

Week 7

Task1:

Solar energy travels through the vacuum of space to earth by a process called radiation. It is an energy released by an object like light from a light bulb. This energy happens at a different wave length, the hotter the object the more it radiates at shorter wavelengths from longest radio waves to shortest highest energy gamma rays.

Let's take the example of a light bulb illustrating the solar radiation which spreads earth. The sun's top output is at visible wave length however, most solar energy is reached as infrared radiation or in other terms felt as heat this can be illustrated by the red lighting used for heating devices such as radiator or night lamps. In addition, higher energy shortwave radiation that we see as visible light and different colors and different wave lengths. Moreover, minimal amount of higher energy called ultraviolet radiation reaches the earth, this is normally used for tanning beds and nail machines. The UV radiation is not visible nor the temperature is felt expect by the damage it can cause such as sunburn and fading of fabric.

Therefore, the earth's protective layer, ozone, acts like sunscreen and only absorbs, transmits and scatters the amount the earth requests.

Task2:

Set the weather file to Piacenza by using the file given in dropbox

Practice 1.osm*

File Preferences Components & Measures Help

Site: Weather File & Design Days Life Cycle Costs Utility Bills

My Model Library Edit

Weather File Change Weather File

Name: Piacenza

Latitude: 44.92

Longitude: 9.73

Elevation: 134

Time Zone: 1

Download weather files at www.energyplus.gov

Measure Tags (Optional):

ASHRAE Climate Zone

CEC Climate Zone

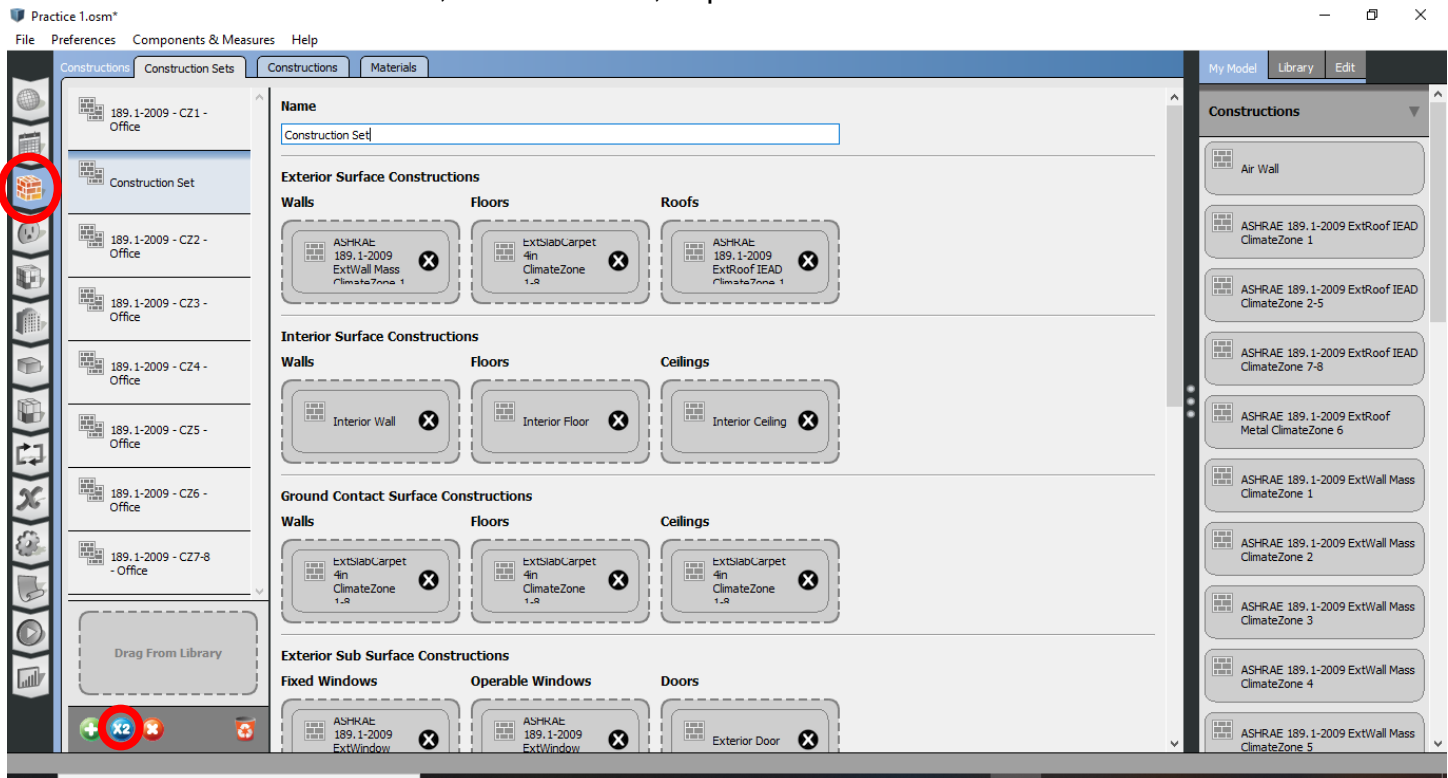
Design Days

Design Days

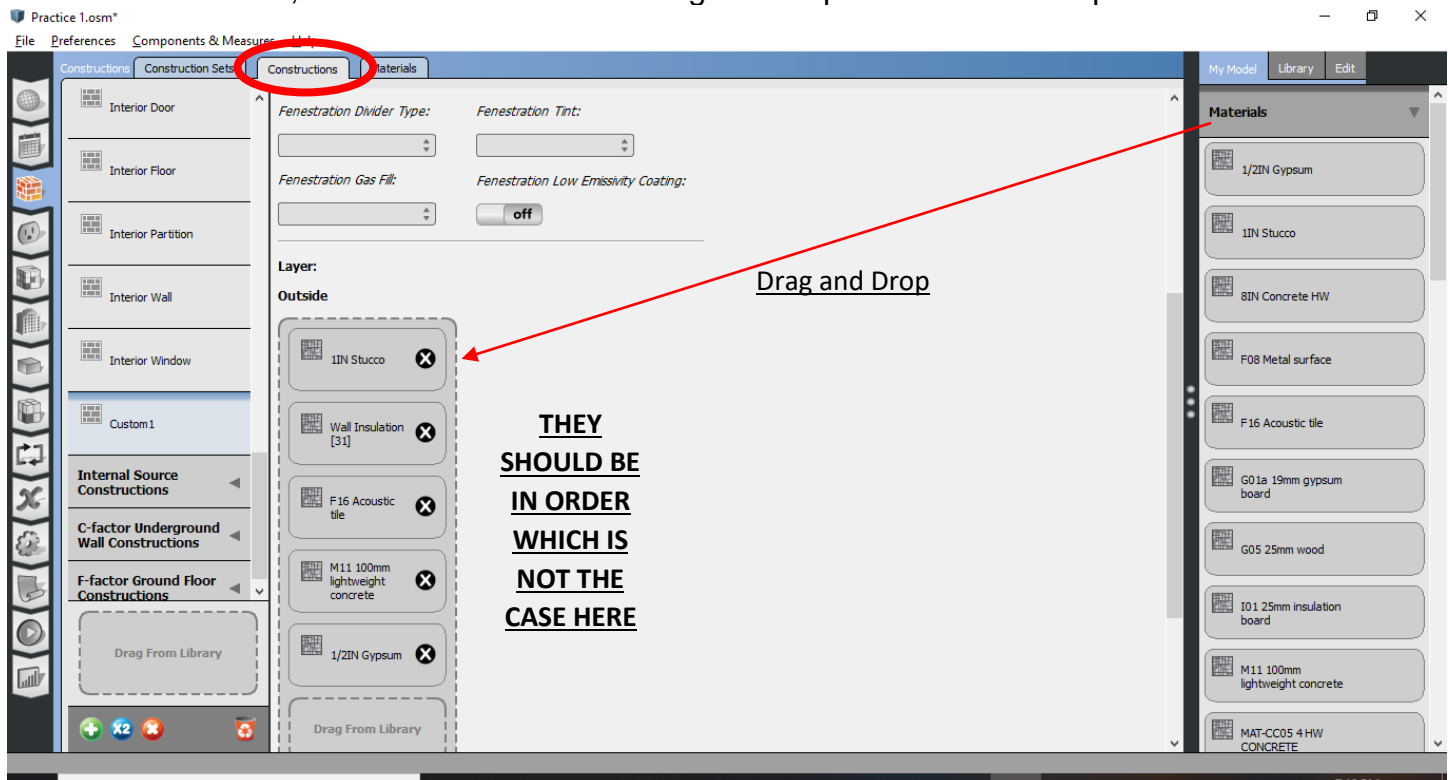
Design Day Name	All	Day Of Month	Month	Day Type	Daylight Saving Time Indicator
	<input type="checkbox"/>	<input type="text" value="Apply to Selected"/>	<input type="text" value="Apply to Selected"/>	<input type="text" value="Apply to Selected"/>	

Windows taskbar: Type here to search, 7:05 PM 11/19/2019

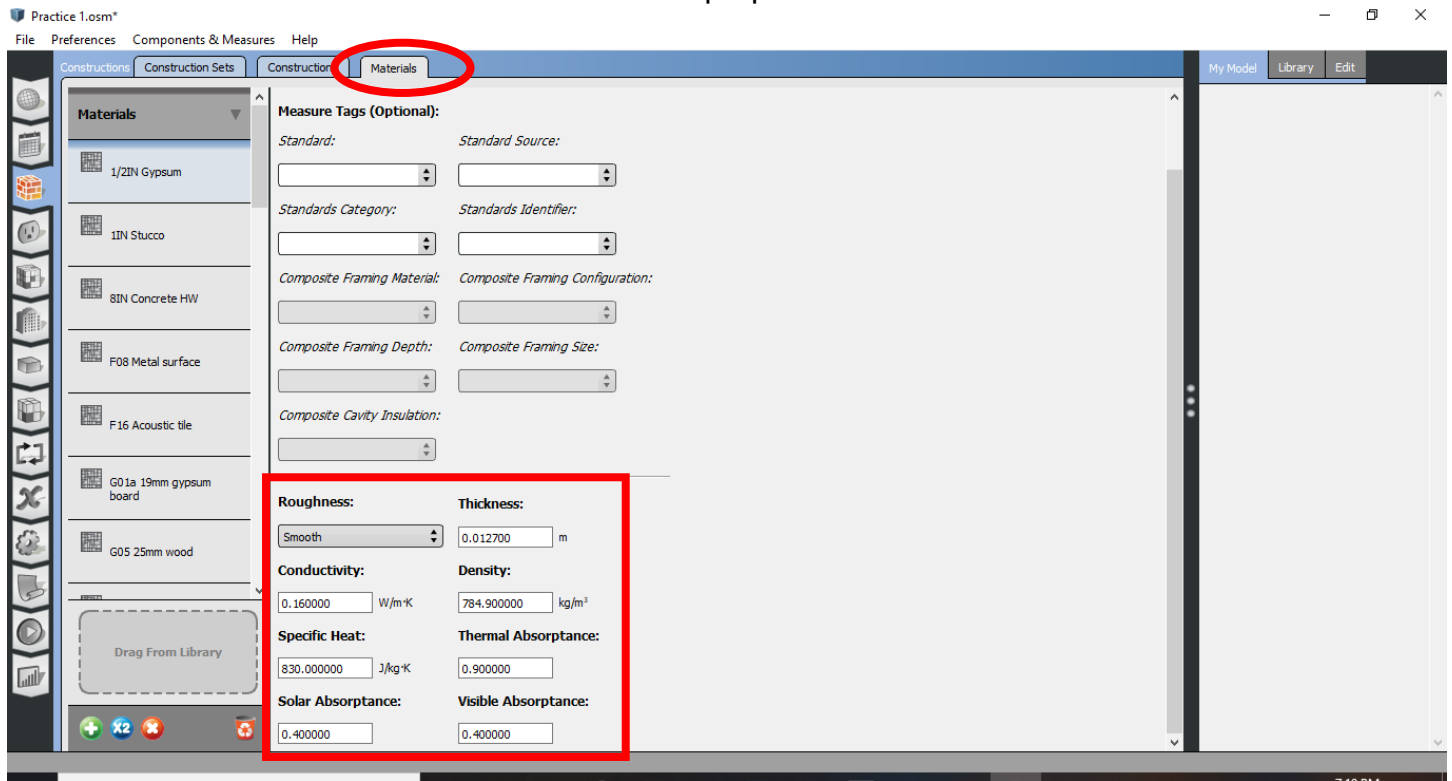
Click on the 3rd icon on the left, Constructions, duplicate the main item and rename it.



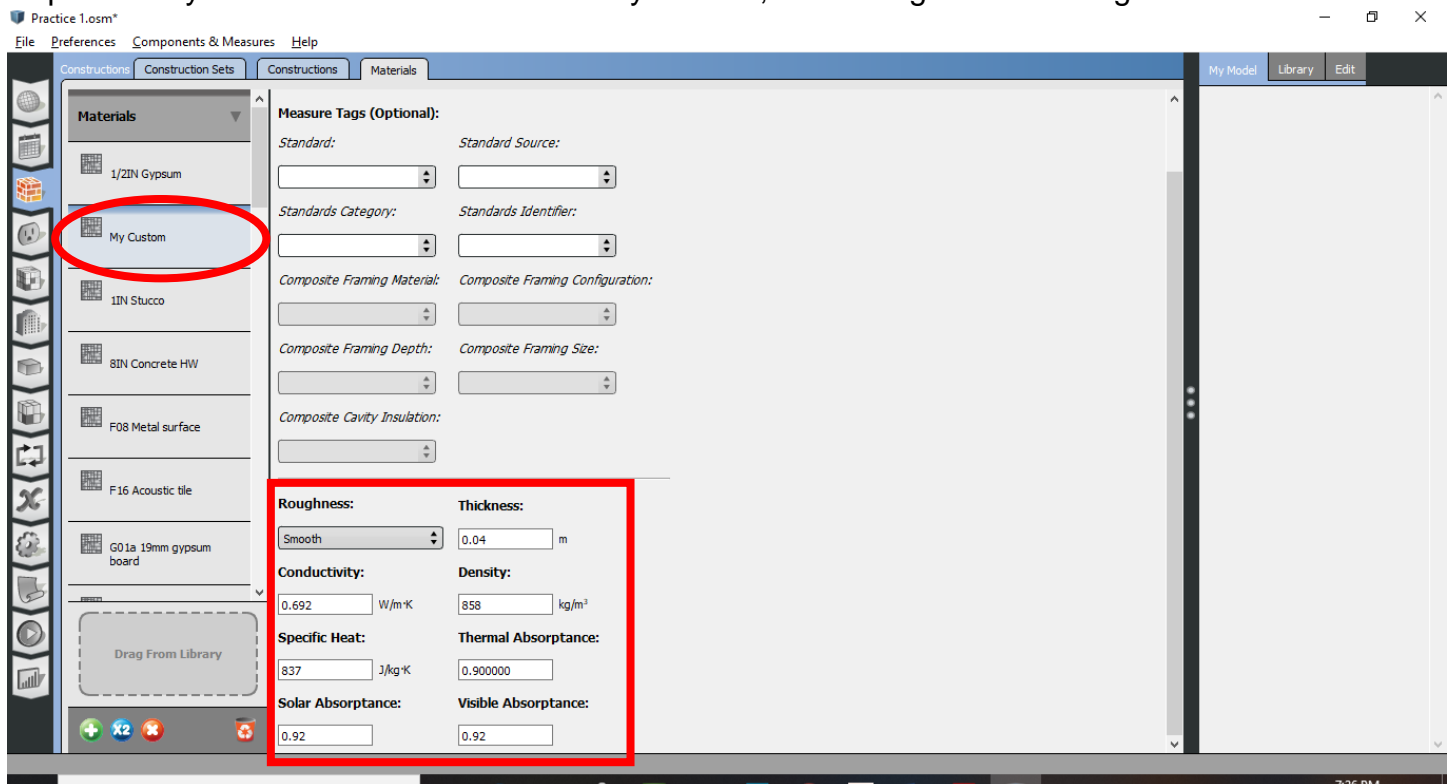
Go to Constructions, create a new item and “drag and drop” the materials required



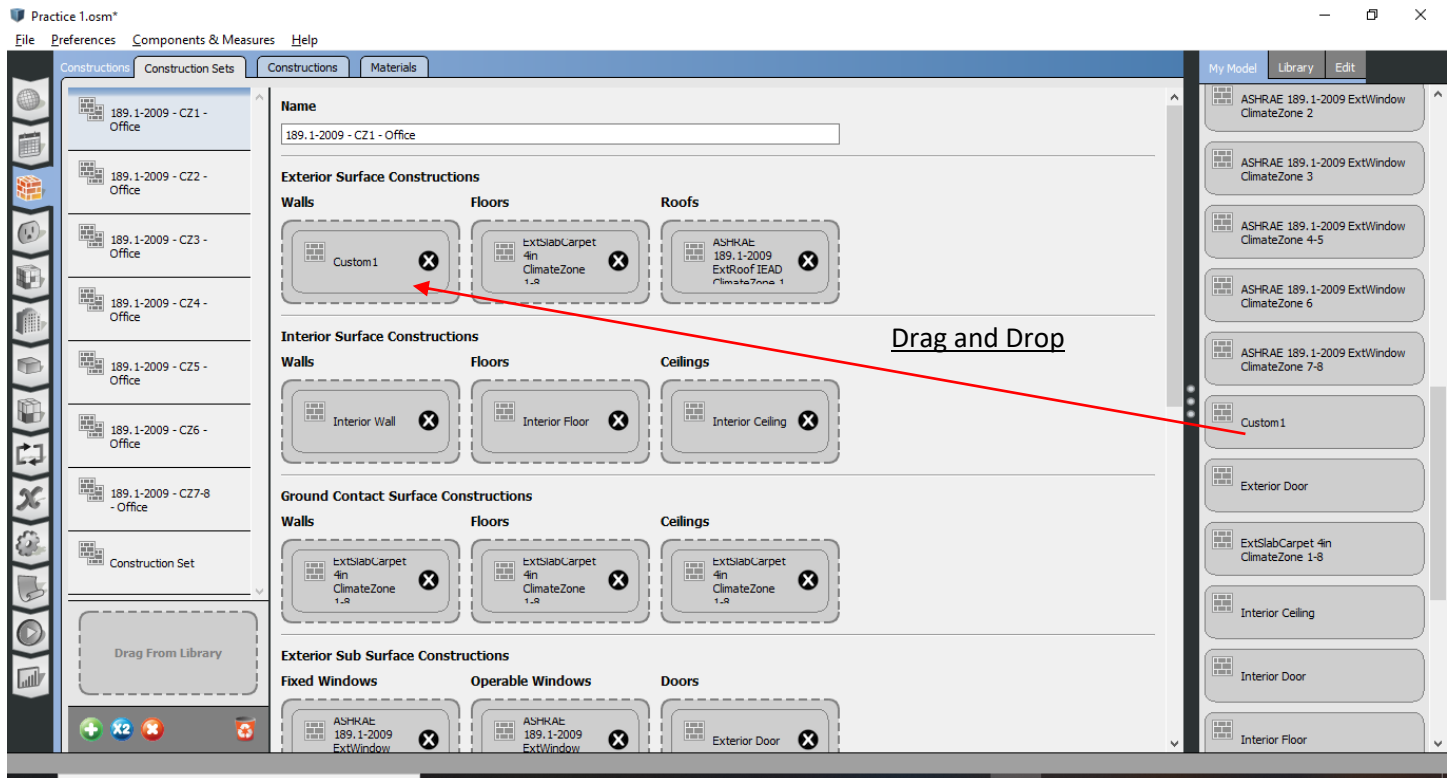
Go to Materials in order to check each material's properties



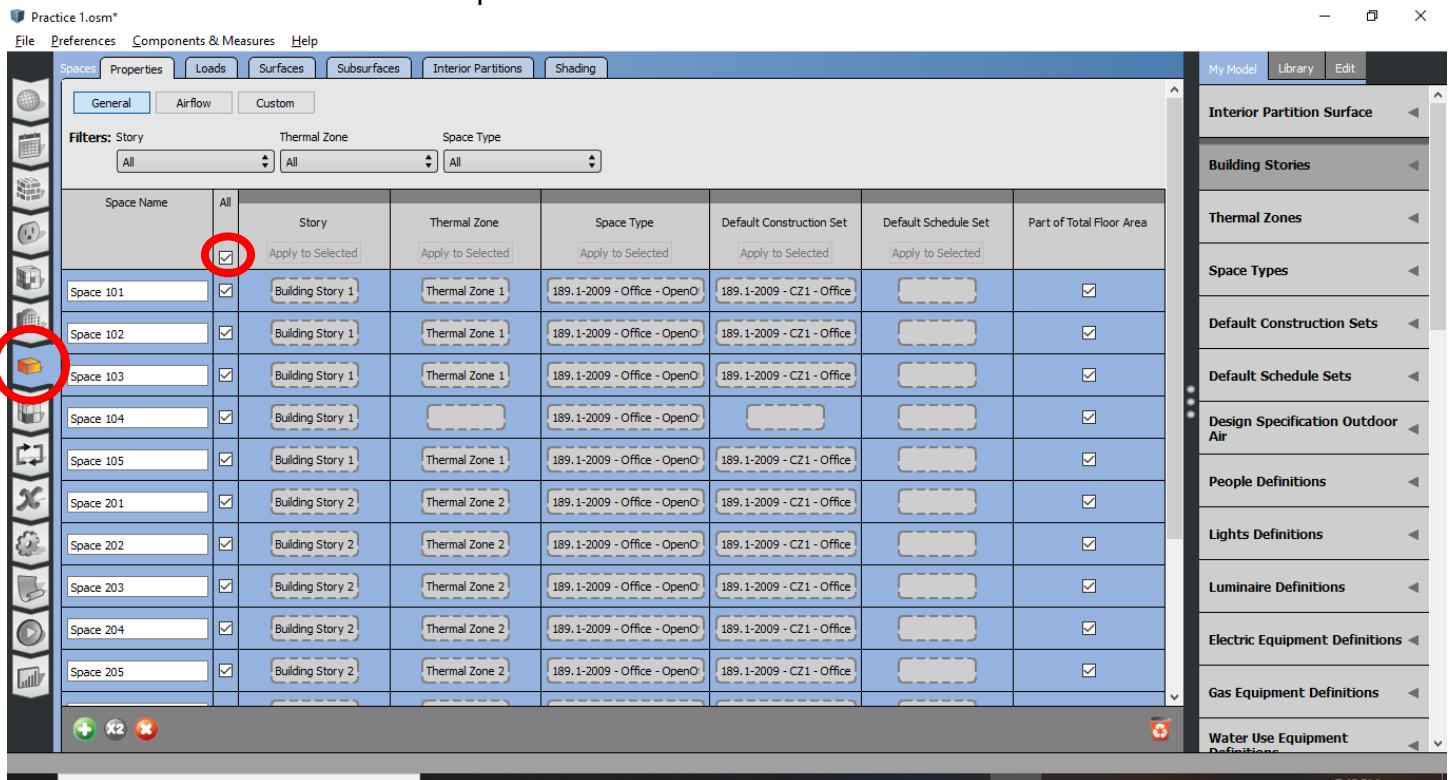
Duplicate any current material to customize your own, and change the followings.



Go to Construction Sets and add the new custom



Click on the 7th icon on the left “Space” and check the “select all” box to insert all modifications done



Click on the 2nd icon “Schedules” to obtain the graph below

