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Open your mind: Learn how to use Open Source Applications Open Office, Audacity, Blender and Processing

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WORKSHOP DEMONSTRATION


Learning the basics of Open Office,
Audacity, Processing & Blender.



OPEN OFFICE

- ▶ A free open source that contains software for word processing, presentation slide, graphic tables, charts and databases.
 - ▶ Simple interface which makes it for easy use
 - ▶ Same capabilities as Microsoft Office
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Audacity

- ▶ A free open source program that allows you to record, mix and edit audio together.
 - ▶ Only accepts mp3, WAV & AIFF files
 - ▶ Available in Windows, Mac and Linux platforms
- 

AUDACITY

Import Audio File

- ▶ Go to Project > Import > and select the audio file you choose to import

To Record sounds

- ▶ If your computer has a microphone built in, then all you will need to do is to press the Record button and record your own audio file. To stop the recording, press stop or to pause it and continue later, press the pause button.

TOOLS OF AUDACITY

Selection

Click and drag over the area you want to edit

Envelope

Changes the volume of the entire audio file

Pencil

Change each Node On the Audio file

Zoom

Zoom in or Out by left Or right clicking

Move

Move the Audio file In any position

Multitask

A tool where all of the tools purposes combined

PROCESSING

Open Source Programming

- ▶ User friendly for beginners and novices
- ▶ Allows you to create drawings, animations, sound and interactivity
- ▶ Founded by John Maeda's students from MIT Media Lab

Called the interactive sketchbook

- ▶ Free download
- ▶ Programming environment for 2D, 3D and PDF outputs
- ▶ Used for PC, Mac & Linux
- ▶ Is OpenGL Integration for accelerated 3D effects

BABY STEPS FIRST!

In order to use Processing, you will have to write code. As un-cool as that sounds, the more you experiment with it, the more you will get the hang of it. In simplest terms, writing code is almost like writing a math equation. There are variables in the code like 'x', for instance, like $3x + 4 = 10$. You will have to write the code to include the variable 'x' and then decide its purpose. A more complex equation: $(x+1) + (2y * 6) = 20$. You must keep the parenthesis organized to keep the equation as simple as possible. The same goes with writing the code. The parenthesis must complete each other for the code to work properly. The end of each code sentence you type must end with a semi-colon, ';'. Just like each sentence must end with a period.

GETTING STARTED

You must type 'void setup ()', which lets the program know you are creating a new window. Typing 'size (300, 600);' for example will determine the size of the window canvas

```
void setup () {  
  size (300, 600);  
}
```

Typing 'void draw ()' will create a canvas for you to write the code and draw

```
void draw () {  
}
```

Key words like 'void' or 'draw'
Will be highlighted orange

The bracket keys are the parameters or Area of the code you are writing. Keeping the Code between those brackets allows the Program to run. If you forget one or the other Then the program will not run.


Typing ' background(0);' determines the color of the window. 0 is the color black. The higher the number, the lighter the background.

```
void draw () {  
  background (0);  
}
```

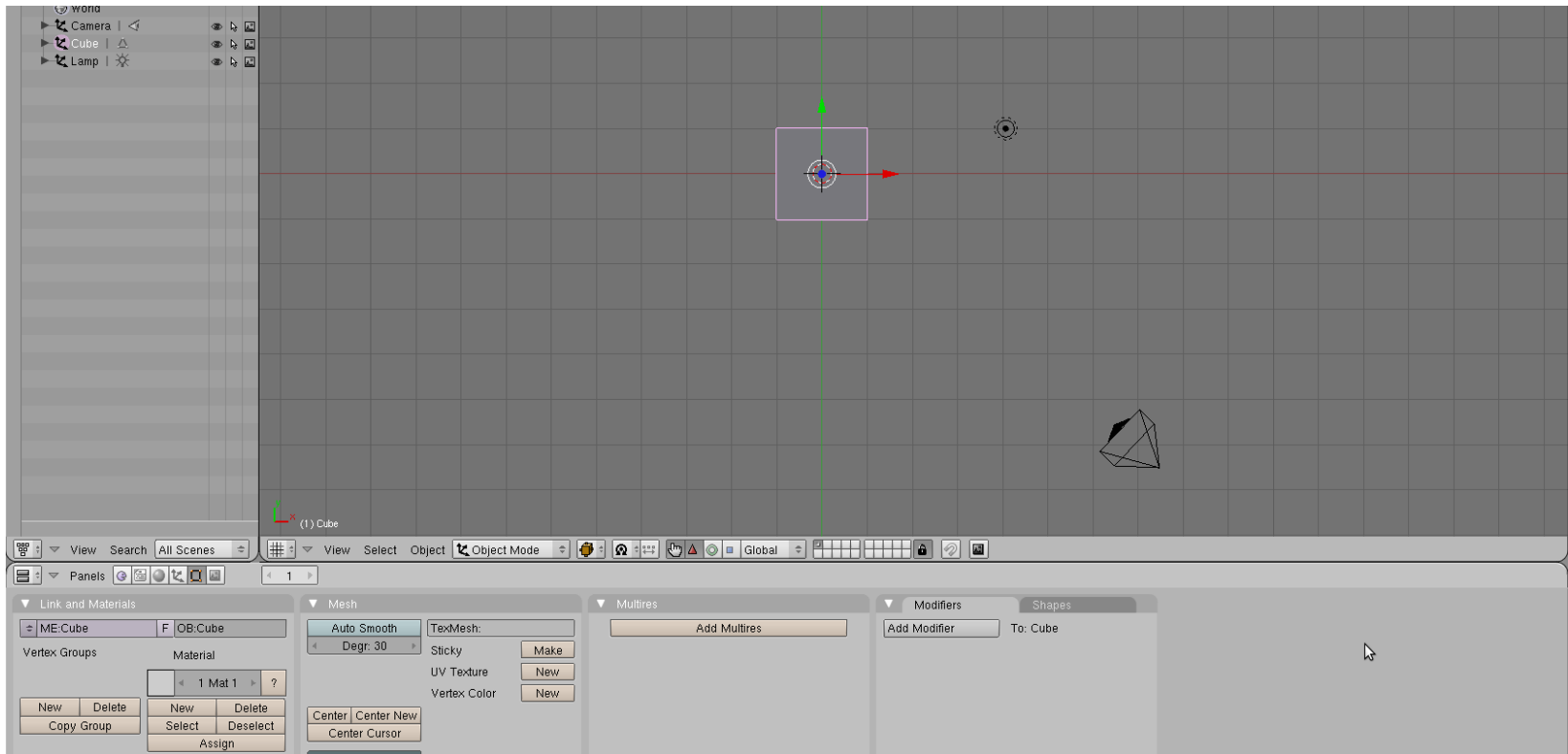
Typing ' ellipse (0,0,0,0);' will create a circle. The first two numbers determine the location of the ellipse on the canvas. The last two numbers will determine its size.

```
void draw () {  
  background (0);  
  ellipse ( 100, 100, 50, 50);  
}
```

BLENDER

- ▶ An open source 3D program. Generated by GNU General Public License
 - ▶ Founded by Ton Roosendaal who started the Blender Foundation in May of 2002
 - ▶ Allows 3D modeling, animation and rendering
 - ▶ It is free!
- 

THE BLENDER INTERFACE



The pink highlighted cube is the selected object


The small dot in the upper right is the lamp

The triangle in the lower right is the camera

BABY STEPS!...AGAIN

- ▶ The middle mouse button rotates the view
- ▶ Holding shift and the middle button, pans the view
- ▶ Control & middle button, zooms in or out. Or use the mouse wheel
- ▶ The colored arrows on the objects lets you move the object in the X, Y or Z directions
- ▶ While the object selected, the 'G' key moves the object
- ▶ 'R' lets you rotate it
- ▶ 'S' scales the object
- ▶ In Edit mode: 'A' selects all the faces, vertices or edges at once
- ▶ 'X' deletes the object & 'tab' switches from object to edit mode

THE SPACE BAR

- ▶ Press the space bar and a pop-up menu will appear
 - ▶ Add-Lets you create new objects, cameras and lights
 - ▶ Edit-Goes into Edit mode, to duplicate shapes, delete or perform functions with those shapes
 - ▶ Select-Selects objects, edges, vertices, faces or objects
 - ▶ Transform-Lets you move, rotate or scale objects
 - ▶ View-Allows to change the view on the window. Focus on one object
Or all of them
 - ▶ Render- Allows you to render the entire scene from the camera's view
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IF YOU THOUGHT THIS WORKSHOP SUCKED, TRY THESE TUTORIALS FOR MORE HELP!

Blender Tutorials

<http://www.blender.org/education-help/tutorials/>

<http://www.tutorialized.com/tutorials/Blender-3d/>

Audacity Tutorials

<http://audacity.sourceforge.net/manual-1.2/tutorials.html>

Processing Tutorials

<http://www.processing.org/reference/>

<http://www.learningprocessing.com/tutorials/>