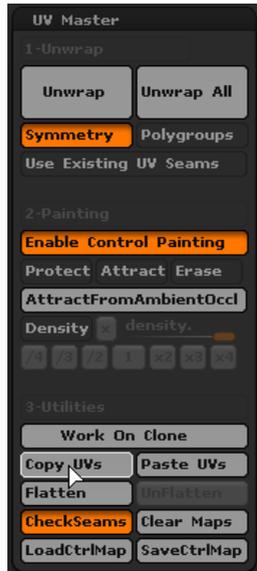


Figure 10-43 The Copy UVs button chosen

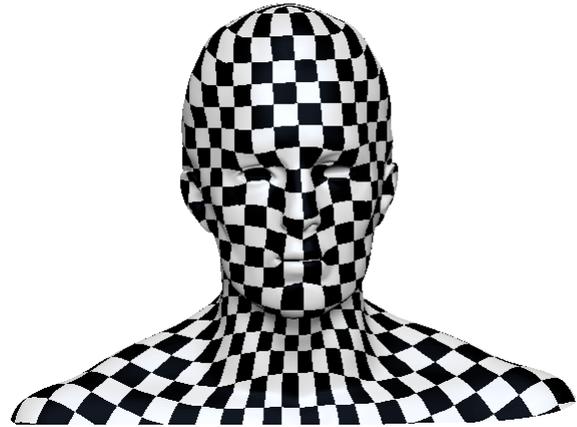


Figure 10-44 The UVs pasted on the original model

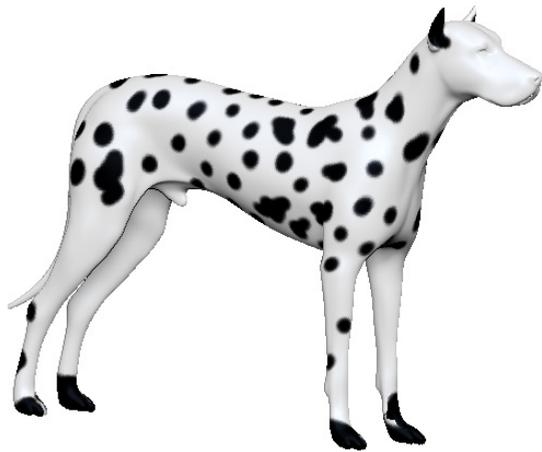


Figure 10-45 Texture map applied to the model



Figure 10-46 The Dog.ZTL model displayed in the canvas



Figure 10-47 The seams displayed on the model

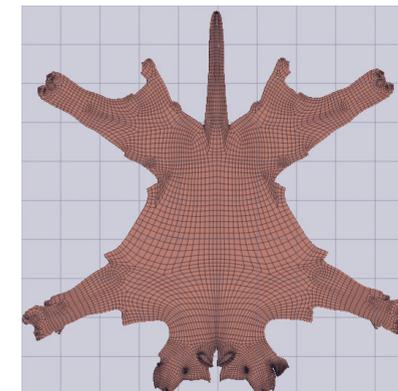


Figure 10-48 The flattened image of the model

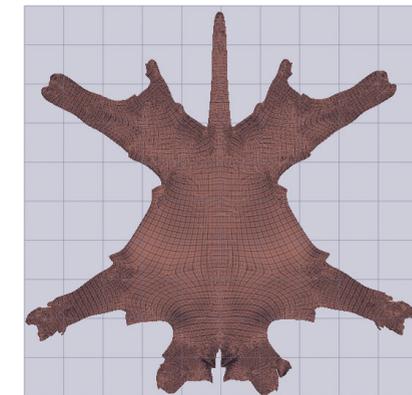


Figure 10-49 The flattened image after pressing CTRL+D thrice

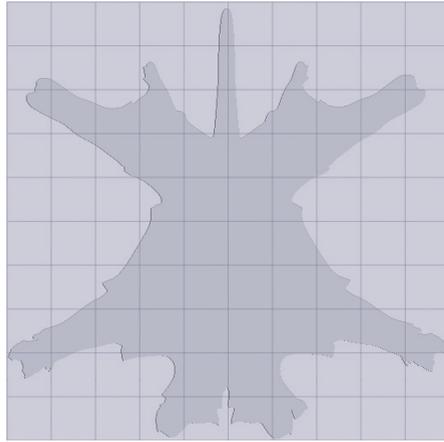


Figure 10-50 The SkinShade 4 material applied to the image

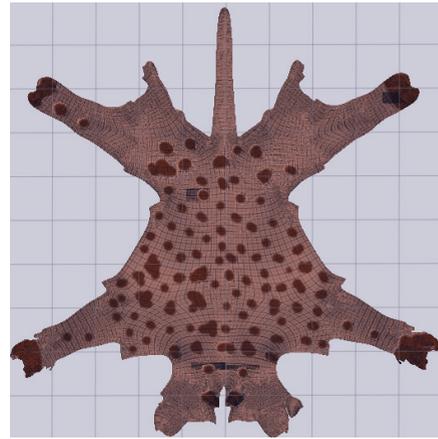


Figure 10-51 A pattern created on the surface of the image

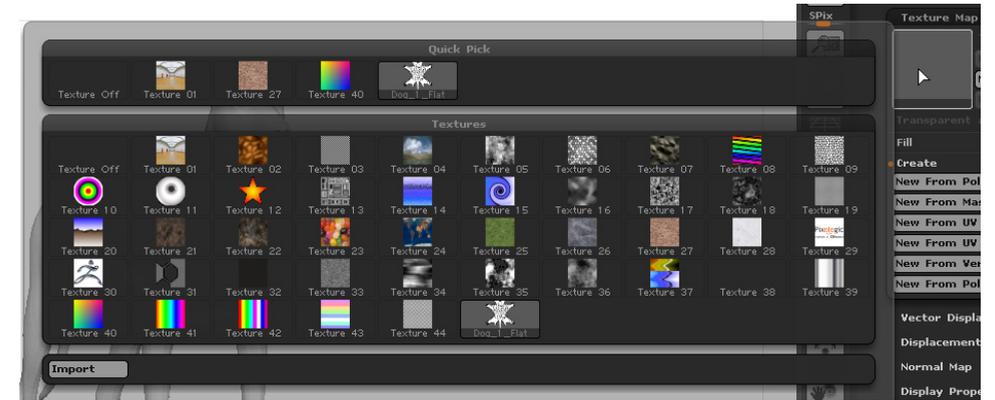


Figure 10-54 The texture image chosen from the flyout



Figure 10-52 The New From Polypaint button chosen



Figure 10-53 The Clone Txtr button chosen



Figure 10-55 The final output

Chapter 11

Lighting

Learning Objectives

After completing this chapter, you will be able to:

- *Work with the Light palette*
- *Understand the different types of lights in ZBrush*
- *Light up a scene using the three point lighting setup*



Figure 11-1 The Light palette

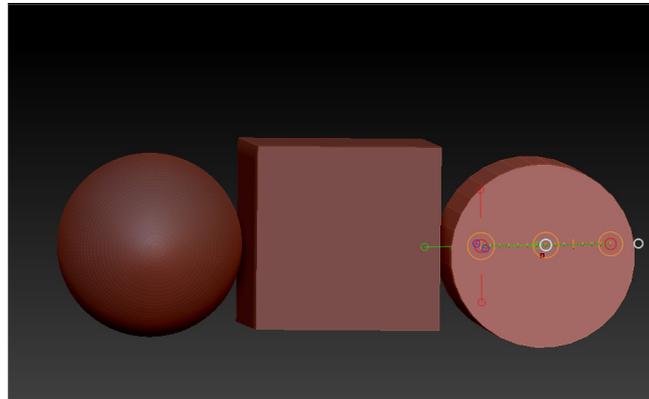


Figure 11-2 Different objects created in the canvas

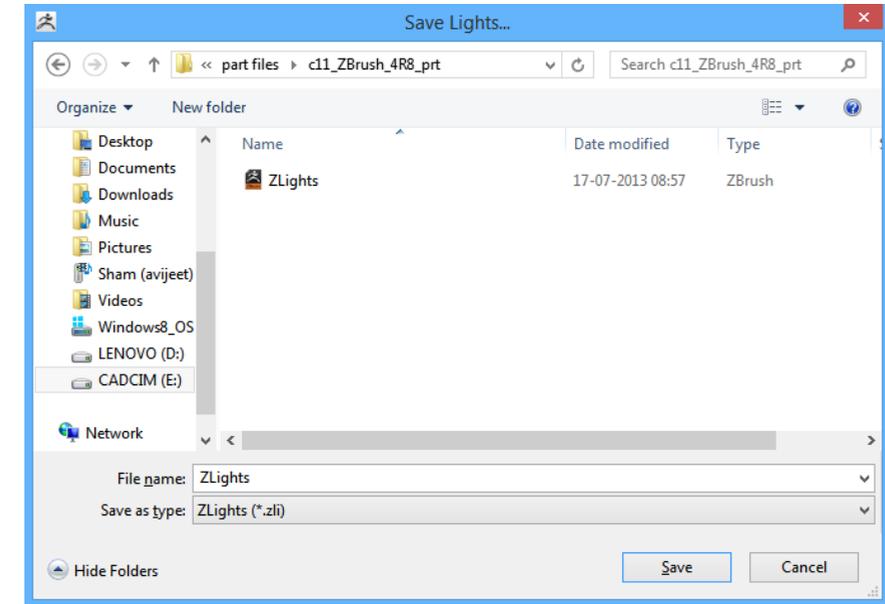


Figure 11-5 The Save Lights dialog box



Figure 11-3 Different settings in the Light palette

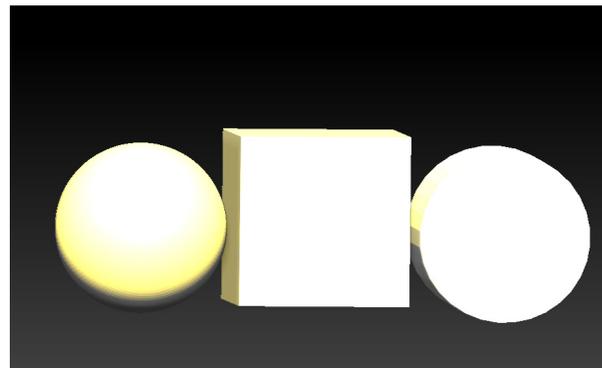


Figure 11-4 Light settings applied to the scene



Figure 11-6 The BasicMaterial material applied to the object



Figure 11-7 The light settings applied in the new scene

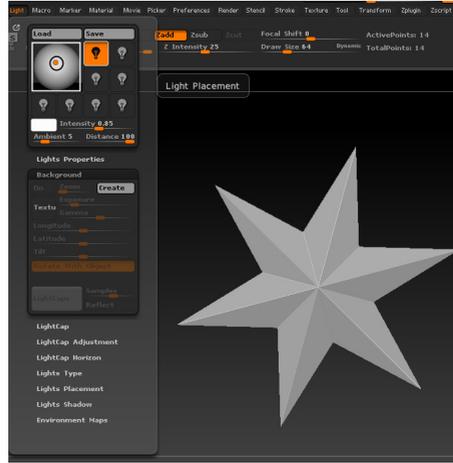


Figure 11-8 The position of light in the Light Placement window

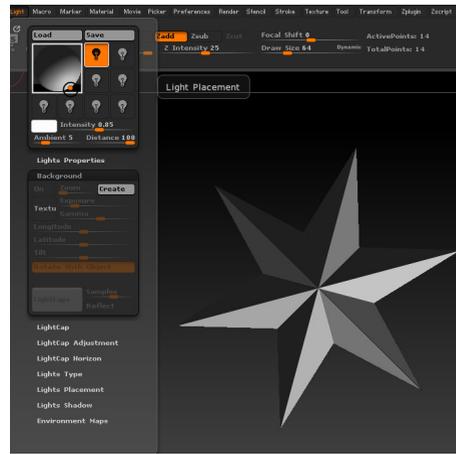


Figure 11-9 The position of light changed in the Light Placement window



Figure 11-10 The light switches in the Light palette

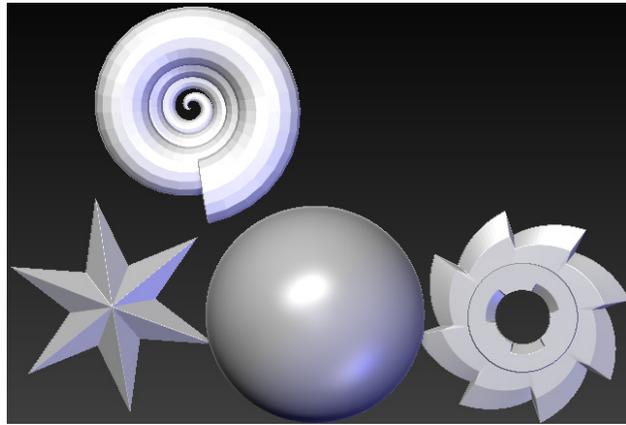


Figure 11-11 The scene illuminated by switching on all the lights



Figure 11-12 The scene with the value of the Intensity slider set to 0

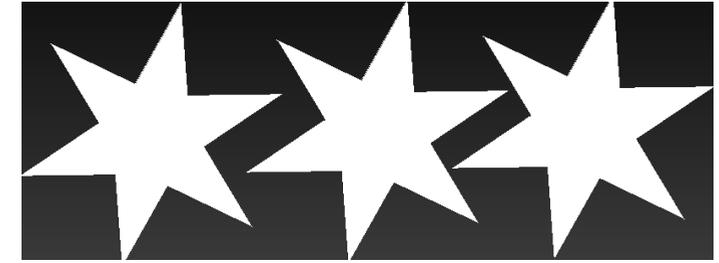


Figure 11-13 The scene with the value of the Intensity slider set to 10

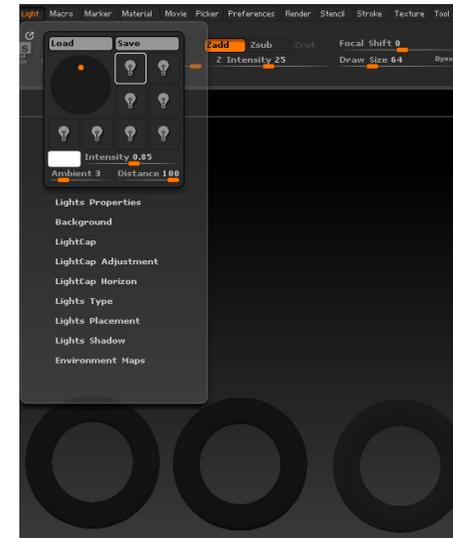


Figure 11-14 All the lights turned off

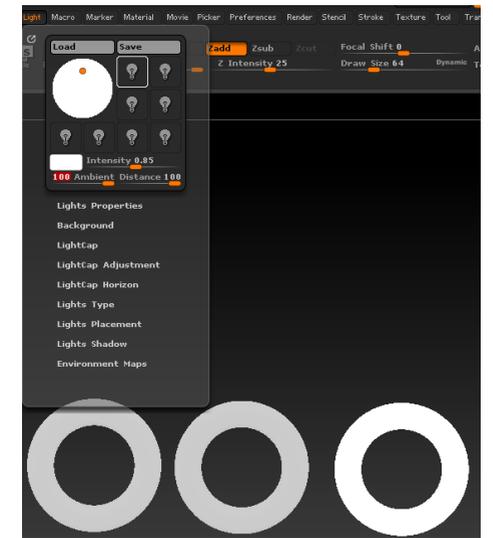


Figure 11-15 The value of the Ambient slider set to 100



Figure 11-16 The graph curve

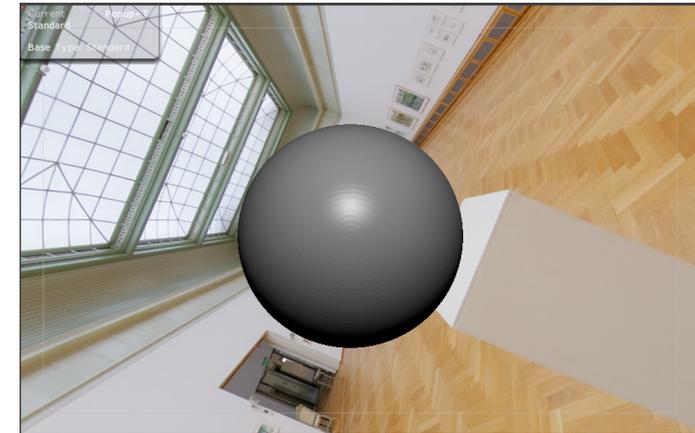


Figure 11-18 The chosen texture image displayed in the background

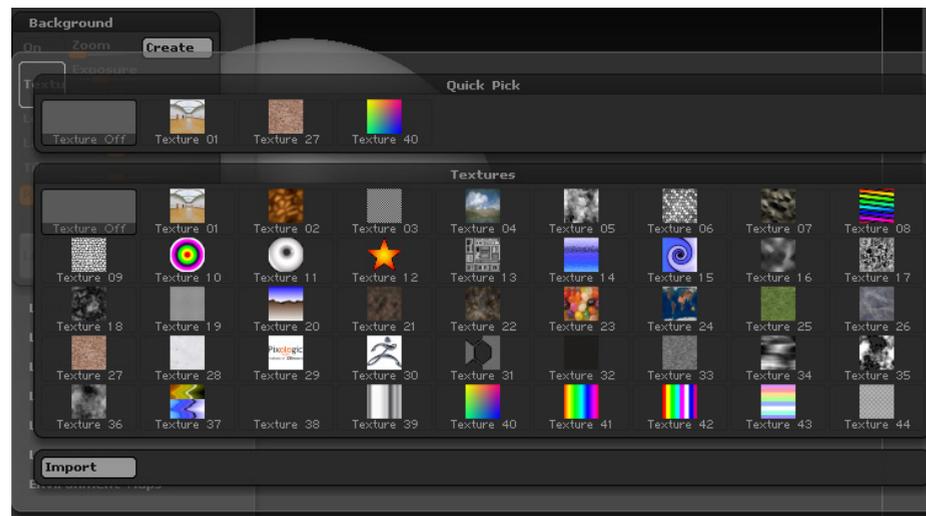


Figure 11-17 The flyout displayed on choosing the Environment Texture button



Figure 11-19 The background image zoomed in



Figure 11-20 The lighting in the sphere changed according to the **Texture 01** image

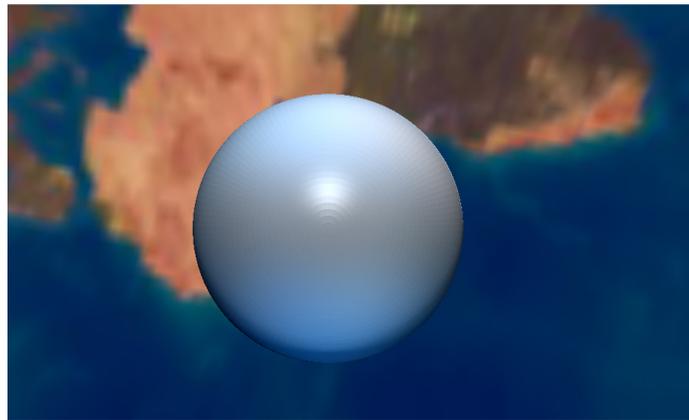


Figure 11-21 The lighting in the sphere changed according to the **Texture 24** image



Figure 11-22 The object when the value of the **Samples** slider is set to 0



Figure 11-23 The object when the value of the **Samples** slider is set to 5

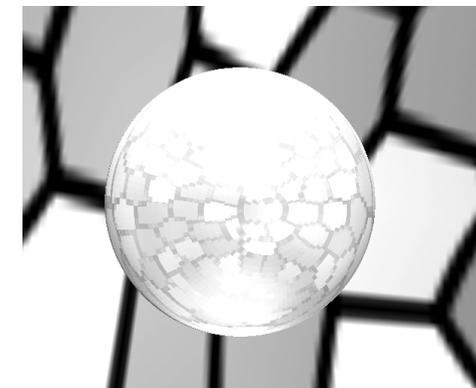


Figure 11-24 The texture reflected in the sphere



Figure 11-25 The **LightCap** subpalette

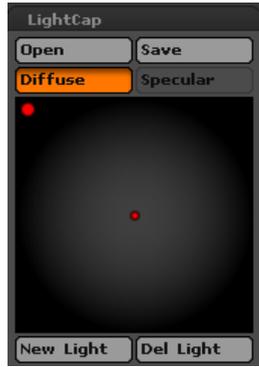


Figure 11-26 The light added in the LightCap Preview window

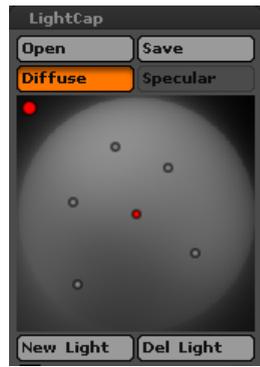


Figure 11-27 More lights added and moved in the window



Figure 11-28 The Strength slider set to 0.2611

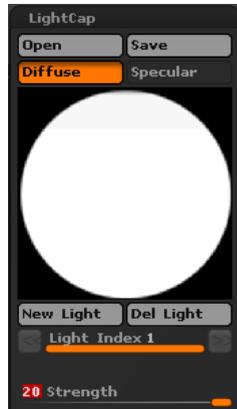


Figure 11-29 The Strength slider set to 20

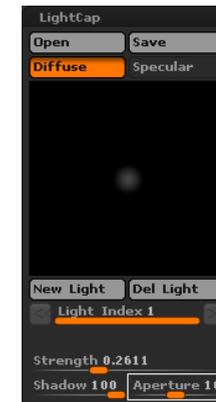


Figure 11-30 The Aperture slider set to 10



Figure 11-31 The Aperture slider set to 120



Figure 11-32 The color of the light changed to red

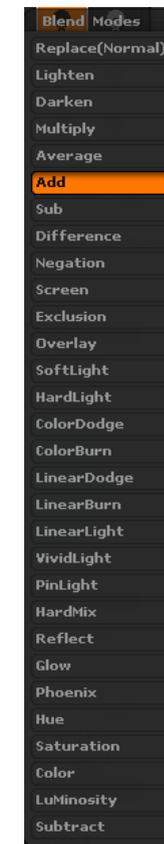


Figure 11-33 The flyout displayed on choosing the Blend Mode button

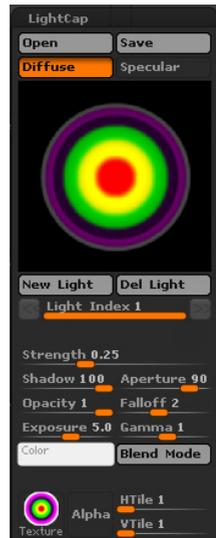


Figure 11-34 The texture image projected on the light



Figure 11-35 The shape of the light changed

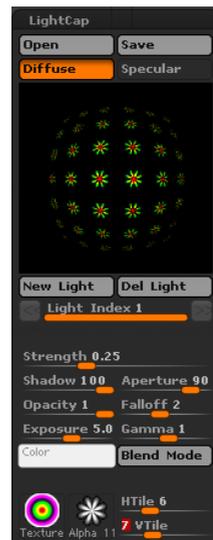


Figure 11-36 The tiling displayed in the LightCap Preview window



Figure 11-37 Displaying the scaled texture in the LightCap Preview window

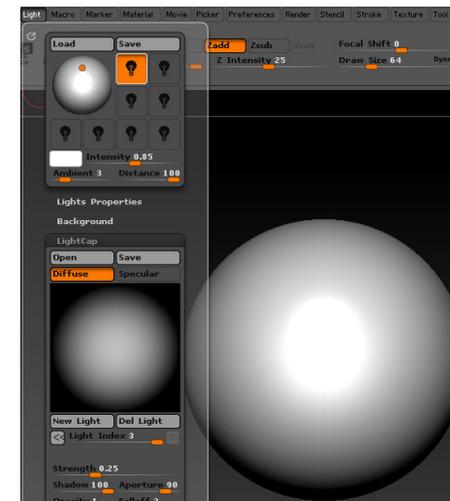


Figure 11-38 The light capture applied to the scene

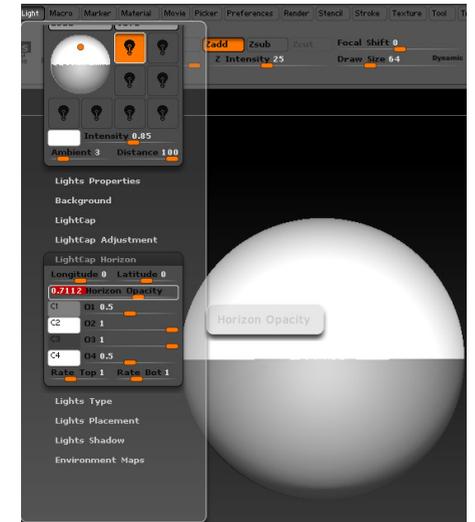


Figure 11-39 The opacity of the horizon line increased

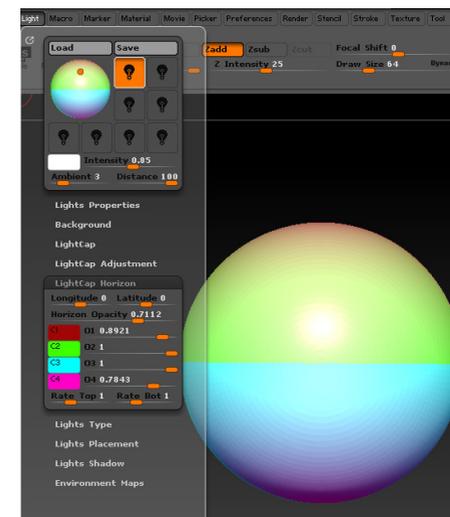


Figure 11-40 Four different colors applied to the light capture

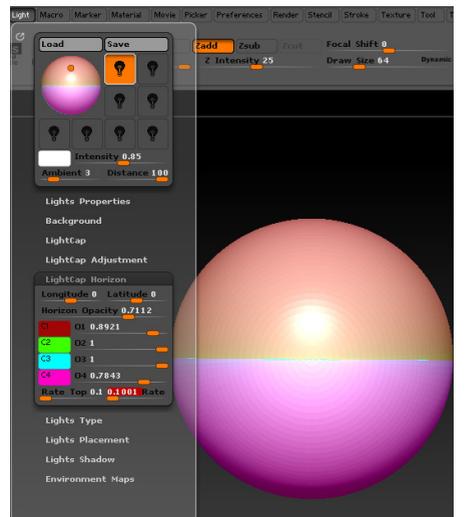


Figure 11-41 The offset of the top and bottom colors increased



Figure 11-42 The Lights Placement subpalette



Figure 11-43 The values of the X Pos, Y Pos, and Z Pos sliders updated

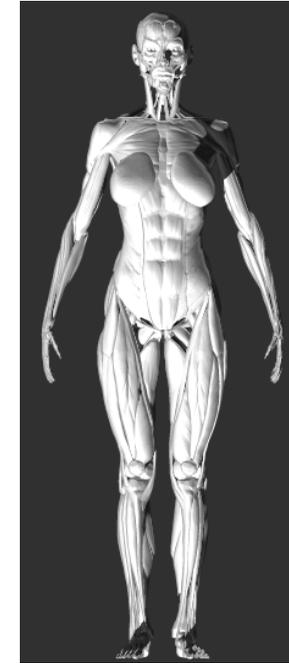


Figure 11-44 The output after applying lights

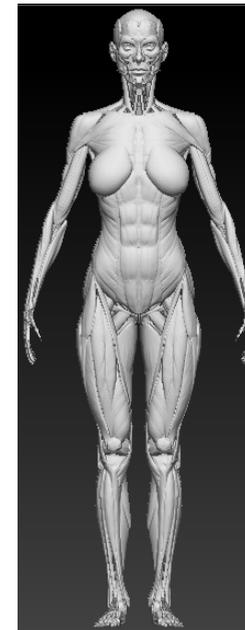


Figure 11-45 The FastShader material applied to the model



Figure 11-46 The Light palette



Figure 11-47 The key light positioned in the **Light Placement** window



Figure 11-48 The **Shadow** button chosen

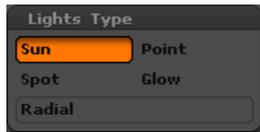


Figure 11-49 The **Sun** button chosen



Figure 11-50 The fill light positioned in the **Light Placement** window with its color changed

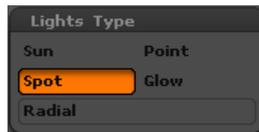


Figure 11-51 The **Spot** button chosen



Figure 11-52 The back light positioned in the **Light Placement** window

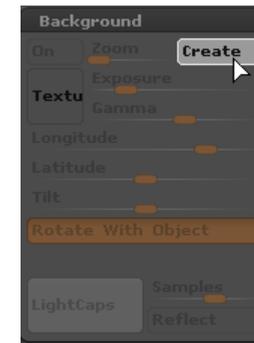


Figure 11-53 The **Create** button chosen in the **Background** subpalette

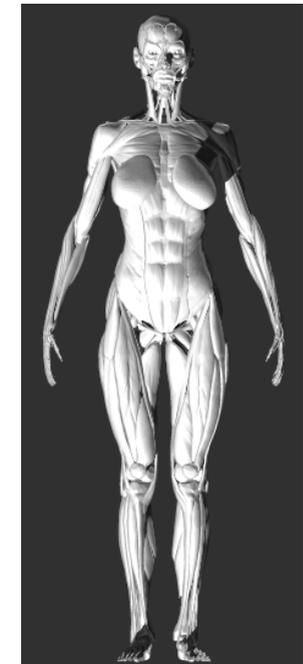


Figure 11-54 The model rendered using the **BPR** renderer



Figure 11-55 The final output

Chapter 12

Rendering

Learning Objectives

After completing this chapter, you will be able to:

- *Work with the Render palette*
- *Generate render passes for compositing*

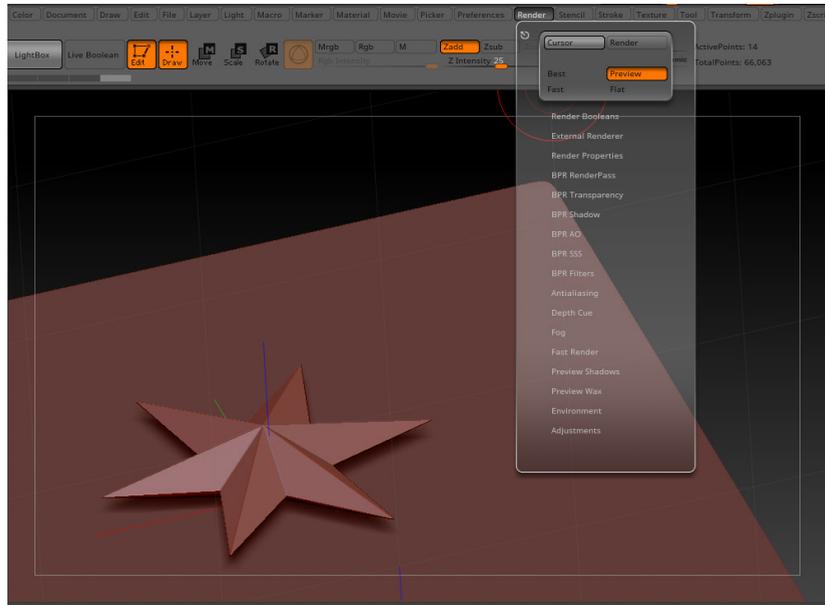


Figure 12-1 The area to be rendered selected using the **Cursor** button

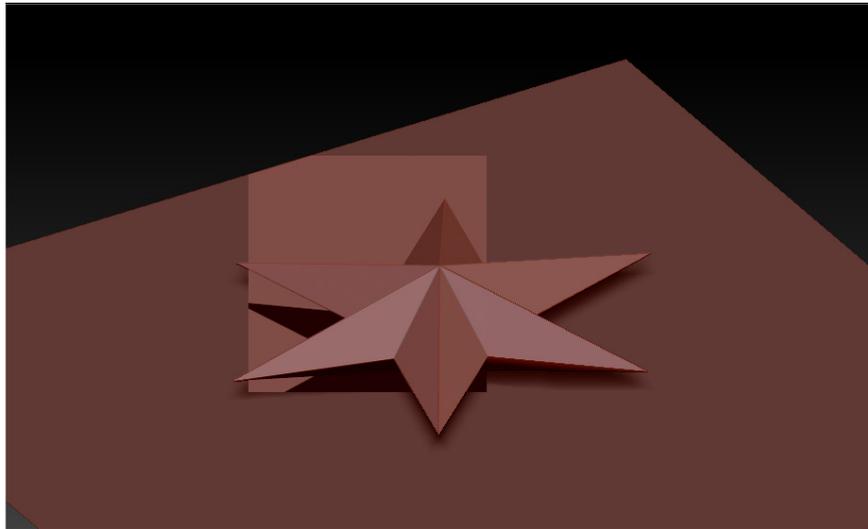


Figure 12-2 The selected area of the scene rendered



Figure 12-3 The plane placed below the model



Figure 12-4 The scene rendered using the **Best** button



Figure 12-5 The scene rendered using the **Fast** button



Figure 12-6 The scene rendered using the **Flat** button



Figure 12-7 The cartoon effect applied to a model

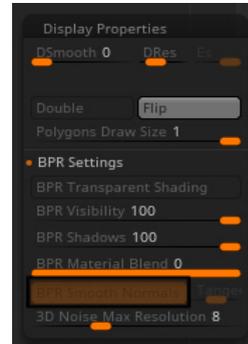


Figure 12-8 The BPR Smooth Normals Render Mode button chosen

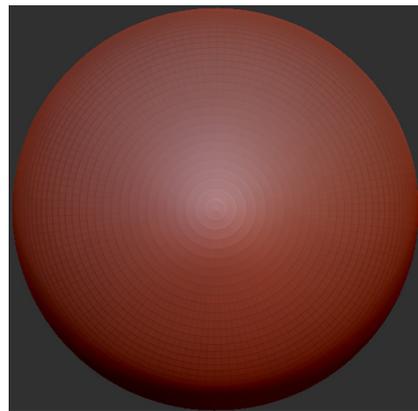


Figure 12-9 A sphere created in the canvas

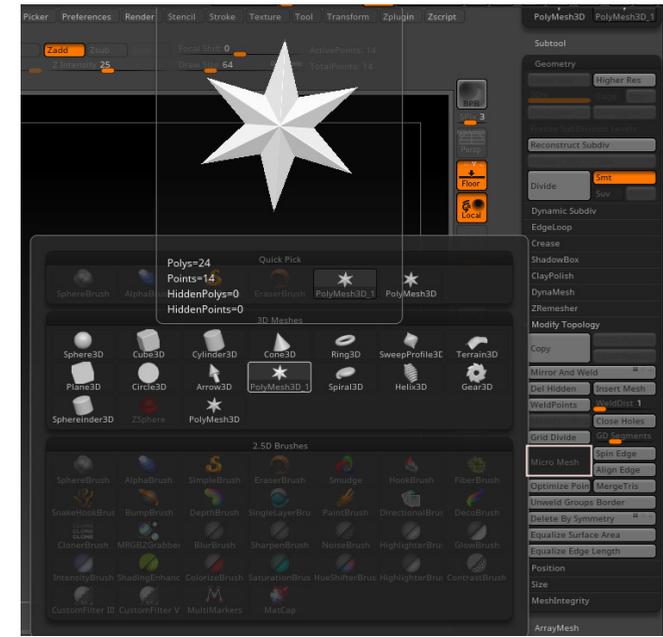


Figure 12-10 A flyout displayed on choosing the Micro Mesh button



Figure 12-11 The message box displayed on choosing the primitive

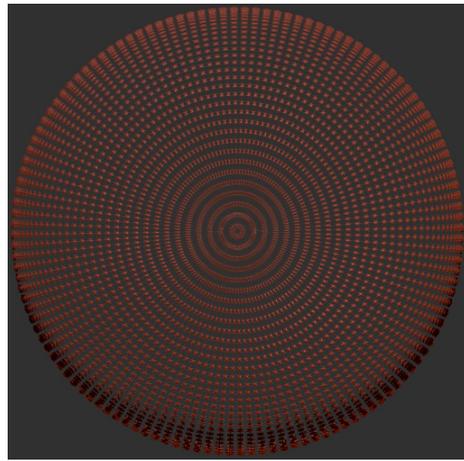


Figure 12-12 The polygons of the sphere replaced by stars on rendering

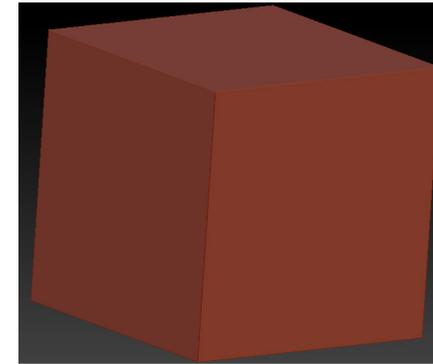


Figure 12-15 The rendered scene in the canvas



Figure 12-16 The Transparent button chosen



Figure 12-13 Rendered sphere with the value of the Materials Blend-Radius slider set to 0

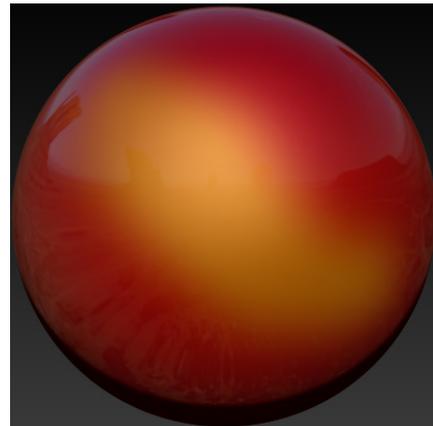


Figure 12-14 Rendered sphere with the value of the Materials Blend-Radius slider set to 50



Figure 12-17 The Display Properties subpalette

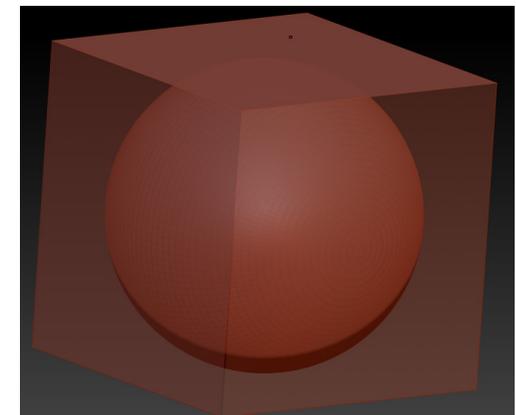


Figure 12-18 The transparency in the cube displayed on rendering



Figure 12-19 The value of the VBlur Radius slider set to 10



Figure 12-20 The blur effect applied to the model

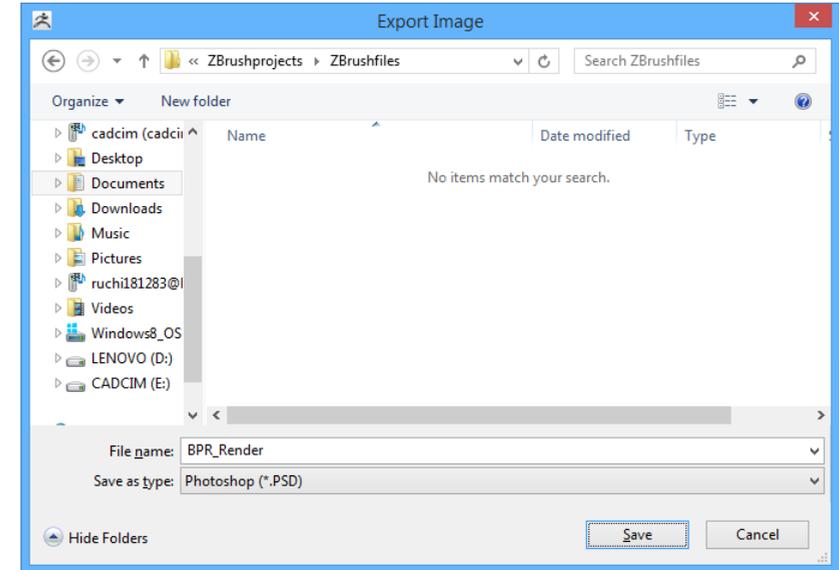


Figure 12-24 The Export Image dialog box



Figure 12-21 The BPR RenderPass subpalette



Figure 12-25 The BPR Transparency subpalette



Figure 12-22 The scene rendered using the BPR renderer

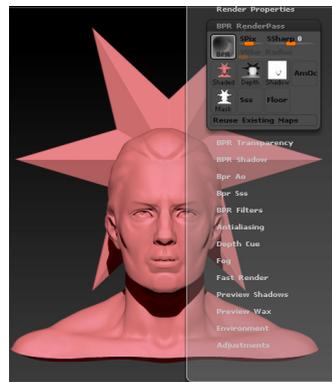


Figure 12-23 The different slots in the BPR RenderPass subpalette filled up



Figure 12-26 The BPR Shadow subpalette



Figure 12-27 The Bpr Ao subpalette



Figure 12-28 The Bpr Sss subpalette

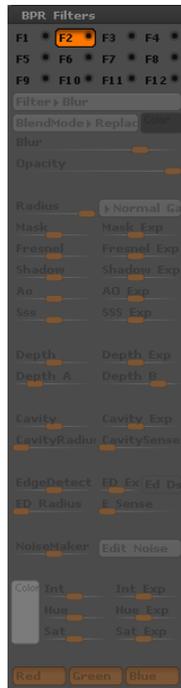


Figure 12-29 The BPR Filters subpalette

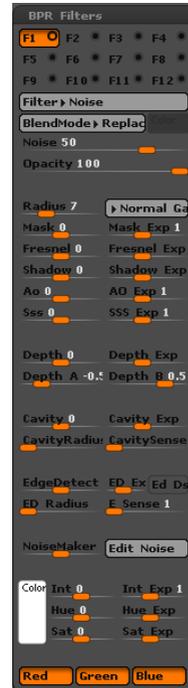


Figure 12-30 Different parameters for applying noise filter

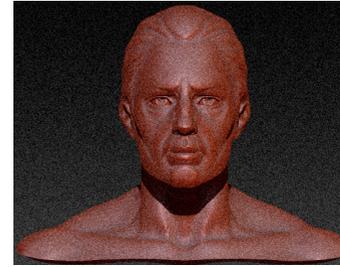


Figure 12-31 The noise filter applied to the rendered image



Figure 12-32 The blur filter applied to the rendered image



Figure 12-33 The sharpen filter applied to the rendered image



Figure 12-34 The orton filter applied to the rendered image



Figure 12-35 The glow filter applied to the rendered image



Figure 12-36 The fade filter applied to the rendered image



Figure 12-37 The colorize filter applied to the rendered image



Figure 12-38 The red filter applied to the rendered image



Figure 12-39 The green filter applied to the rendered image



Figure 12-40 The blue filter applied to the rendered image



Figure 12-41 The saturation filter applied to the rendered image



Figure 12-42 The hue filter applied to the rendered image



Figure 12-43 The Antialiasing subpalette



Figure 12-44 The Depth Cue subpalette



Figure 12-45 The flyout displayed on choosing the Depth Cue Alpha button

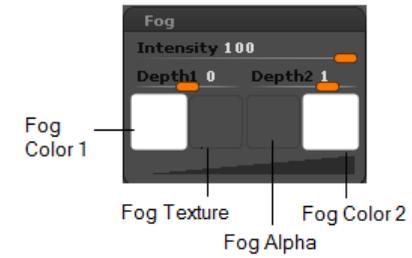


Figure 12-46 The Fog subpalette



Figure 12-47 The Preview Shadows subpalette

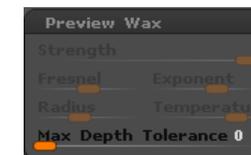


Figure 12-48 The Preview Wax subpalette



Figure 12-49 The value of the Strength slider set to 20

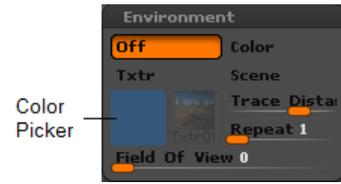


Figure 12-50 The Environment subpalette



Figure 12-51 The Adjustments subpalette



Figure 12-52 The Plane3D primitive chosen from the flyout

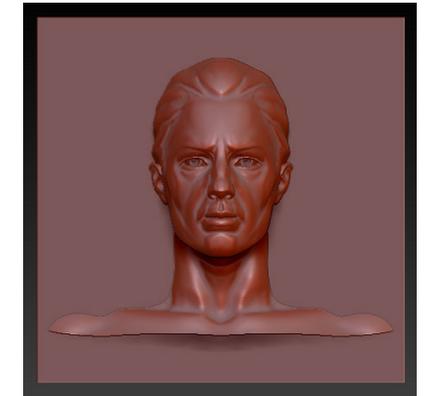


Figure 12-53 The plane displayed in the canvas

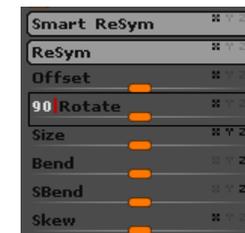


Figure 12-54 The value of the Rotate slider set to 90

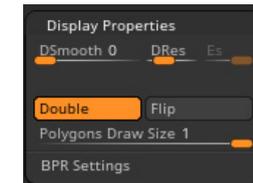


Figure 12-55 The Double button chosen



Figure 12-56 The plane placed below the model



Figure 12-57 The light positioned in the Light Placement window

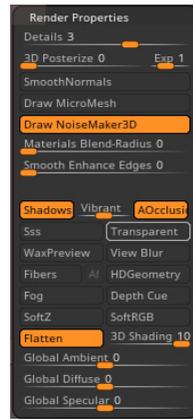


Figure 12-58 The AO Occlusion button chosen



Figure 12-59 The render passes generated



Figure 12-61 The light positioned in the Light Placement window

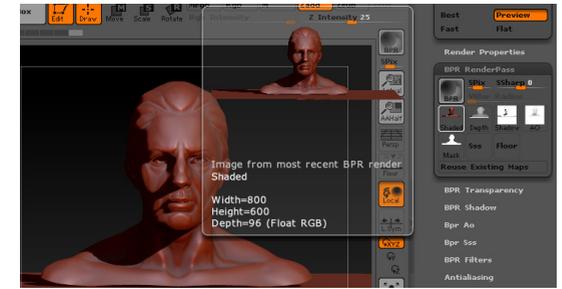


Figure 12-62 The Shaded render pass selected

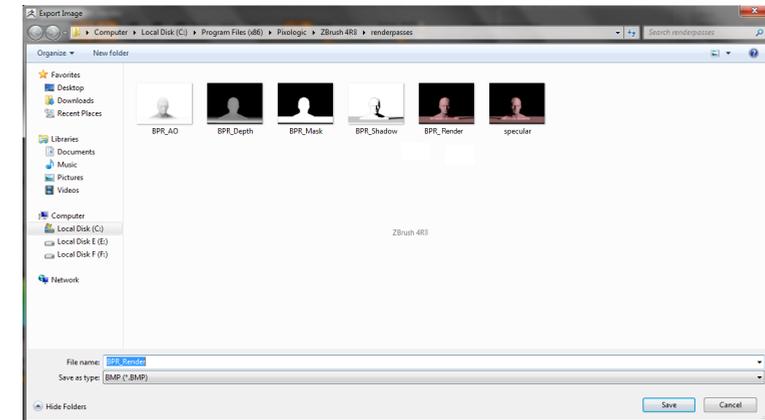


Figure 12-63 The render passes saved in the .BMP format

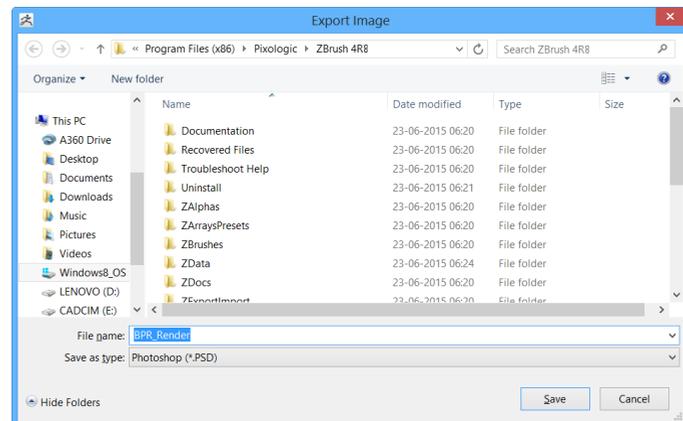


Figure 12-60 The Export Image dialog box



Figure 12-64 The Kotelnikoff Earthquake model displayed in the canvas

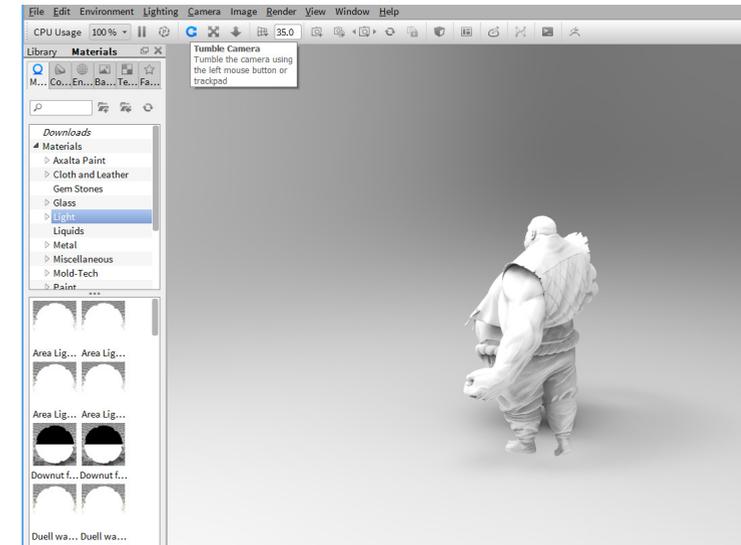


Figure 12-66 Choose the Tumble Camera from the Ribbon



Figure 12-65 The rendered model in the KeyShot renderer



Figure 12-67 Model rotated using the Tumble Camera button

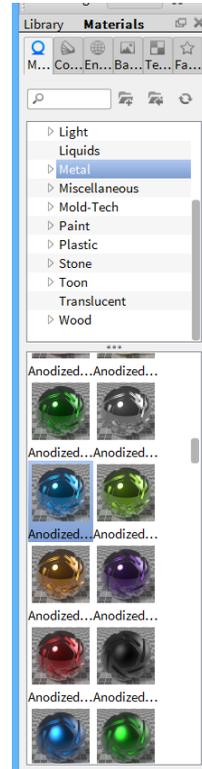


Figure 12-68 Metal node from Library



Figure 12-69 The Anodized Light Blue material applied to the dress



Figure 12-70 The Sunburst material applied to the model



Figure 12-71 The Doch-Design_Dirt-Lot material applied

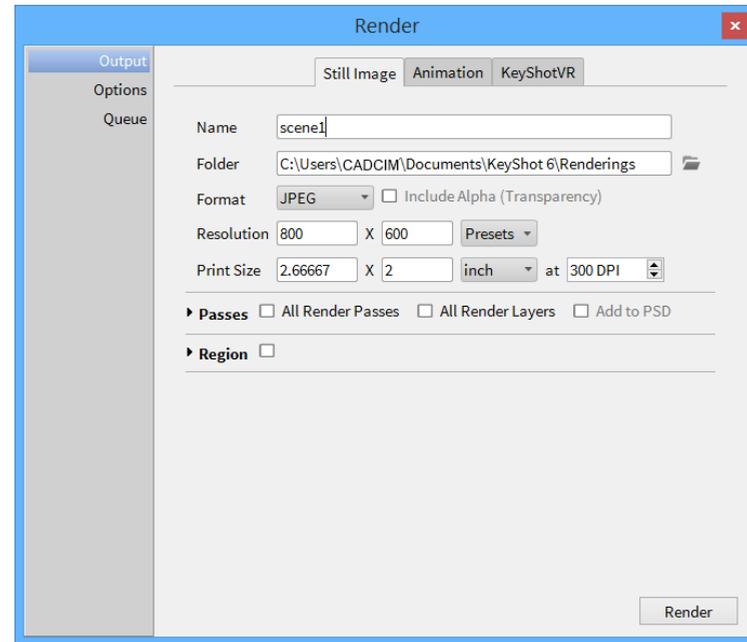


Figure 12-72 The Render dialog box

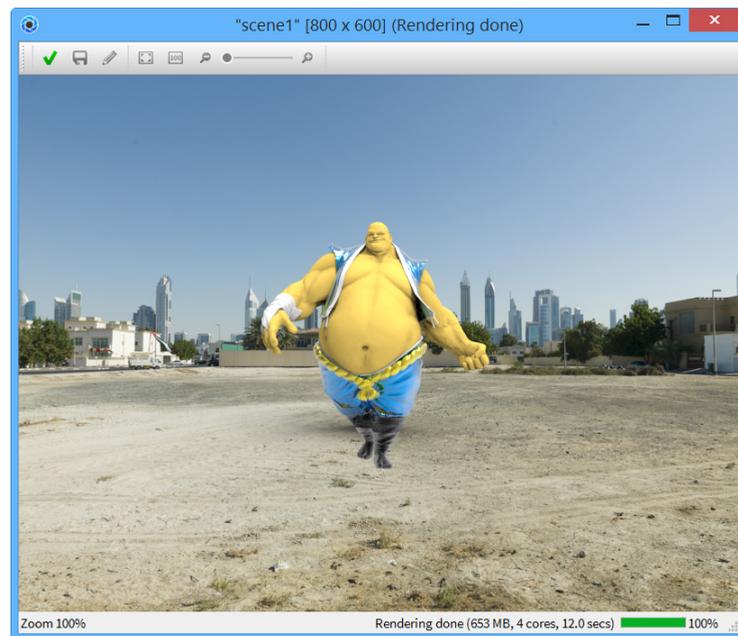


Figure 12-73 The rendering window



Figure 12-74 The final output