

# Blender 3D

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ElectronicArmory.com
3D Game Development Course

#### Resources

Blender - Official homepage

Blender Nation - News and links

Blender Artist - Forums and gallery of Blender artists

Blend Swap - Free Blender models

<u>Turbo Squid</u> - Free and paid high quality models

**Art Station** - Artist community

#### General (most window types)

Toolbar	T
Properties	N
Add Object/Node	Shift + A
Delete	X or Delete
Search for Function	F3
Move	G
Scale	s
Rotate	R
along axis	_ then X/Y/Z
along local axis	$\bar{z}^{\textit{then X, X/Y, Y/ Z,}}$
Trackball Rotate	R, R
Precise movement	Shift (hold)

Incremental movement	Ctrl (hold)	
Duplicate	Shift + D	

Duplicate Linked	Alt + D
Hide	Н
Unhide All	Alt + H
Hide all Except Selected	Shift + H

Annotate	D (hold) + LMB (drag)
Erase Annotation	D (hold) + RME (drag)
Quick favs menu	Q

#### Navigation (3D viewport)

Orbit	MMB
Pan	Shift + MMB
Zoom In/Out	Scroll or Ctrl + MM
Fly	Shift + ~

#### View (3D viewport)

Numpad views (most common bolded):

	/ Isolate	
7	8	9
Тор	Up	Opposite
4	5	6
Left	Persp/Ortho	Right
1	2	3
Front	Down	Side
	0	23#7/
Ca	amera	Focus

view Pie Menu	~	
Fast View Switch	Alt + MMB (drag)	
Show All Objects	Home	
Zoom to region	Shift + B	

## **Navigation**

Middle mouse button (hold) - Spin around object

Ctrl-Mouse Wheel - Zoom in and out

Shift-Middle mouse button (hold) - Pan

#### Modes

Object Mode - Move entire objects (including all vertices) and all their child objects

Edit Mode - Edit individual pieces of the object (vertices, edges, faces)

## **Keyboard Shortcuts - Manipulate Objects**

A/AA - Select all, deselect all (double tap)

Tab - Toggle Edit/Object Mode

G - Grab/Move

S - Scale

R - Rotate

X/Y/Z - Pressed after G, S or R, will constrain the item to that axis

Ctrl-R - Add Edge Loop

## **Objects and Children**

P - Separate (by selection) from current object and create new object

Ctrl-J - Join selected objects into one object

## **Keyboard Shortcuts - Adding Objects**

**Shift-A** - Add object. When in Edit Mode, adds to current object. In object mode, adds a new object

Shift-S - 3D Cursor pie menu. Selecting vertices, edges or faces will put the 3D cursor at the average point of all items selected.

Shift-D - Duplicate object. Puts the object into move mode.

Alt-D

### **Keyboard Shortcuts - Removing Objects**

X - deletes a particular feature of an object (vertices, edges, faces, dissolves, etc). If in Object Mode, deletes the entire object.

### **Models and Texture**

Turbo Squid

Blender Market

<u>Textures</u>

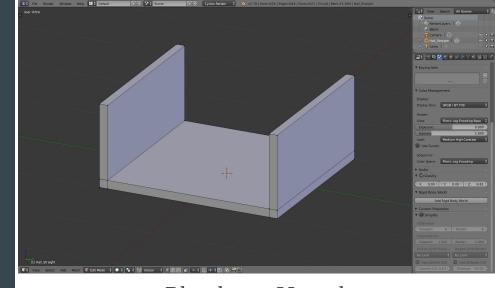
Game Textures

<u>Unreal Engine Marketplace</u>

# Blender 3D Demo

Making a corridor!

Simple, but illustrates a number of important ideas and techniques



Blender to Unreal

