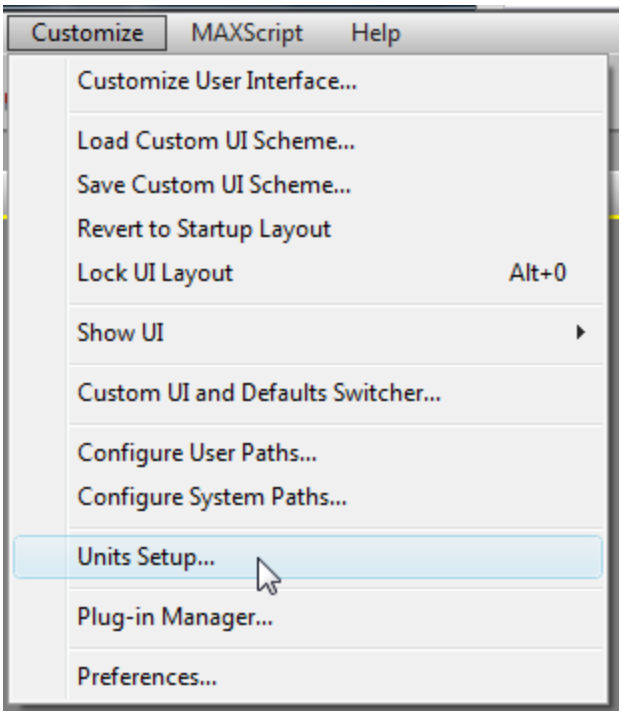
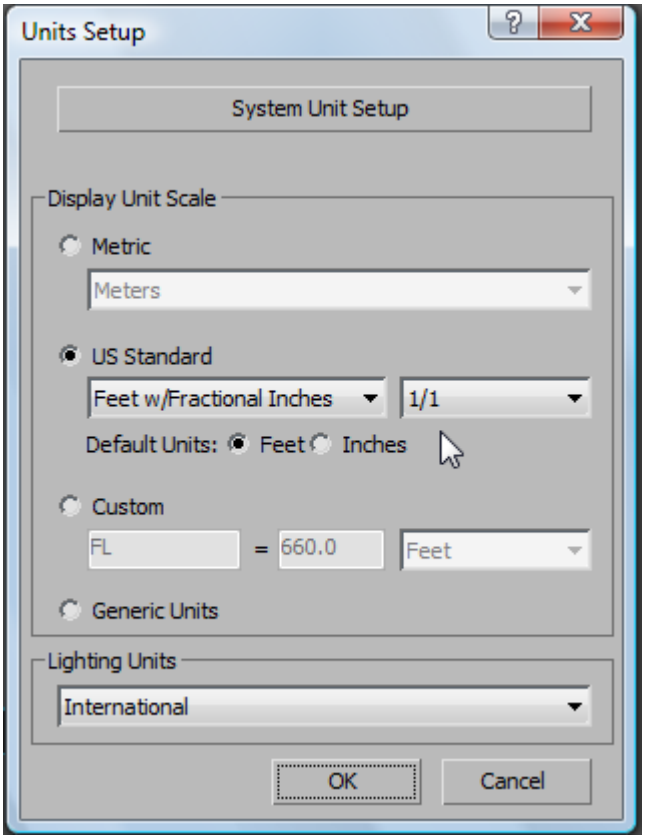
Very Simple House Part 1

Set up units
Main menu/Customize/Units Setup …



US Standard … Feet w/Fractional
Inches, 1/1. Choose Feet as the default units.



See edges
Hit the F4 key to make certain you will be able to see your segments and edges.

Create a primitive to get started
Create a Box:
Length and Width: 20 ft
Height: 15 ft.
8 segments each axis.

Navigate
Zoom out by rolling the middle mouse button if necessary.
Drag with middle mouse down to pan.
Drag with middle mouse down and Alt key to orbit.

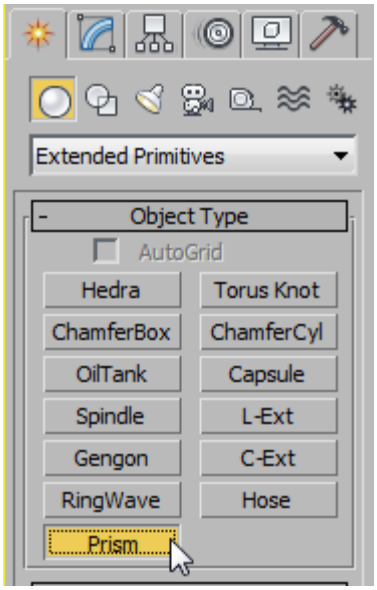
Position
Activate the move tool and set position to 0,0,0.

Convert
Right click/Convert to editable poly.

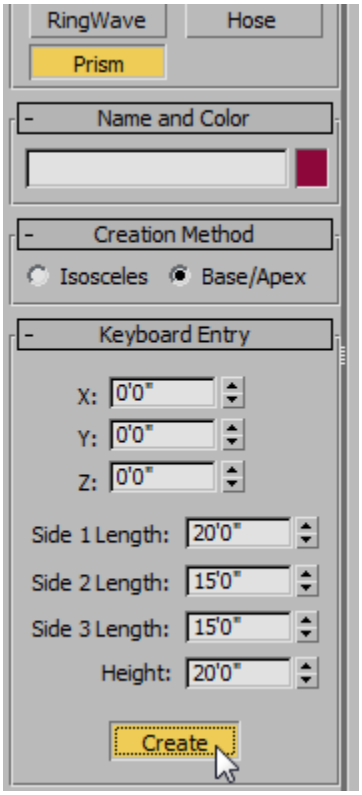
Start modeling
Enter the polygon subobject level.
Turn on Ignore Backfacing.
At the front of the house select 2 columns of 4 polygons for a door.
Control click to select multiple polygons.
Delete.

Holes for windows
On the side of the house create 4 polygons for a window.
Delete.
Exit the polygon sub-object level.
Note – exiting the sub-object means clicking on the yellow to go to the top level of the model.
"Be mellow – click on the yellow."

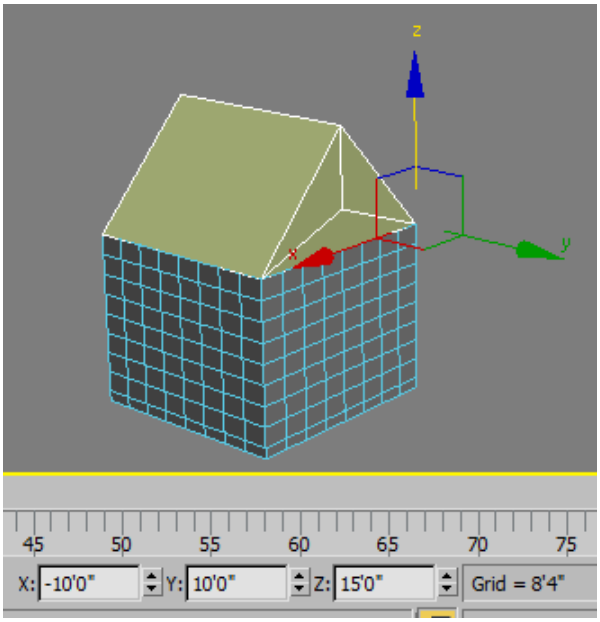
Make a roof
Activate the front viewport.
Activating the front viewport will align the prism correctly.
Drop down Standard Primitives and select Extended Primitives.
Select Prism.



Since drawing a Prism is awkward, use the keyboard entry rollout:
Side 1 = 20 ft
Side 1 = 15 ft
Side 1 = 15 ft
Height = 20 ft
Hit the Create button.



Position the roof
The roof will need to be moved.
Activate the Move tool.
Having the move tool activated will give us the right numbers to work with.
Set position to -10, 10, 15.
(Note – we could have also done this in the X, Y, Z settings when we created the prism.)



Make a chimney
Change Extended Primitives dropdown back to Standard Primitives.
Make a simple box of any size.
Make segments 1, 1, 1.
Use the move tool to position in the roof as a chimney.
Suggestion: size of 2, 2, 12.

Select the house.
Activate the modify tab.
Locate the Edit Geometry rollout.
Hit the attach button.
Hover over the roof and click,
hover over the chimney and click.
This makes the 3 parts all one editable polygon.
Click on the attach button to turn it off.

Detach a floor:
Arc rotate (Alt MMB) to look under the house.
Access the polygon subobject level.
Make certain Ignore Backfacing is on.
Use the select tool and select all the polygons of the floor.
Tip – under the selection rollout is the "Grow" button. If you click on the middle 4 polygons, you can "grow" out to select all the polygons faster that selecting one by one.

Detach a Foundation:
Under the Edit Geometry rollout hit Detach.
Name it Foundation.
Element and clone should not be selected.

Detach the roof
Access the Element subobject level.
Select the Roof.
Detach it and name it Roof.

Detach the chimney
Select the chimney.
Detach and name it Chimney.
Name Box01 Walls
Exit the subobject level by clicking on the yellow highlighted word Element.
At the top of the modifier tab, rename Box01 to Walls.

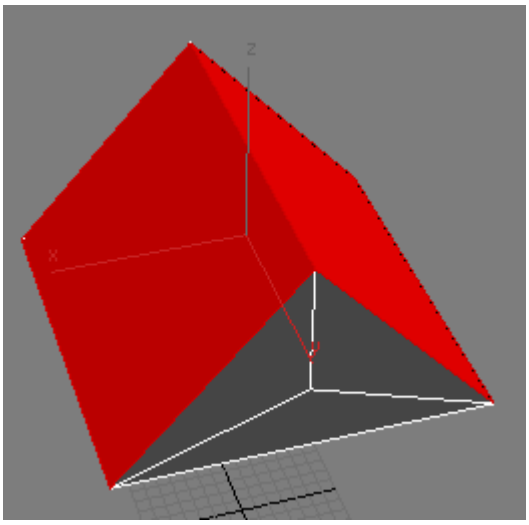
Give the foundation thickness
Select the Foundation object
On your keyboard, hit Alt Q to enter Isolation Mode.
Drop down the modifier list and select Shell.
Tip: type sh to find Shell.
Set inner to 0, and outer to 1 ft.
Right click convert to editable poly.

Detach a floor plane
Enter the Polygon subobject level.
Select all the top polygons.
Detach and name them Floor.
Exit the Polygon subobject level.
Exit Isolation Mode.

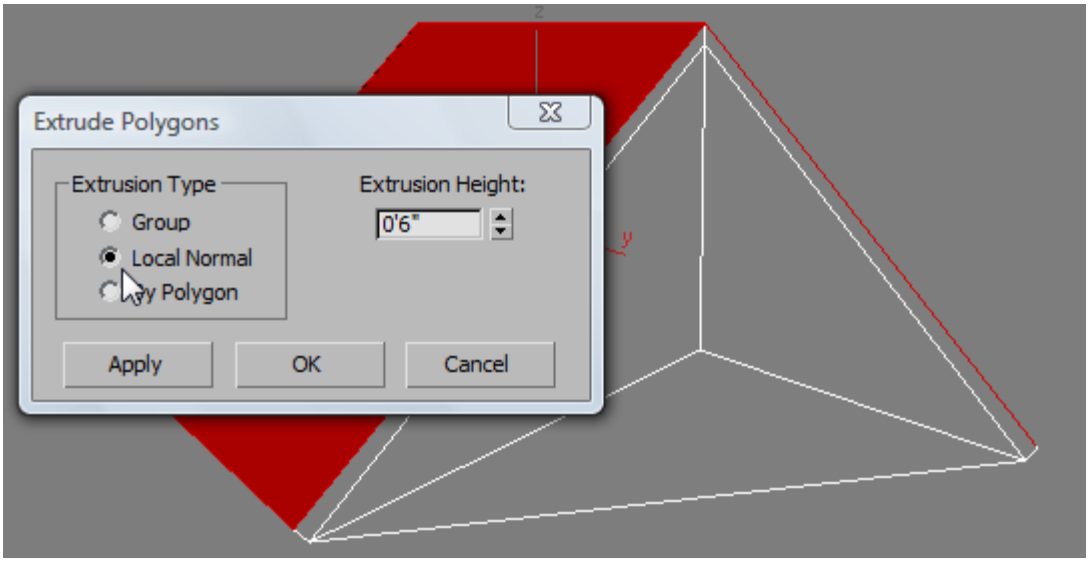
Add shell for wall thickness
Select the Wall object only with the selection tool.
Do not select other objects.

Add a Shell Modifier from the Modifier List.
Inner: 6 inches – not 6 feet!
Tip – type in .5 and click tab – it will convert to 6 inches.
Outer 0.
The wall should look like a normal thickness for a house. If not you typoe3d in 6 feet, not 6 inches.
Right click/convert to editable Poly.

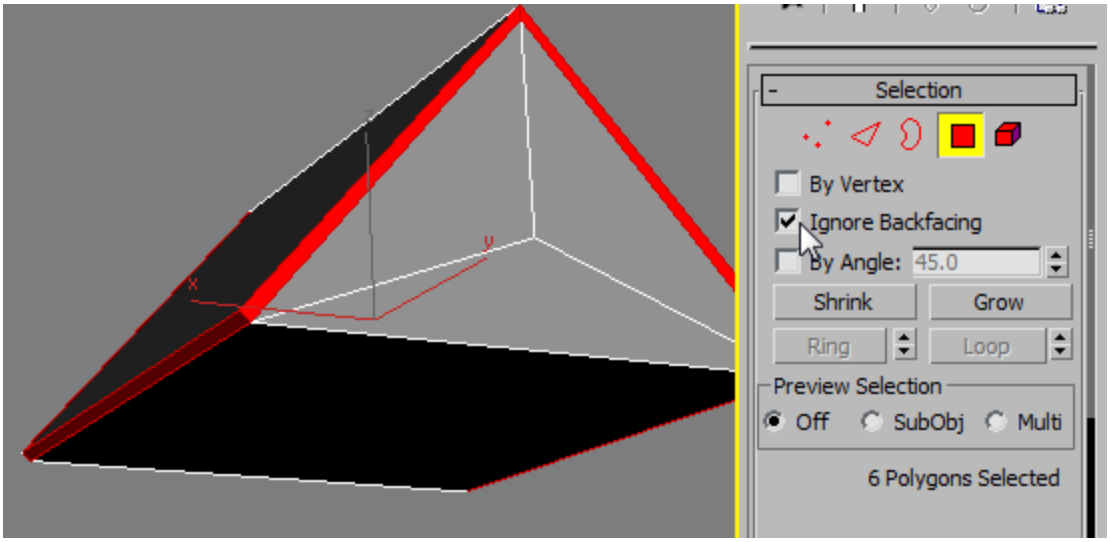
Give the roof thickness and eaves
Select the Roof.
Alt Q to enter Isolation Mode.
Enter the Polygon subobject level.
Select the 2 tilted polygons of the roof. By this I mean the large tilted edges.



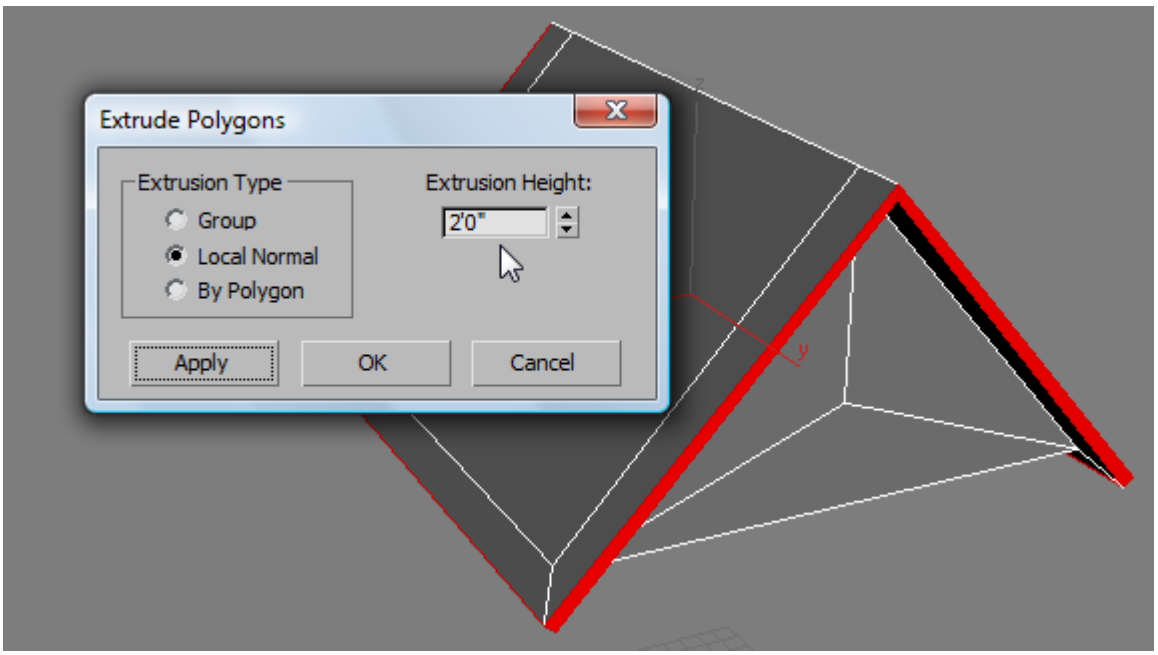
In the Edit Polygons rollout, Hit the Extrude settings button.
Extrude 6 inches, making sure Local Normal is selected.
Tip – try Group, Local Normal, and By Polygon, to see the result.
Select Local Normal.
Hit OK.



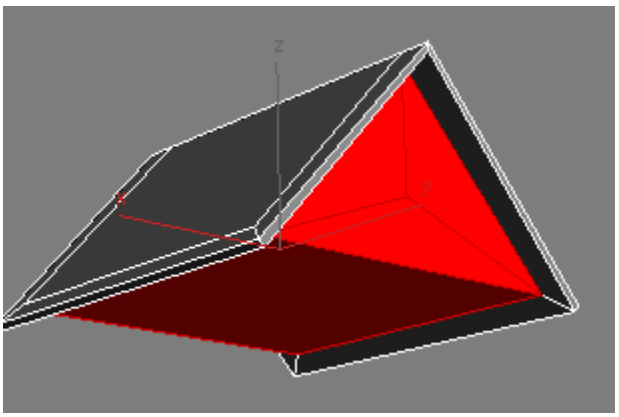
Select all 6 thin edges of the roof.
By this I mean the 6 long polygons at the ends and bottom of the roof.



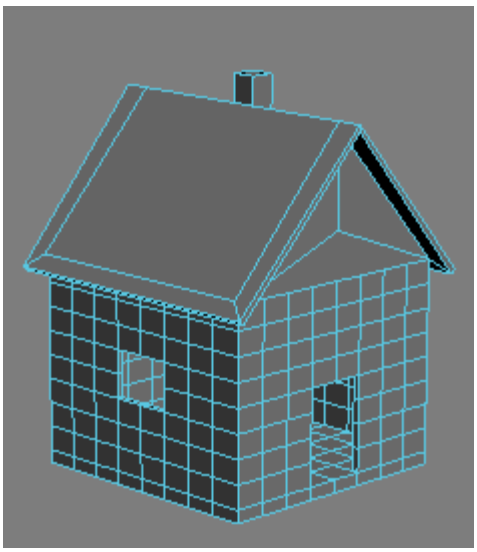
This will require arc rotating will also using the Control key to select multiple objects. Extrude them out 2 feet in one step.



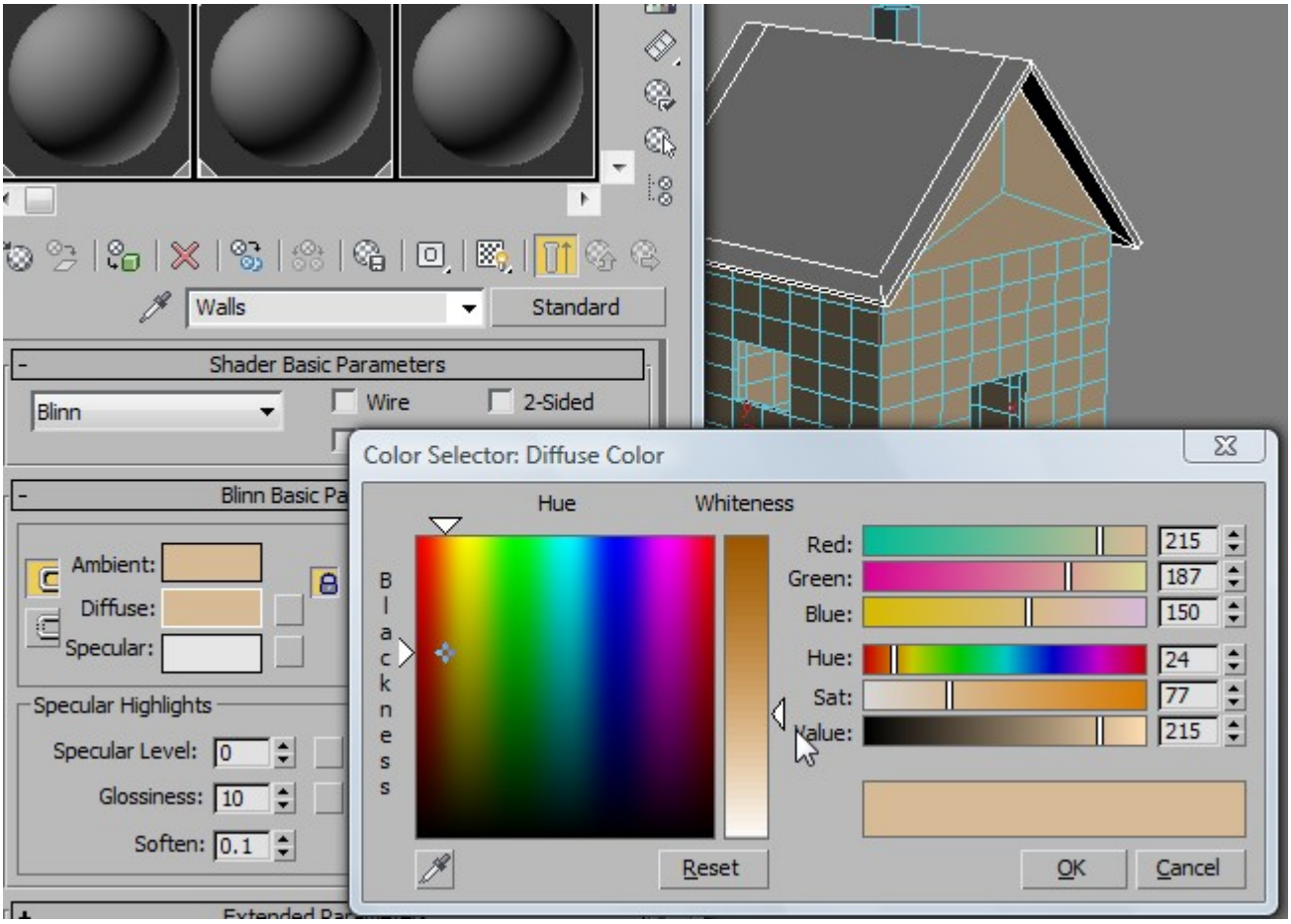
Select the 7 polygons that are not the roof.
Detach them and name them Attic.



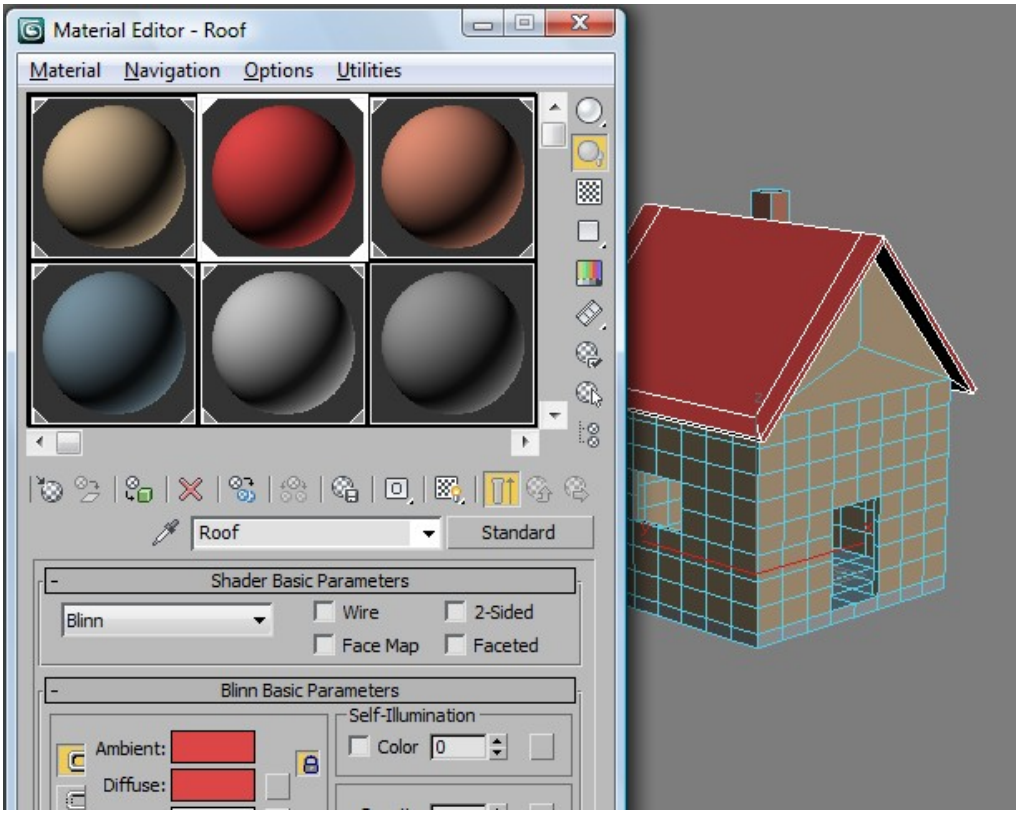
Exit the Polygon subobject level.
Exit Isolation Mode.



Make a basic material
Hit M for the Material Editor.
Or, hit the icon in the main toolbar that looks like 4 spheres.
Select an empty material slot.
Name it "Walls.
Apply a color to the material in the diffuse slot.
Drag and drop the sphere to your "Walls" and "Attic" objects.



Make a new slot named “Roof” and create a new color, then drag to the roof.
Do the same for the chimney, floor and foundation.



Render and print
Navigate your model for a good view – you should be able to see the best parts of your model, filling the viewport, with nothing cut off.
In the main menu, go Render/Environment …
Change background color from black to white.
Move the main menu left with the grabber hand until you see the teapot icon in the far right top corner.
Hit that to render.
Background should be white.

Use the save icon to save the image.
Using the “Save As Type” drop down, select jpeg as your image format.
Name the file “Very Simple House Part 1.

Open in Photoshop.
Add your name at the bottom with the text tool.
Add the words “Very Simple House Step 1”
Print in landscape view.