Blender Demo Guide

* Default blender navigation:
  + Scrolling the will zoom in and out.
  + Clicking and moving mouse will rotate the view.
  + Clicking will pan the view.
  + Documentation for basic viewport control can be found here: <https://docs.blender.org/manual/de/dev/editors/3dview/navigate/index.html>
  + Documentation for blender’s different modes can be found here: <https://docs.blender.org/manual/de/dev/editors/3dview/modes.html>
* Object modeling:
  + Default mode in blender.
  + Right click to select an object.
  + will enable translation mode where you can then move the object around by moving the mouse around.
  + will enable scale mode where the object will change scale based on how you move the mouse around.
  + will enable rotation mode where you can rotate the object based on your mouse movement.
  + In all cases you can use or to lock the transformation to a specific axis.
  + In a transformation mode you can type numbers to affect an object by a specified number.
    - For instance, in rotation mode with a lock on the x axis typing 90 will rotate the object by 90 degrees around the x axis.
    - Or if in scale mode you type 0.5 the object will be half as large.
  + To apply a transformation either hit enter or left click the mouse.
  + To cancel a transformation either use escape or right click the mouse.
  + To clear transformations from an object use transformation you want to clear.
    - So, to clear the translation of an object can be used.
  + To apply a transformation to the mesh you can use and then select the transformation you wish to apply.
  + To spawn a new object, you can use and select the primitive you wish to spawn.
  + To duplicate an object but make the mesh it uses unique, you can use
  + To duplicate an object but keep the same mesh, you can use
  + will undo an operation, will redo an operation, will open the menu that has a history of operations that were done.
  + will open the object delete menu.
  + For more about object mode in blender check out the documentation (<https://docs.blender.org/manual/de/dev/editors/3dview/object/index.html>) or the tutorials linked in the PowerPoint.
* Mesh modeling:
  + In blender mesh modeling (or rather edit mode) can be accessed by hitting when an object is selected.
  + Default operations are the same as in object mode.
  + Notable new operations are for a menu with lots of useful features like merge, remove doubles, smooth/flat shading, flip normals, etc.
  + will now let you pick whether you want to remove or dissolve vertices, edges, faces.
  + Selection will now select individual vertices. To select multiple vertices (or objects) in blender you can hold shift while selecting your objects.
    - will select everything or if everything’s selected, deselect everything.
    - will open a region which can be scaled with the and will select all the elements inside the circle if , will deselect the elements instead.
  + will open the loop slide tool which can be used to insert edges into a model.
  + will extrude a vertex or set of vertices.
  + will join vertices together creating either an edge or a face.
  + For more information regarding mesh modeling in blender refer to the documentation (<https://docs.blender.org/manual/de/dev/modeling/index.html>) or the tutorials linked in the PowerPoint.
* Modifiers:
  + In blender can be accessed through the modifier menu.
  + Modifiers of note:
    - Subsurface: smoothly interpolate between vertices making the mesh more uniform/smooth.
    - Bevel: divide the edges of a model making it look more realistic by not having a 90 degree edge but a more tapered/smoothed out edge.
    - Solidify: Change a surface into a 3D shape by extending it along its surface normal.
    - Array: Create repeats of a mesh based on either another object, a set distance or a relative distance.
  + For more information regarding modifiers check out the documentation (<https://docs.blender.org/manual/en/latest/modeling/modifiers/index.html>) or the tutorials linked in the PowerPoint.
* Sculpting:
  + Won’t really get too into this, check out the documentation (<https://docs.blender.org/manual/en/latest/sculpt_paint/sculpting/index.html>) or the tutorials linked in the PowerPoint if you wish to learn how to sculpt in blender.