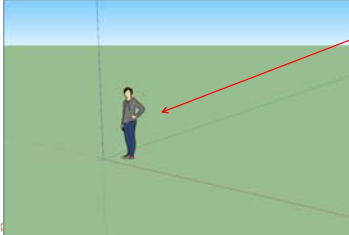


### Getting Started

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

University  
Computer Graphics

mjb - July 6, 2018

### 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**

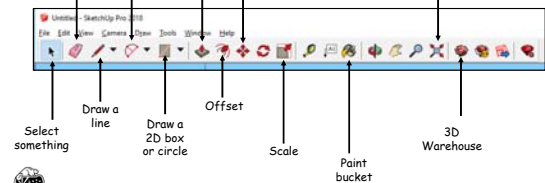
Oregon State  
University  
Computer Graphics

mjb - July 6, 2018

### Getting Started Toolbar

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)

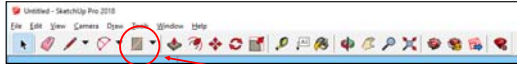


Labels for toolbar icons: Select something, Draw a line, Draw a 2D box or circle, Offset, Scale, Paint bucket, 3D Warehouse, Erase something, Draw an arc, Push/pull, Move/Copy, Zoom extents.

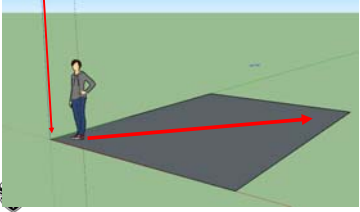
Oregon State  
University  
Computer Graphics

mjb - July 6, 2018

### Drawing a 2D Box



This is called **The Origin**



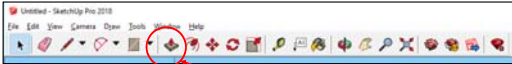
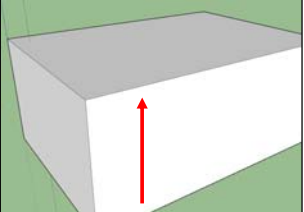
Click on the **Draw-a-Box** icon, then click on the origin, and while holding down the mouse, drag in this direction

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

Oregon State  
University  
Computer Graphics

mjb - July 6, 2018

### Lifting it into a 3D Box

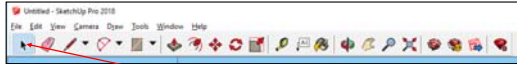
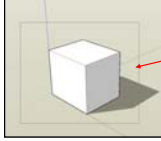
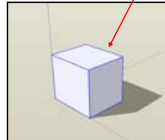
Click on the **Push/pull** icon, then click on the box you just created, and while holding down the mouse, drag in this direction

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

Oregon State  
University  
Computer Graphics

mjb - July 6, 2018

### 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)

Oregon State  
University  
Computer Graphics

mjb - July 6, 2018

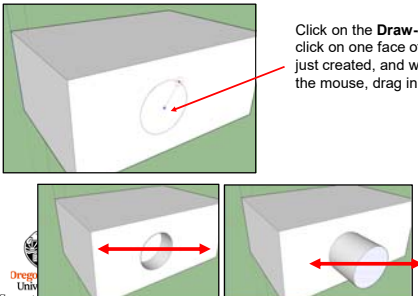
### Adding more detail to an existing face

7



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



Oregon State University  
Computer Graphics

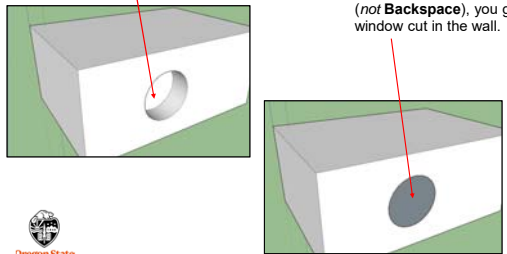
mjb - July 6, 2018

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

8

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.

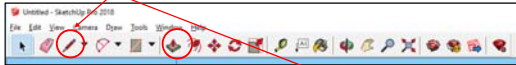


Oregon State University  
Computer Graphics

mjb - July 6, 2018

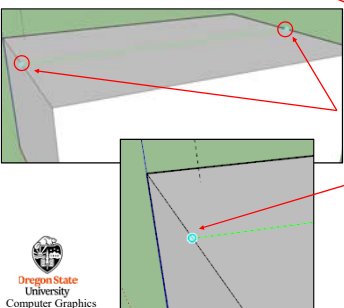
### Let's give it a roof

9



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.




Oregon State University  
Computer Graphics

mjb - July 6, 2018

### 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



Oregon State University  
Computer Graphics

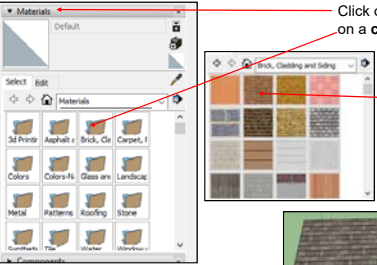

mjb - July 6, 2018

### Want to make it look more interesting?

11

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.

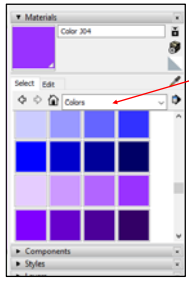
Oregon State University  
Computer Graphics

mjb - July 6, 2018


### Pure colors are considered Materials too

12

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



Scroll up and down to get more colors

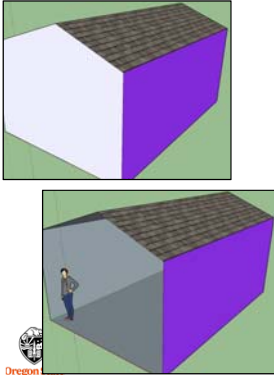


Oregon State University  
Computer Graphics

mjb - July 6, 2018

### Hiding Geometry

13



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).

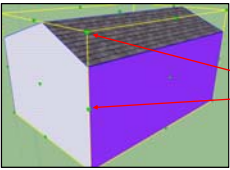
To bring it back, go up to the menu and click on **View**. Then click on **Hidden Geometry**. Then select the geometry that you hid. Right-click on **Unhide**.

Oregon State University  
Computer Graphics

mjb - July 6, 2018

### Scaling an Object

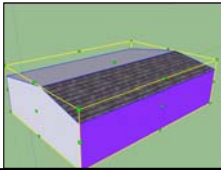
14



1. Select an object

2. Select the **Scale** icon

3. Move the green dots with the mouse



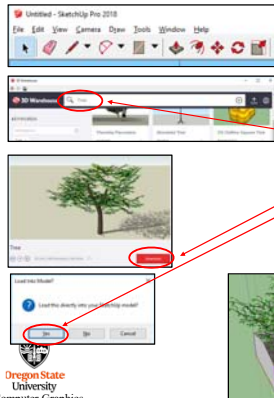
Moving a side green dot will stretch the object in that direction. Moving a diagonal dot will scale the object equally in all directions.

Oregon State University  
Computer Graphics

mjb - July 6, 2018

### 3D Warehouse

15



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

Oregon State University  
Computer Graphics

mjb - July 6, 2018

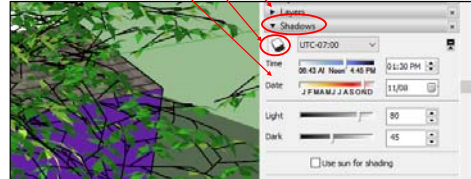
### Shadows

16

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



Oregon State University  
Computer Graphics

mjb - July 6, 2018