

## **Simple House, Step 1**

### **Basic Modeling and basic materials**

#### 3ds Max Setup

Main menu/Customize/Custom UI and Defaults Switcher ... set to 3ds Max and ame-light – restart Max if necessary.

Set up units to Feet with fractional inches 1/1

Make a box:

L 24

W 14

H 8

Width segments 2

Other segments, 1

Hit F4 to see the segment edges.

Select the box with the move tool.

Enter 0,0,0, for xyz positions.

Save as: *simple house 001.max*

#### **Basic modeling**

Right click, convert to editable poly.

Enter edge mode.

With the Move tool, select the middle of the top.

Move it up 14 ft, creating a peak to a roof.

Note – when you raise the roof peak edge up on Z, Max will report to you the amount you are moving relatively (for example, 1 ft); when you let go of the numeric spinner, Max will read out the absolute measurement (for example, 14 ft.)

#### Roof

Enter polygon mode.

Using the Control key, select both planes of the roof.

Open the Edit Geometry rollout of the Command panel.

Hit Detach.

Name it Roof

#### Floor

Arc rotate your view to look under the house.

Select and detach the floor planes.

Name it Floor.

## Roof

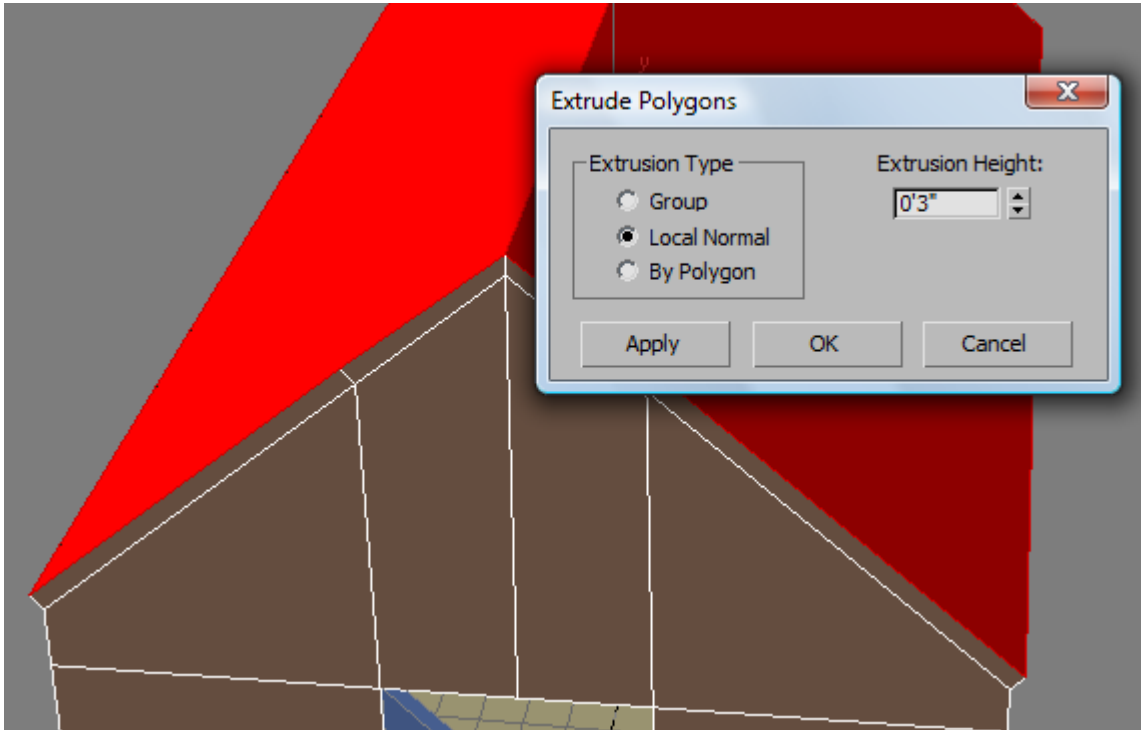
Select the roof.

Enter the polygon sub-object mode.

Both polygons should be selected.

Right click, hit the Extrude numeric entry button.

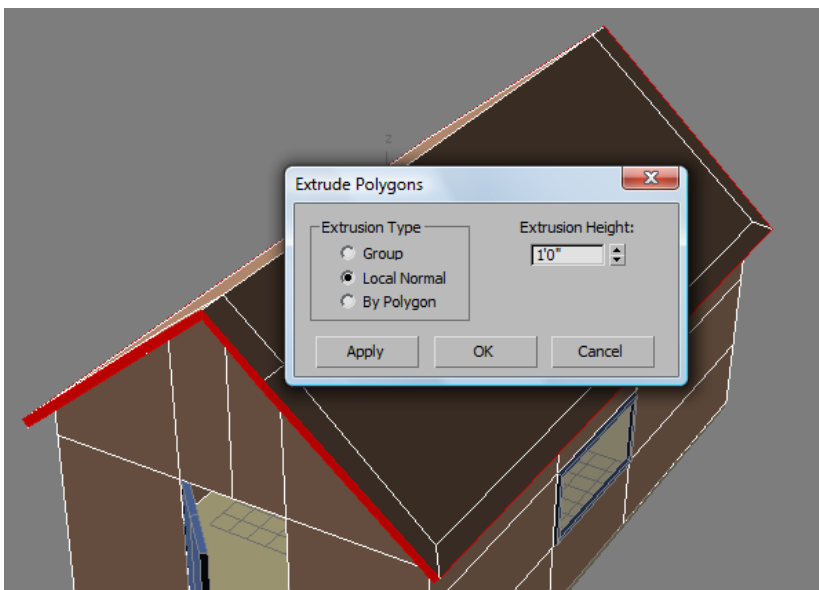
Enter 3 inches, **local normal**. OK.



Arc rotating as needed, select all the polygons that make up the edges of the roof.

Right click, Extrude 1 ft.

Exit the sub-object mode.



### Window

Select a large side of the house.  
Hit F2 so the red selection becomes a red outline.  
This is just a different way to view a selected polygon.

Hit the slice plane button.  
You are now in slice plane mode.  
Move the plane to the top position of a window: 6 ft.  
Hit the slice button.  
Move down to 3 ft.  
Hit slice again.  
Rotate the slice plane 90 degrees.  
Hit slice for the left side of the window, move it to the right 3 ft, and hit slice again.

Select the window only.  
Detach it the same way you attach the roof, and name it window.

### Door

Make a door at the front of the house the same way you made the window.  
You will need to rotate the plane into position.  
Slice the top of the door at 7 ft.  
Make the door 4 ft wide.  
(One vertical slice at negative 2 ft on Y, one slice on positive 2 ft.)

Select the 2 polygons making the door and detach, name it door.

### Walls

Exit the Polygon sub-object mode.  
Name the object Walls in the command panel.

Hit Alt Q to isolate the walls.  
Add a Shell modifier.  
Make Inner 3 inches.  
Make outer 0.  
Select Straighten corners.  
Hit Exit Isolation Mode.

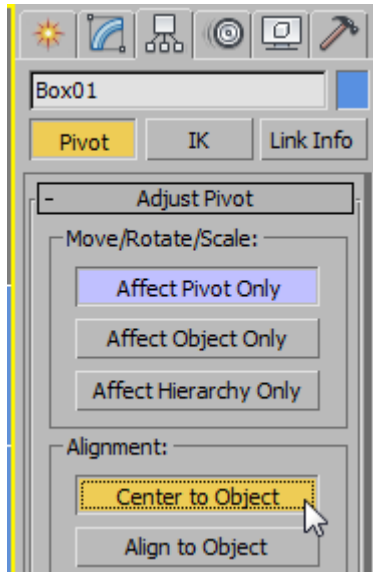
### Open the door

Select the door.

Select the Hierarchy tab on the command panel.

Select Affect Pivot Point Only

Hit Center to Object.



Select the Move tool.

Move the pivot to the left edge of the door

Hint – do this in Front View for most accuracy

Important – now, Turn off Affect Pivot Point Only (the blue button should turn back to grey.)

In the perspective view, select the rotate tool, and open the door.

Add a shell modifier to the door to give it thickness.

Tip – you could also have used extrude in the polygon sub-object, but shell was a little faster in this case.

### Window glass

Select the window.

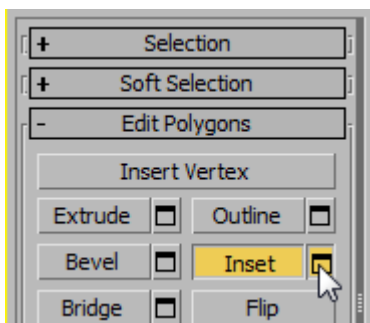
Center the pivot point to the object the way we did with the door.

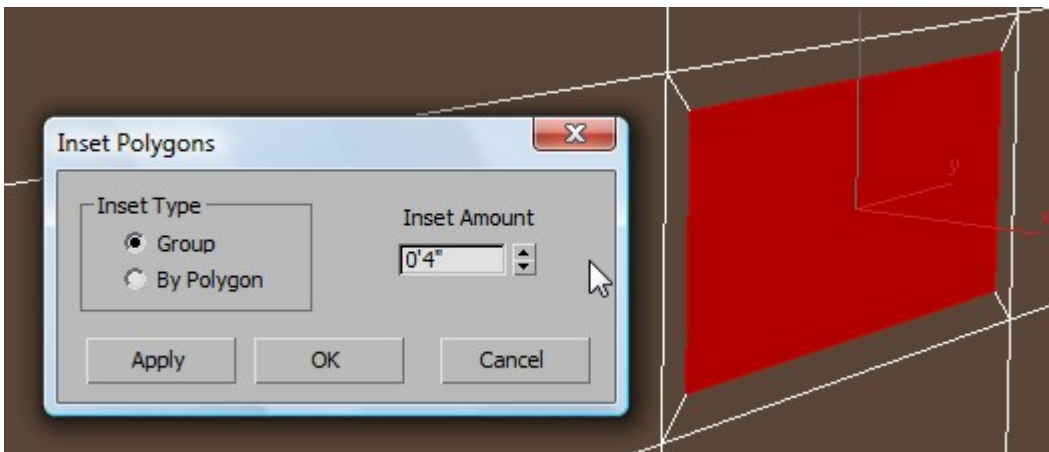
(Not necessary to move it to the edge.)

Enter the polygon sub-object of the window.

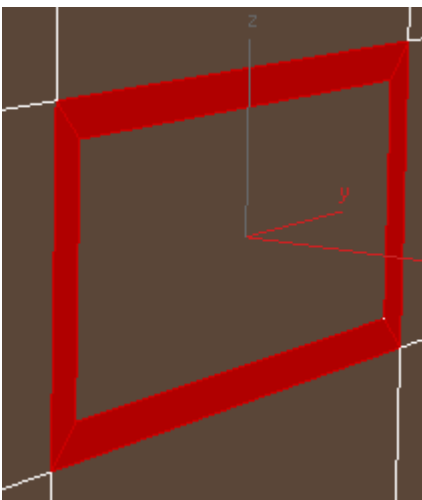
Find the Inset tool in the Edit Polygon rollout.

Inset 4 inches. OK.

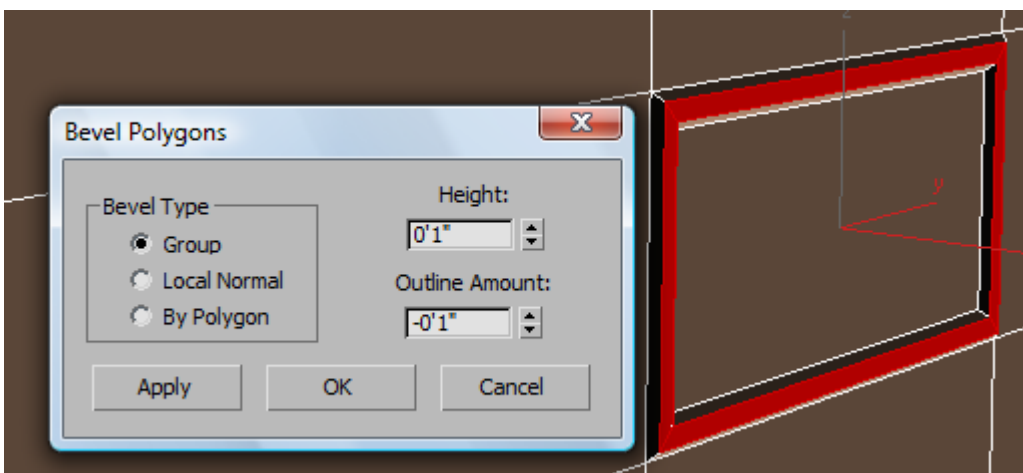




In the main menu, go Edit/Select Invert. (Control I) This will select the frame edges.



Bevel up the frame height 1 inch, outline amount -1 inch. OK.



Now select the glass polygon in the center.  
Detach this polygon and name it glass.  
Exit polygon sub-object mode.

### Floor thickness

Select the floor  
Add shell  
Inner 0, Outer 3 inches.

### **Basic Materials**

Hit M to open the Material Editor

Each sphere represents a new material.

Please simply **use these very simple diffuse colors** for your materials for now; we will apply specific image maps in the next lesson.

### Wall material

Name the first one Walls

Hit the diffuse color button and pick a bold color

Then drag the sphere to the walls.

If you don't see it in the viewport, hit the "Show Standard Map In Viewport" icon (looks like a blue and white checkered box)

### Floor, Roof and Glass materials

Make the following new materials and drag to the correct objects, each time selecting a very different bold color:

Floor

Roof

Make another material called Frames – drag it to the door and the window frame.

Last make a material called Glass.

Make it a dark blue, and reduce the opacity to about 20%.

Drag it to the glass.

### Background

From the main menu, Rendering/Environment, make the background white.

### Render dimensions and view

From the Rendering dialogue, set the size to 800x600

Arc rotate and zoom for a good view of your model

Render the Perspective viewport

### Roof: Smooth

You will notice the roof looks odd, in other words, you can see the edges where we extruded out the roof eaves.

We need to fix what are called smoothing groups.

Select the roof.

Add the Smooth modifier, and turn on "Auto-smooth."

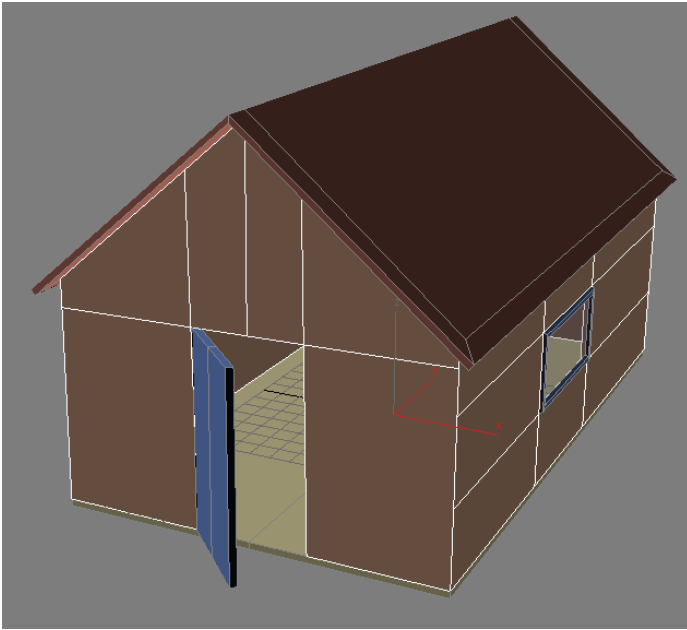
### Final render

Re-render.

Save as a jpeg

### Final output

Open in Photoshop; add your name and print to the color printer.



This completes this lesson. Next is step 2, where we add more advanced materials, etc.