
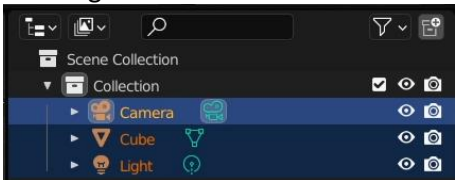

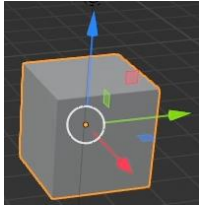


# Blender – Fundamentals of Modeling

## Section 1 – Getting Started

### Objects

Description	Command/Icon
<b>Camera View</b> View the scene from the perspective of the active camera	Numpad 5, Camera Icon  <i>Figure 1 - The Camera Icon</i>
<b>Deselect</b> Clears the selection	Click in the Viewport away from all objects
<b>Select Multiple Objects</b> Select multiple objects in the Viewport  <b>NOTE:</b> The <b>active object</b> is the last object selected. It has a brighter orange highlight in the world and in the Outliner.	SHIFT + Left Click, Click and Drag to Box Select  <i>Figure 2 - Multiple Selections in the Outliner</i>
<b>Change the Active Object</b> Changes the current Active Object when multiple objects are selected	SHIFT + Left Click One of the Currently Selected Objects
<b>Grab</b> Moves an object in space  <b>NOTE:</b> Right Click before confirming movement to cancel that movement	G, Move Icon to get the Translation Gizmo  <i>Figure 3 - Move Icon</i>   <i>Figure 4 - The Translation Gizmo</i>
<b>Undo All Movement</b> Clear out all movement for an object	ALT + G

<p><b>Undo All Rotation</b> Clear out all rotation for an object</p> <p><b>Undo All Scaling</b> Clear out all scaling for an object</p>	<p>ALT + R</p> <p>ALT + S</p>
<p><b>Lock Movement to an Axis</b> Movement will be constrained to the specified direction</p> <p><b>NOTE:</b> G + (number in meters) + ENTER will rotate the object by the specified distance.</p>	<p>G + (X, Y, or Z) and Move the Mouse (click to confirm), Move Icon, then Click and Drag the Handles on the Translation Gizmo</p>
<p><b>Rotate</b> Rotate an object parallel to the plane of the screen</p> <p><b>NOTE:</b> Right Click before confirming rotation to cancel that rotation</p>	<p>R, Rotate Icon to get the Rotation Gizmo</p> <div data-bbox="1062 728 1170 814" data-label="Image"> </div> <p><i>Figure 5 - Rotation Icon</i></p> <div data-bbox="1034 903 1203 1079" data-label="Image"> </div> <p><i>Figure 6 - Rotation Gizmo</i></p>
<p><b>Lock Rotation to an Axis</b> Rotation will be constrained to the specified axis</p> <p><b>NOTE:</b> R + (number in degrees) + ENTER will rotate the object by the specified angle.</p>	<p>R + (X, Y, or Z) and Move the Mouse (click to confirm) Rotate Icon, then Click and Drag the Arc Handles on the Rotation Gizmo</p>
<p><b>Scale</b> Scale an object to make it bigger or smaller</p> <p><b>NOTE:</b> S + (number) + ENTER will scale the object by the specified number</p>	<p>S, Scale Icon, then Click and Drag one of the Handles on the Scale Gizmo</p> <div data-bbox="1066 1419 1170 1514" data-label="Image"> </div> <p><i>Figure 7 - Scale Icon</i></p> <div data-bbox="989 1566 1248 1808" data-label="Image"> </div> <p><i>Figure 8 - Scale Gizmo</i></p>

<b>Lock Scaling to an Axis</b> Scaling will be constrained to the specified axis	S + (X, Y, or Z) and Move the Mouse (click to confirm)
<b>Transform an Object in Two Directions</b> Allows us to specify the axis <b>not</b> to transform in.  Translate in Two Directions         Scale in Two Directions	         G + (SHIFT + Z) will move the object in the XY plane, etc.         S + (SHIFT + Z) will scale the object in the XY plane, etc.