

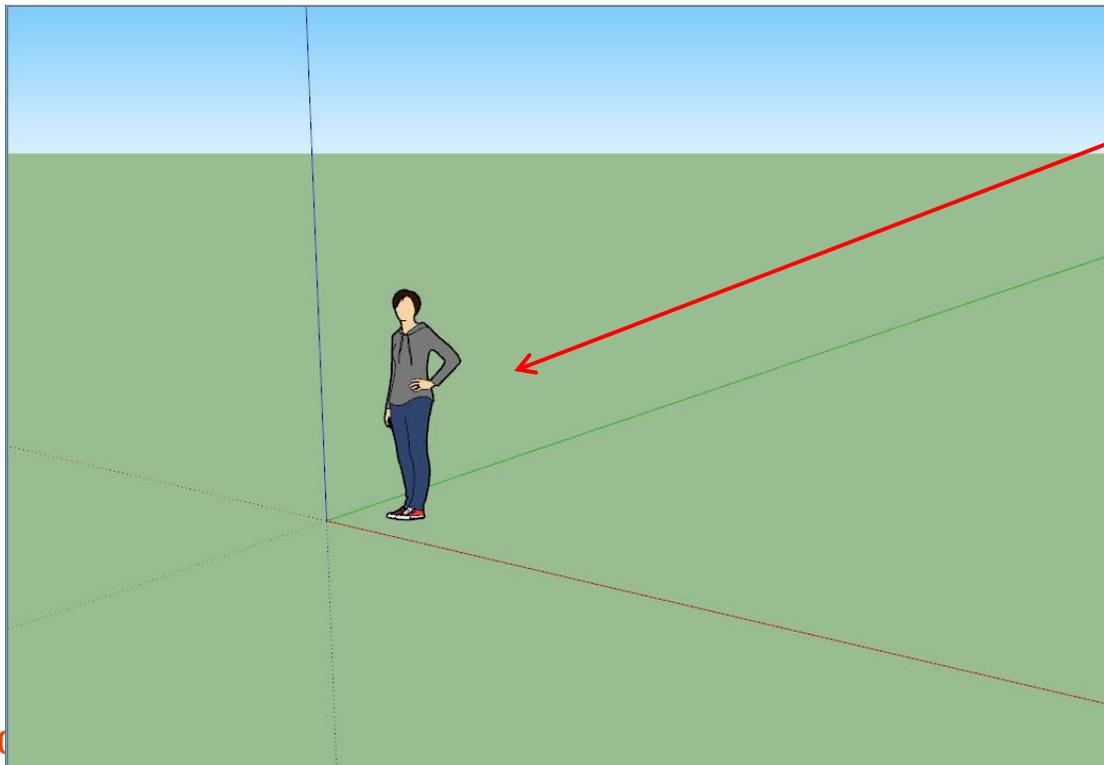
# Getting Started

Double-click the **SketchUp** icon

or click:

**Start → All Programs → SketchUp 2018 → SketchUp 2018**

The start screen should look something like this:



This person is about 5' 5" tall – this sets the scale for what you are about to create

## Moving Around in 3D



You have a 3-button mouse. The middle button acts both as a pushbutton and as a scrollwheel.

**Mouse Scrollwheel = Zoom in and out**

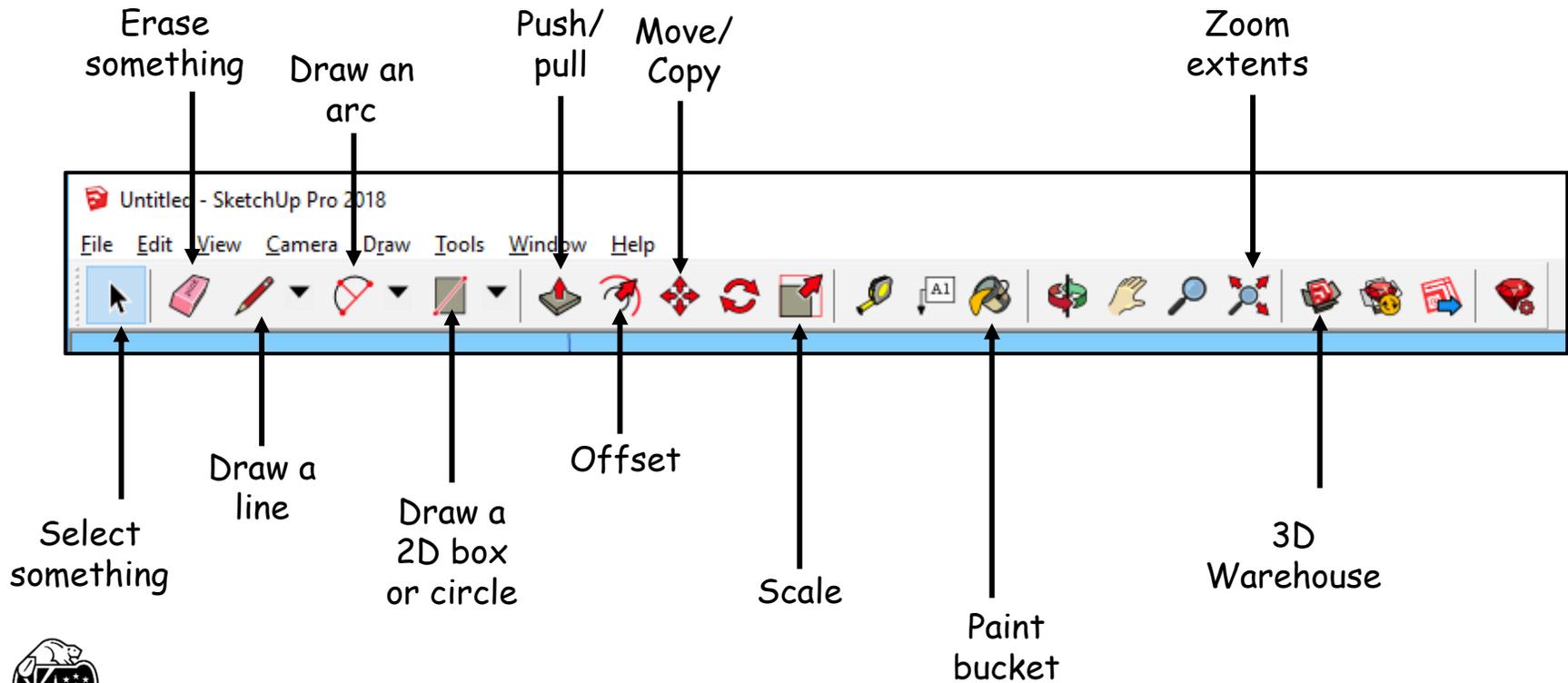
**Middle Mouse Button = Rotate in 3D**

**Shift Middle Mouse Button = Move left-right and up-down**

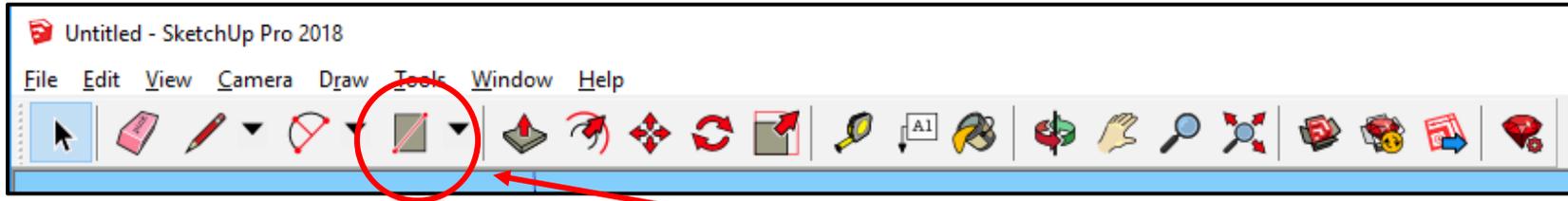


The icons across the top are really important:

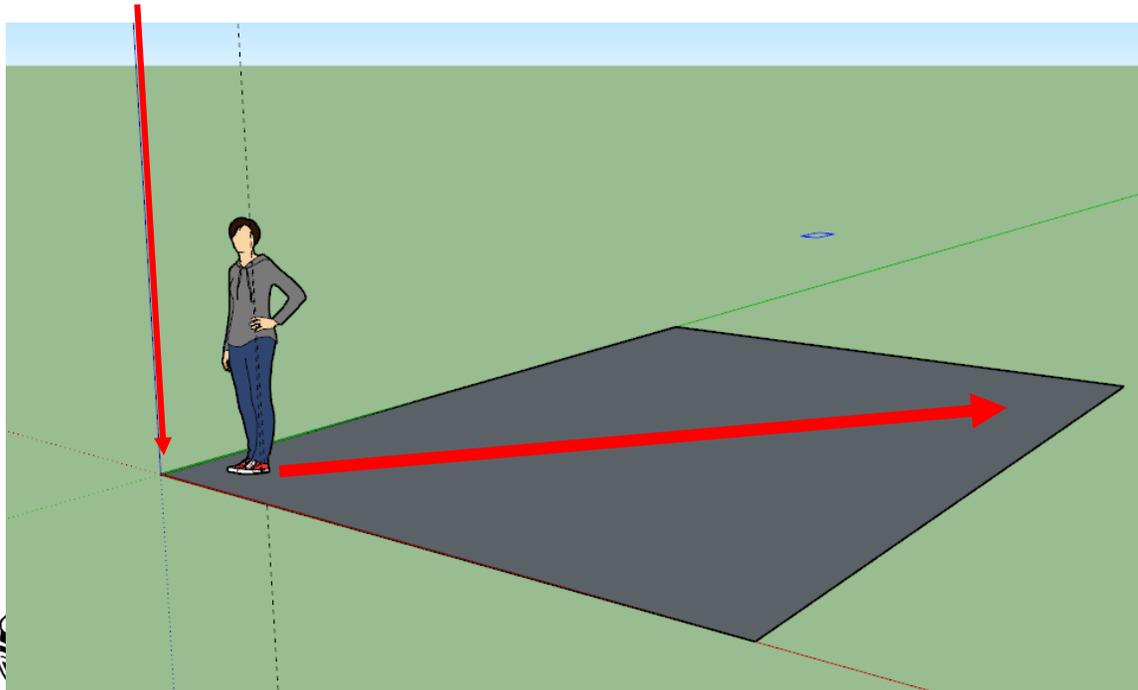
(The **Zoom extents** icon will zoom in as much as possible without making any of your object disappear off the screen )



# Drawing a 2D Box



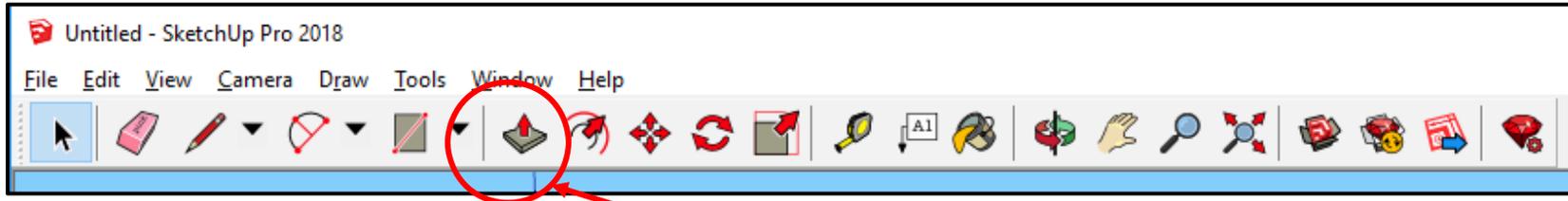
This is called  
*The Origin*



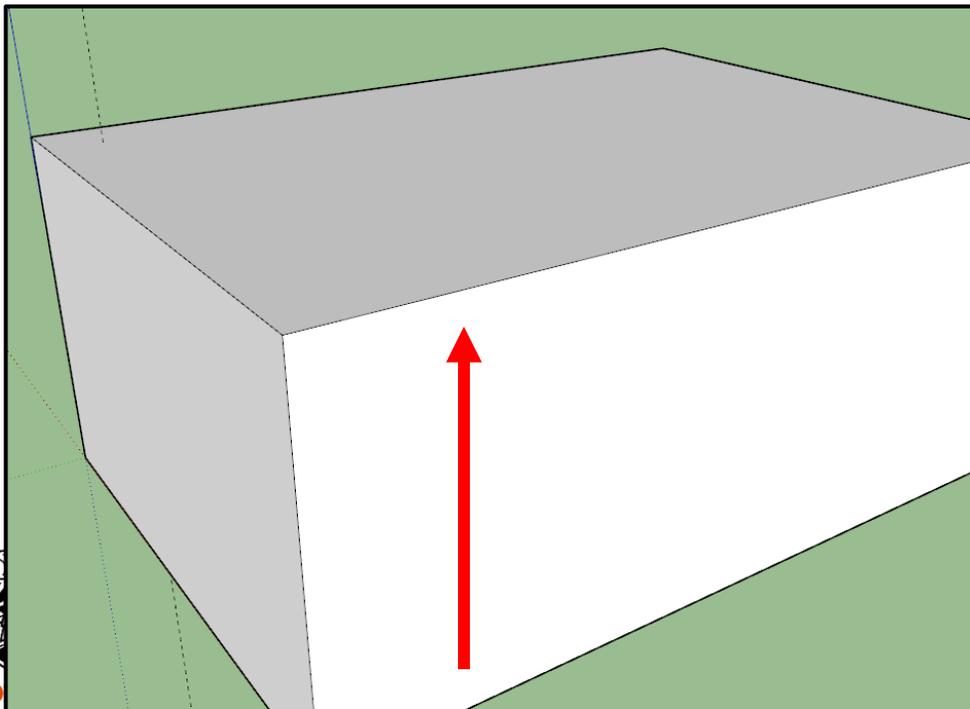
Click on the **Draw-a-Box** icon, then click on the origin, and while holding down the mouse, drag in this direction

We are going to build a house, so make this square an appropriate size, given that the person is almost 6 feet tall.

## Lifting it into a 3D Box

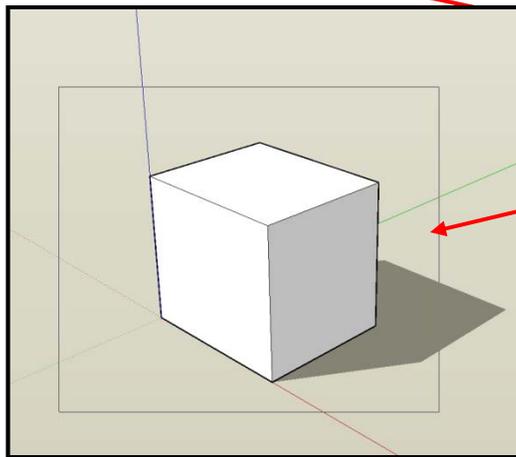
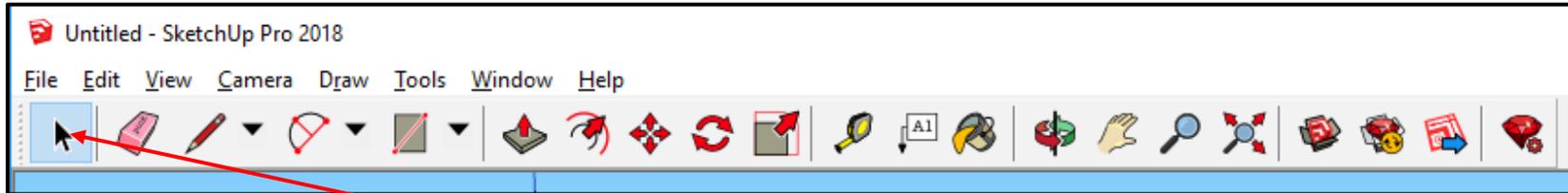


Click on the **Push/pull** icon, then click on the box you just created, and while holding down the mouse, drag in this direction

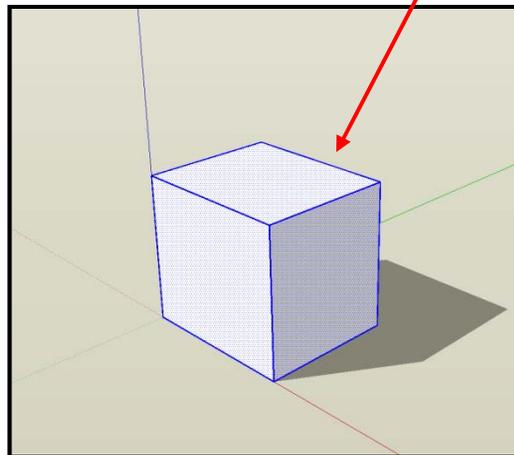


We are going to build a house, so make this height an appropriate size, given that the person is almost 6 feet tall.

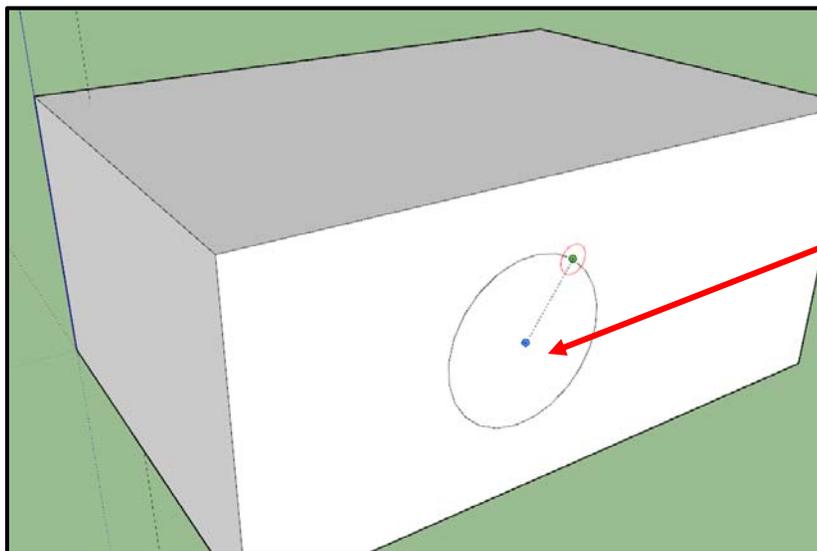
## Deleting an Object



1. Select the **Select** icon
2. Select the object to delete by dragging a box around it with the cursor
3. Hit the **Delete** key (*not Backspace*)

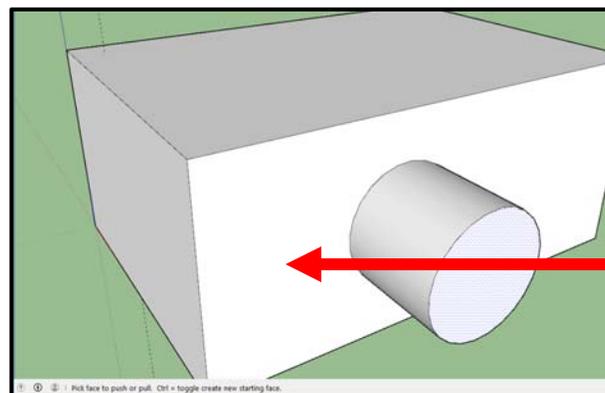
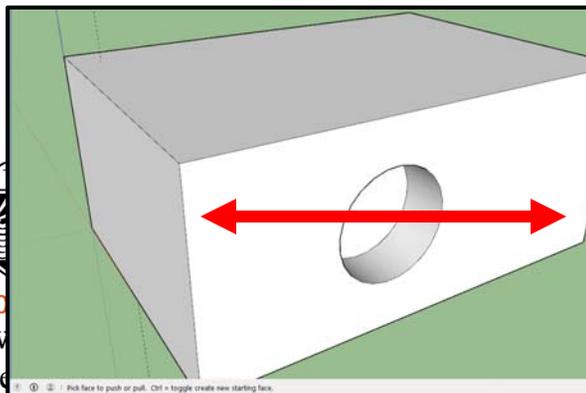


# Adding more detail to an existing face



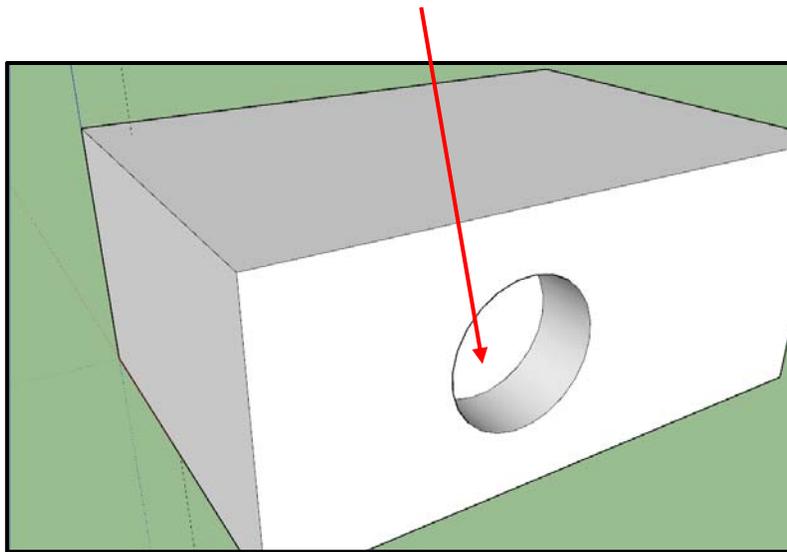
Click on the **Draw-a-circle** icon, then click on one face of the 3D solid you just created, and while holding down the mouse, drag in some direction

Click on the **Push/pull** icon, then click on the circle you just created, and while holding down the mouse, drag in this direction

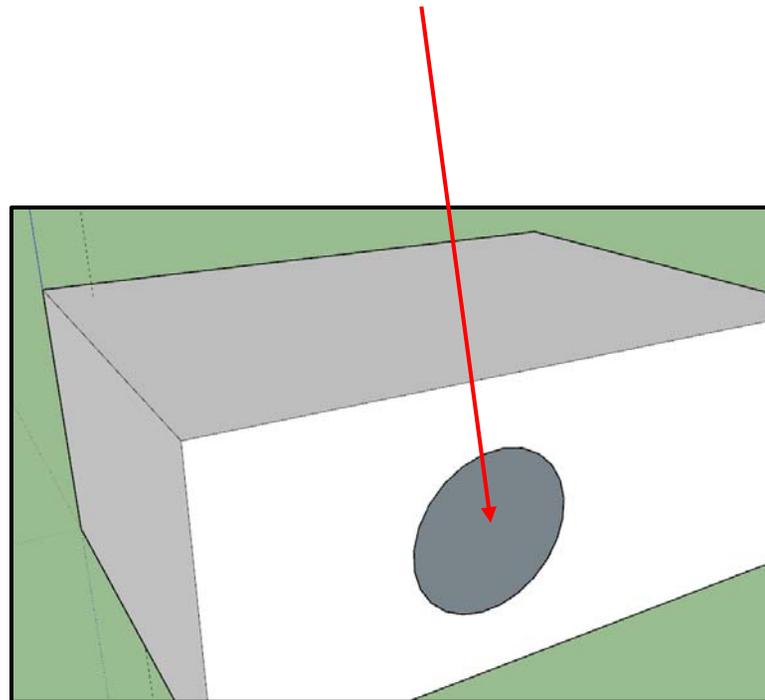


## The difference between pushing a hole and cutting a hole

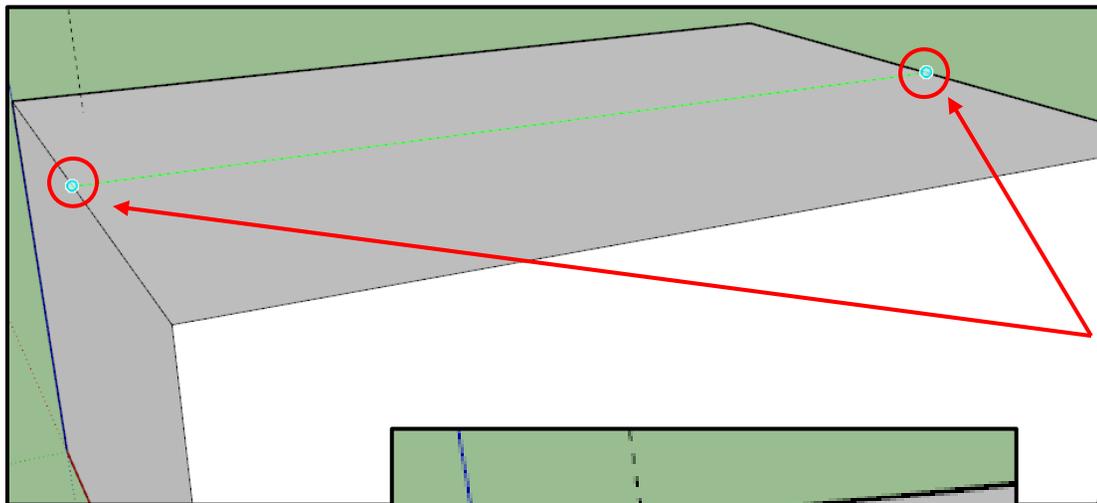
If you push the circle in,  
you get a tunnel with  
walls and a back face



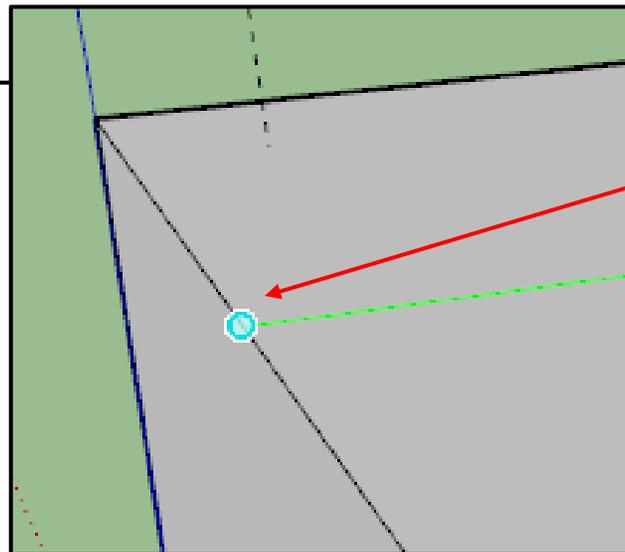
If you erase the circle by clicking  
on the circle, then hitting **Delete**  
(*not Backspace*), you get a  
window cut in the wall.



## Let's give it a roof



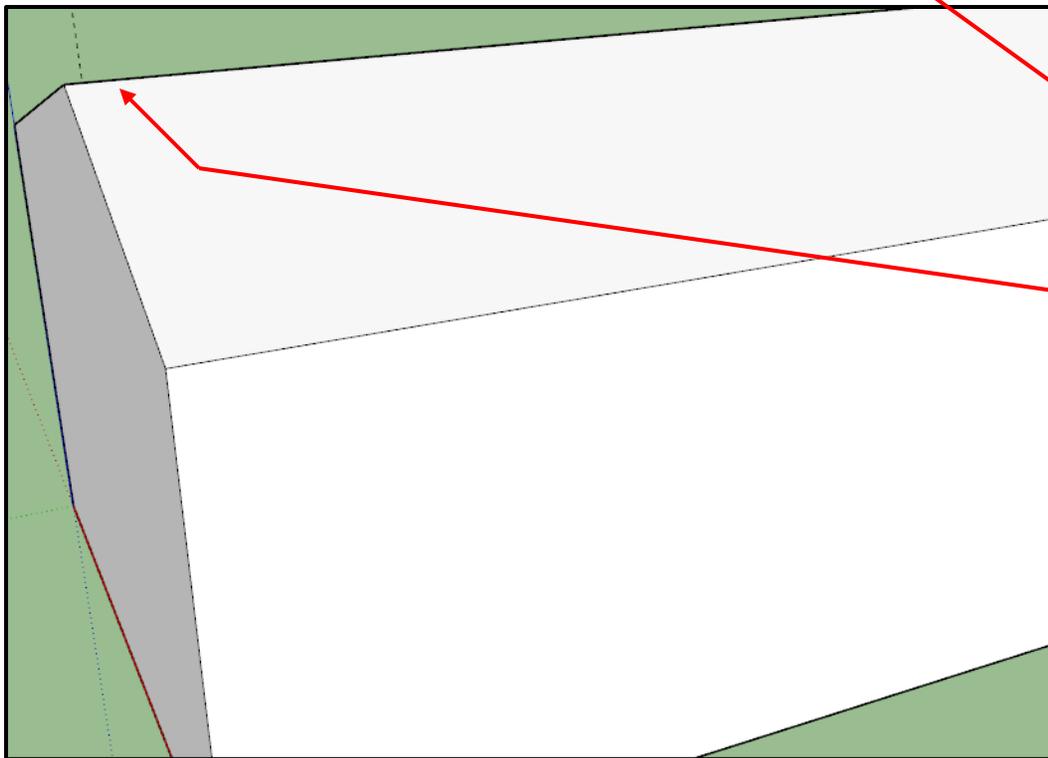
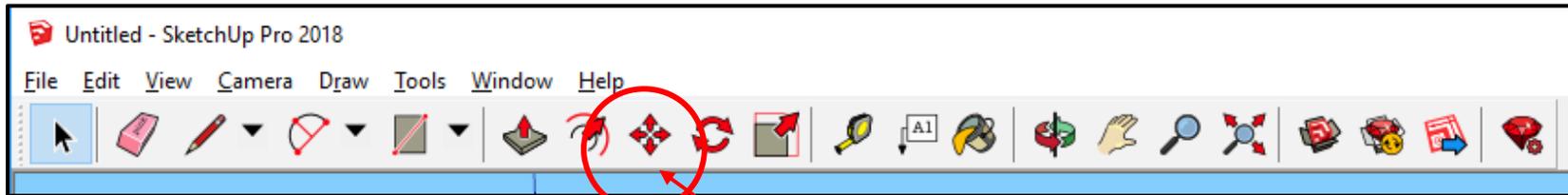
Click the **Draw-a-Line** icon to draw a line across the top of the solid. But, you want the line to go midpoint-to-midpoint, which is a good place to raise the roof line from.



So, before clicking to draw the line, slide the pencil back and forth until the cyan dot appears, indicating that you've found this edge's midpoint.

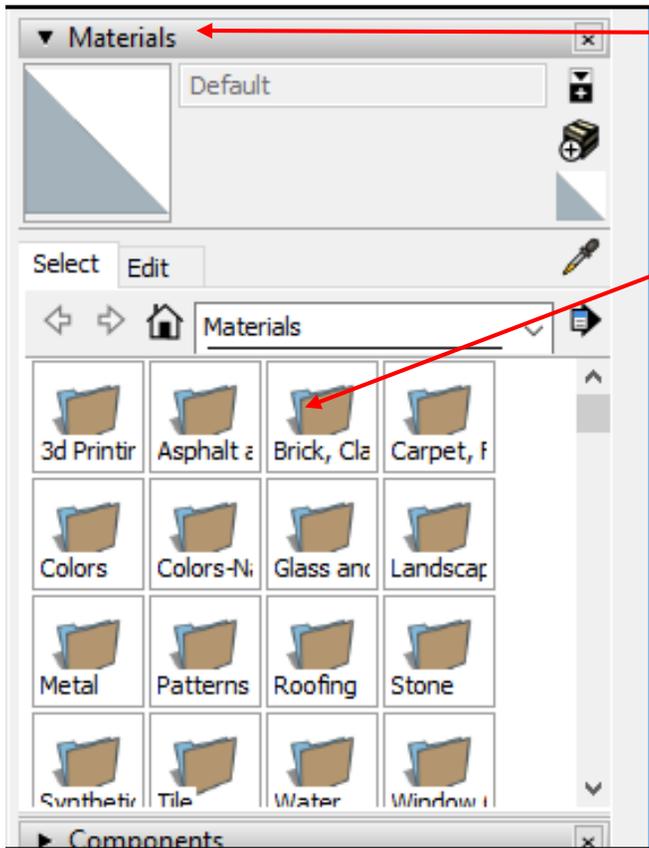
## Let's give it a roof

10

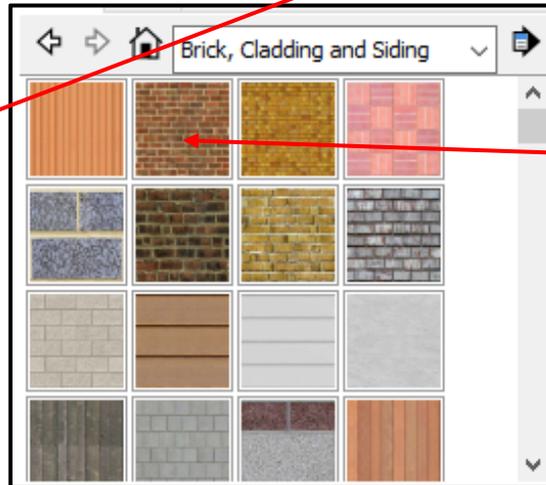


Now click on the **Move/Copy** icon, then click on the line you just drew, and drag it upwards

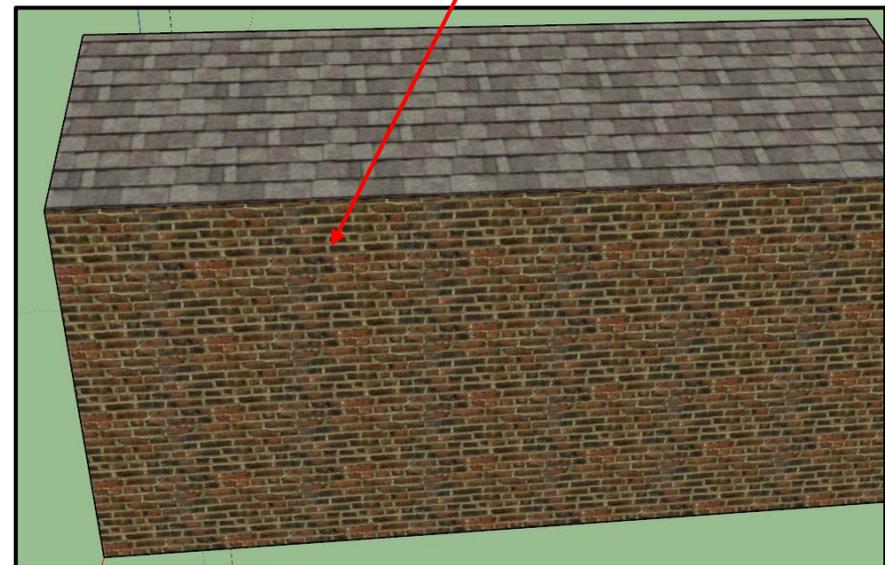
# Want to make it look more interesting?



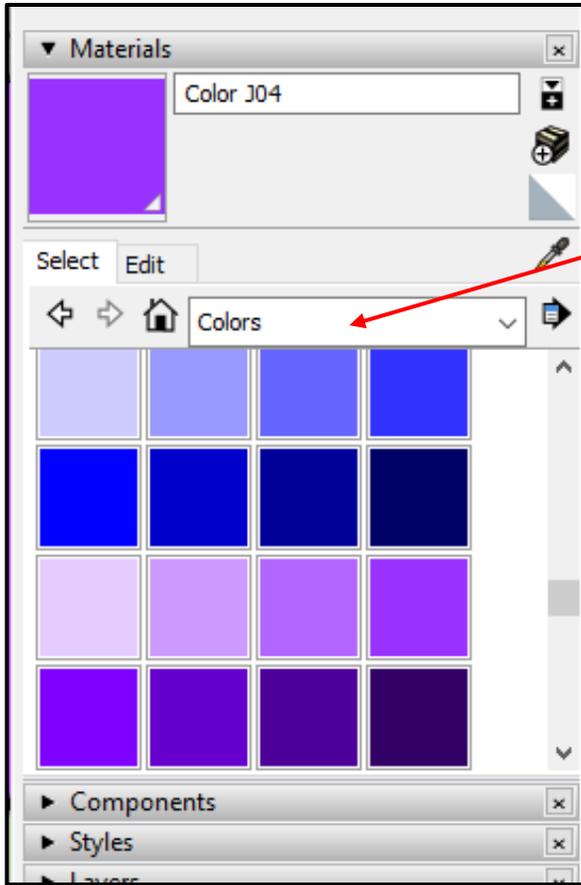
Click on **Materials**, then click on a **category**



1. Click on a specific color or pattern
2. With the Paintbrush icon, click on the surface(s) you want to apply it to.



# Pure colors are considered Materials too

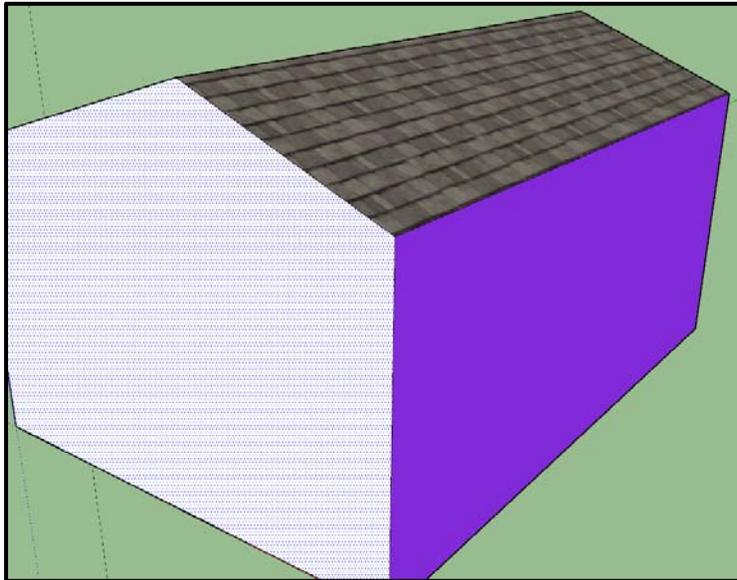


1. Select **Colors**
2. Treat the color just like you did the material



Scroll up and down to get more colors





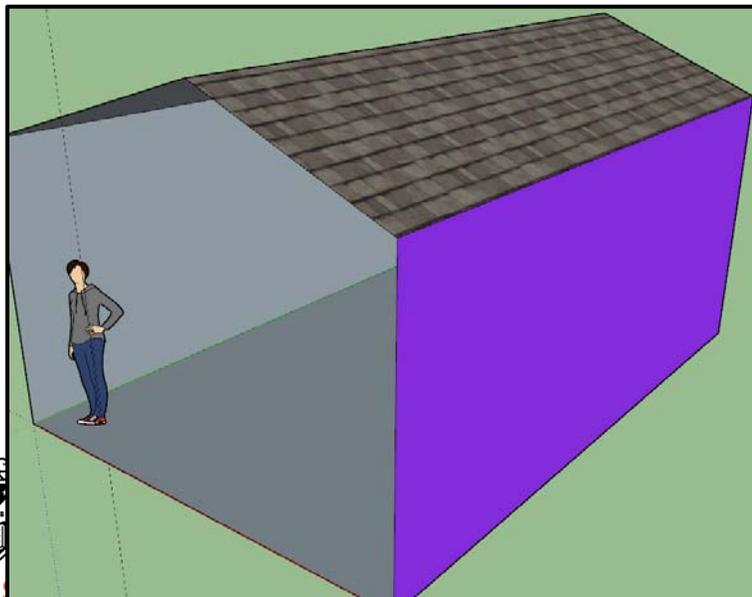
Sometimes it would be nice to temporarily eliminate some geometry so that you could see inside something. This is referred to as **Hiding**.

To hide a piece of geometry, select it.

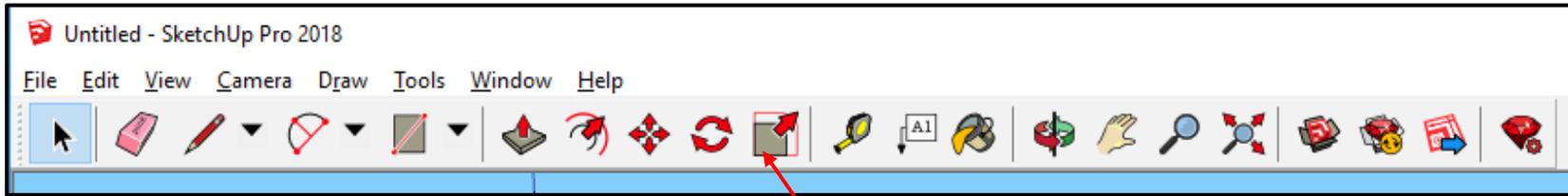
Then, right-click and select **Hide** from the pop-up menu. The selected object looks like it is gone, but it isn't. It's just hidden.

This is useful for putting things into an object (such as furniture) or for editing the object (as is needed here).

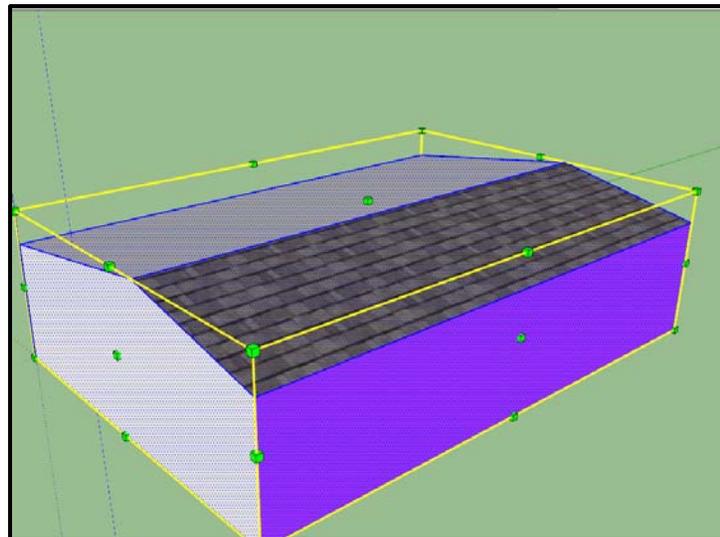
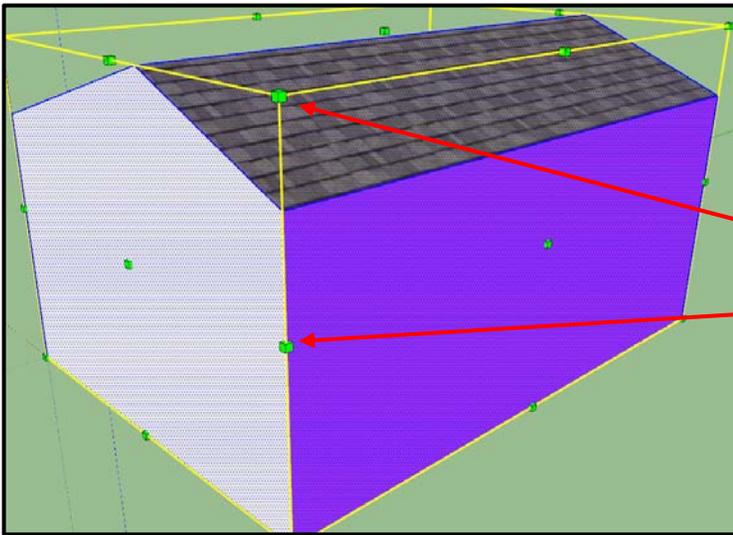
To bring it back, go up to the menu and click on **View**. Then click on **Hidden Geometry**. Then select the geometry that you hid. Right-click on **Unhide**.



# Scaling an Object

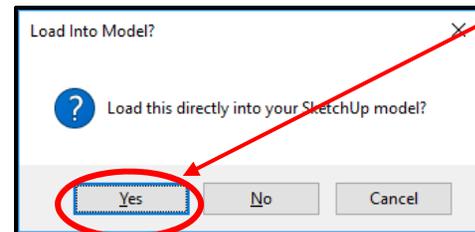
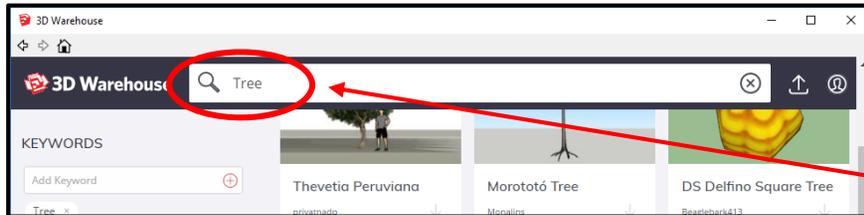


1. Select an object
2. Select the **Scale icon**
3. Move the green dots with the mouse

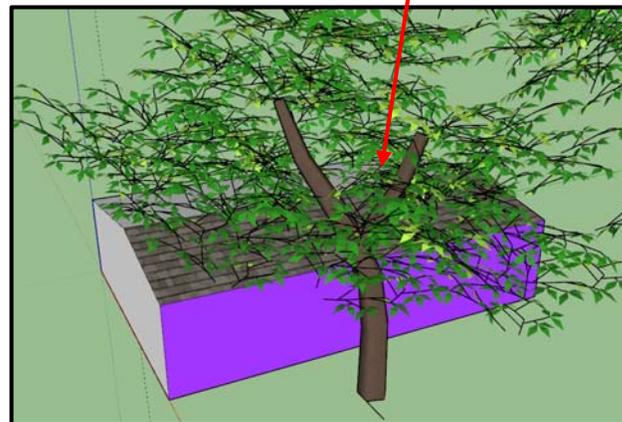


Moving a side green dot will stretch the object in that direction. Moving a diagonal dot will scale the object equally in all directions.

# 3D Warehouse



1. Click on the 3D Warehouse icon
2. Type in the kind of 3D object you are looking for. (**Tree** in this case.)
3. Click on the tree you want.
4. Click **Download**.
5. Click **Yes**.
6. You might have to scale the object to better match your scene



# Shadows

1. Click **Shadows**
2. Click on the box in the upper-left corner
3. You can select the time-of-day and day-of-year

