

Introduction to Blender

Refer to the **lecture notes** from September 13 (posted on web page).

You can also refer to the **User Manual**:

<http://wiki.blender.org/index.php/Doc:2.6/Manual/>

And to the **Blender Tutorials**:

<http://cgcookie.com/blender/get-started-with-blender/>

Your goal with this lab is to learn how to navigate the basic functionality of the Blender interface. This includes **adding** objects, **deleting** objects, **duplicating** objects, **editing** objects.

By the end of this lab, you should be able to:

1. Create an object
2. Duplicate the object
3. Edit the properties of the first object
4. Edit the faces of the second object
5. Render the objects as an image
6. Animate the objects
7. Render the animation as a movie

Be CREATIVE!

Be BRAVE! Try things to see what happens!

Step-by-step introduction to Blender interface

1. Start up Blender. You will see the default *cube* object.
2. Refer to the lecture notes (as above) for the keystrokes and fill in the quick reference below:

zoom in (toward object) using:		key
zoom out (away from object) using:		key
rotate object to the left using:		mouse key
rotate object to the right using:		mouse key
pan up using:		key/mouse
pan down using:		key/mouse
pan left using:		key/mouse
pan right using:		key/mouse
toggle between <i>camera view</i> and <i>user view</i> using:		key
switch to <i>front view</i> using:		key
switch to <i>side view</i> using:		key
toggle between <i>perspective mode</i> and <i>orthographic mode</i> using:		key

3. Select the *cube* object (using the key).
Transform the object in several ways:

- (a) **Translate** or **Grab** the object (using the key or menu button).
- (b) **Rotate** the object (using the key or menu button).
- (c) **Scale** the object (using the key or menu button).

Note that translating or grabbing the object is not the same as panning the view. Why not?

Note that rotating the object is not the same as rotating the view. Why not?

Note that scaling the object is not the same as zooming the view in or out. Why not?

4. **Add** a new object (using the key).

- (a) Select your new object.
- (b) Switch to *object edit mode*.
- (c) Select a *vertex*.
- (d) *Delete* the vertex (using the key).
- (e) Select a *face*.
- (f) *Extrude* the face (using the key).

5. **Duplicate** your new object (to create a third object).

6. **Delete** the third object (to make sure you know how to delete an object).

7. Select one of the objects. Find the **materials button** on the **properties panel**.

- (a) Change the color of the object (using the feature).
- (b) Change the reflectivity of the object (using the feature).
- (c) Change the transparency of the object (using the feature).

8. Select one of the objects. **Animate** the object by making it move in a straight line over 100 frames.

9. Select the **lamp** object. Find the **object properties button** on the **properties panel**.

- (a) Change the type of lamp (e.g., point, sun, hemisphere, etc). See what that does to your scene, in particular to the objects that are in the scene.
- (b) Modify the reflectivity properties of your objects when you change the lamp properties to experiment with how these two types of properties interact.

10. **Render** your object (using the key).

- (a) Save your rendered object as an IMAGE — use the key to bring up the file saving screen.

11. DO THIS AT HOME: **Render** your animation — *this may take a while*.

- (a) Save your rendered animation as a MOVIE.