

Assignment 7. FTorresPérez

martes, 19 de noviembre de 2019

09:25 p.m.

Task 1:

Solar Radiation:

To begin, the sun radiates energy. This energy is classified as electromagnetic energy. As follows, electromagnetic energy that is emitted by the sun is called Solar Radiation. Solar radiation is radiated in the form of electromagnetic waves, including visible light, ultraviolet light, and infrared radiation. This energy, or solar radiation, is either transmitted, scattered, or absorbed. When solar radiation reaches earth's surface it is modified. This modification is due to the phenomenon of dispersion and absorption.

Dispersion is when the sun's rays are not perpendicular to the surface of the earth. Therefore, the energy becomes dispersed. The greater the dispersion, the lower the temperature.

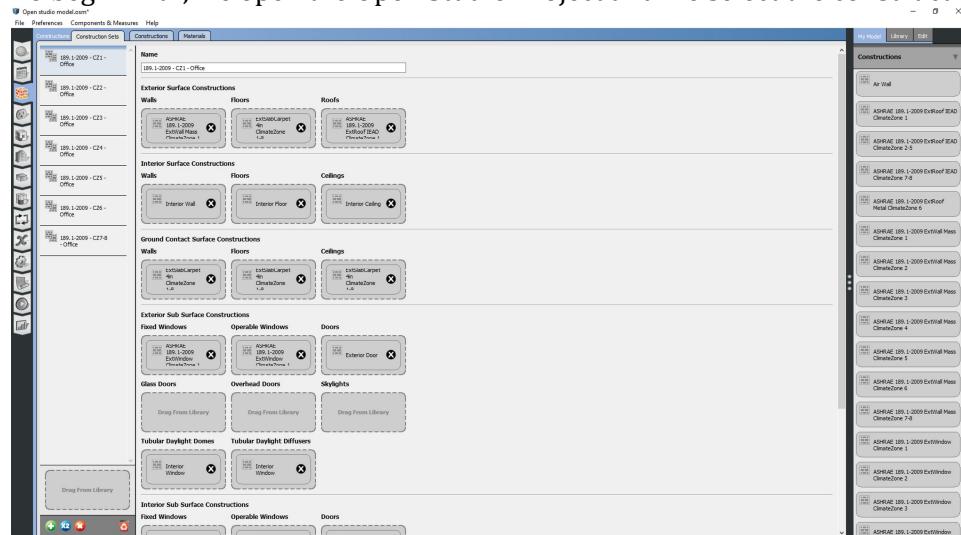
Scattering is when solar radiation passes through and some of the wavelengths are deflected in all directions by gas molecules, particles, and water vapor. When these particles are suspended, they act like prisms and display a variety of colors. A wonderful example of this is the display of colors during the sunset.

Reflection is when a surface reflects a percentage of the incident radiation back to the medium from which it originated.

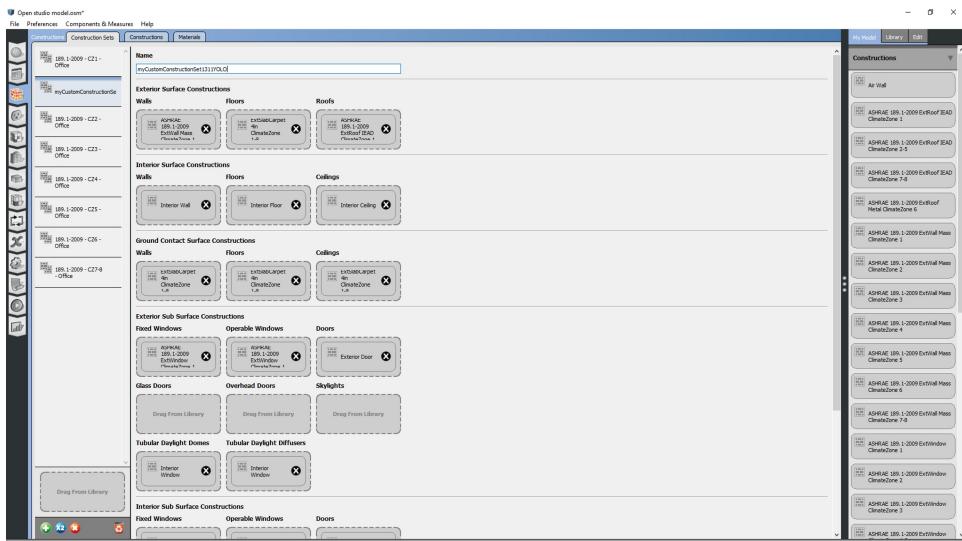
Most importantly! Solar radiation is dependent on the position of the sun, the weather conditions, the altitude, and the duration of the day.

Task 2:

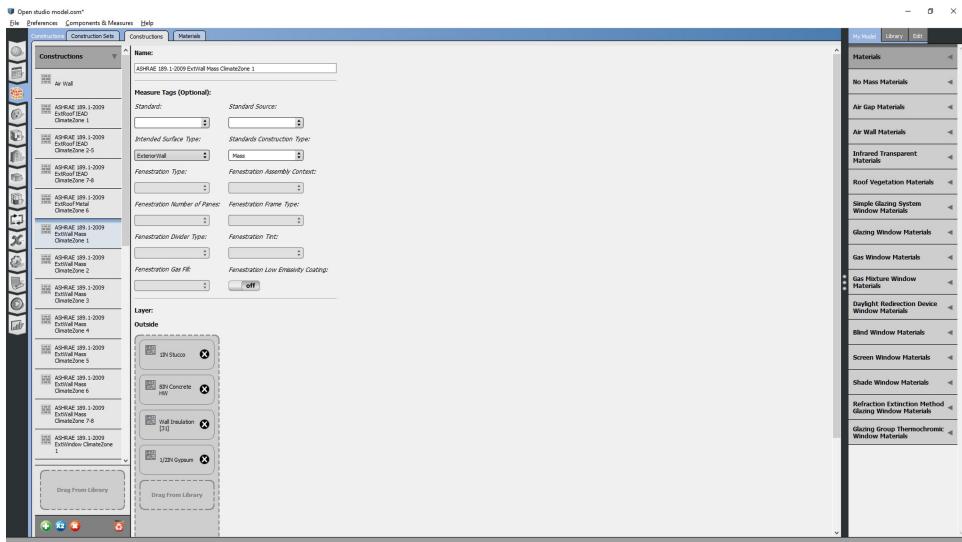
To begin with, we open the Open Studio Project and we select the constructions set panel



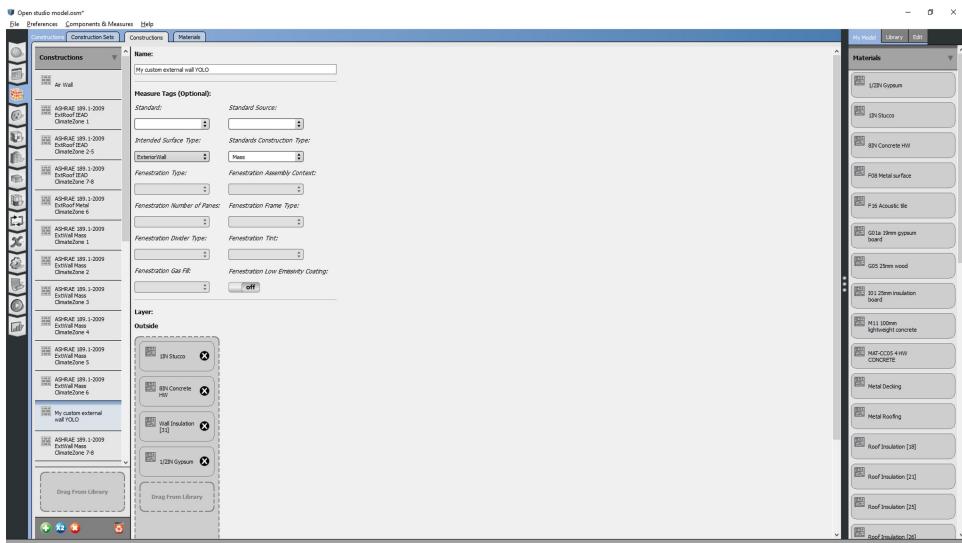
We duplicate a construction set and we rename it



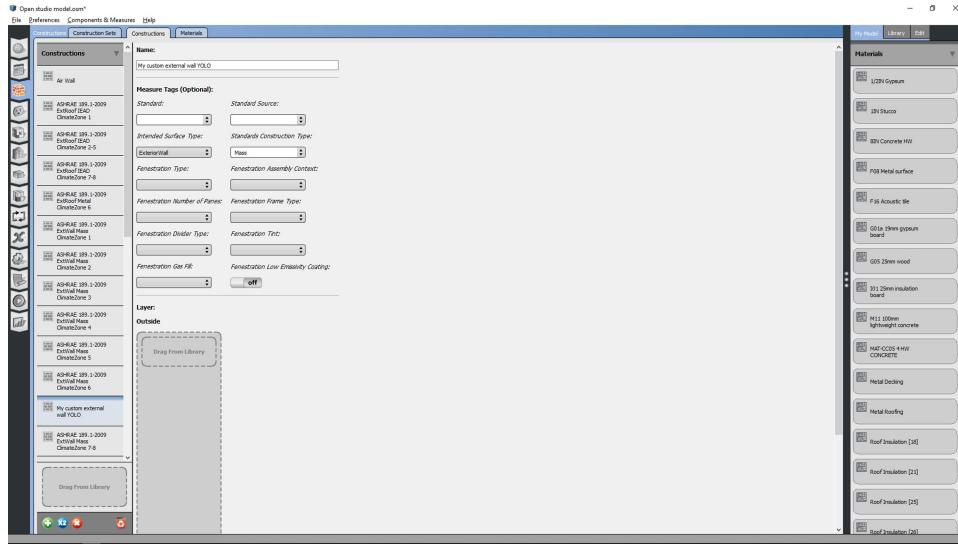
We select the constructions panel window and we duplicate the wall element



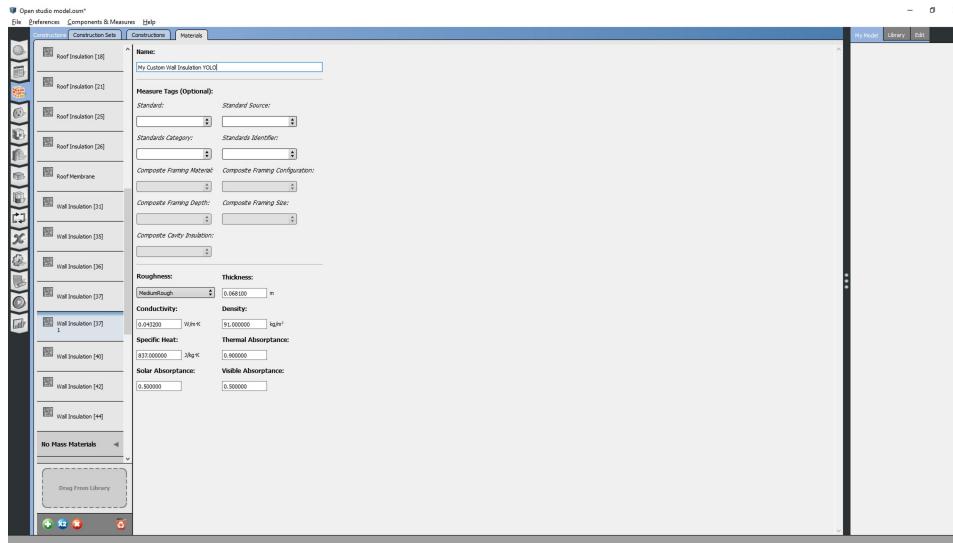
Once we did that we rename it and we can have a look at the elements that compose it



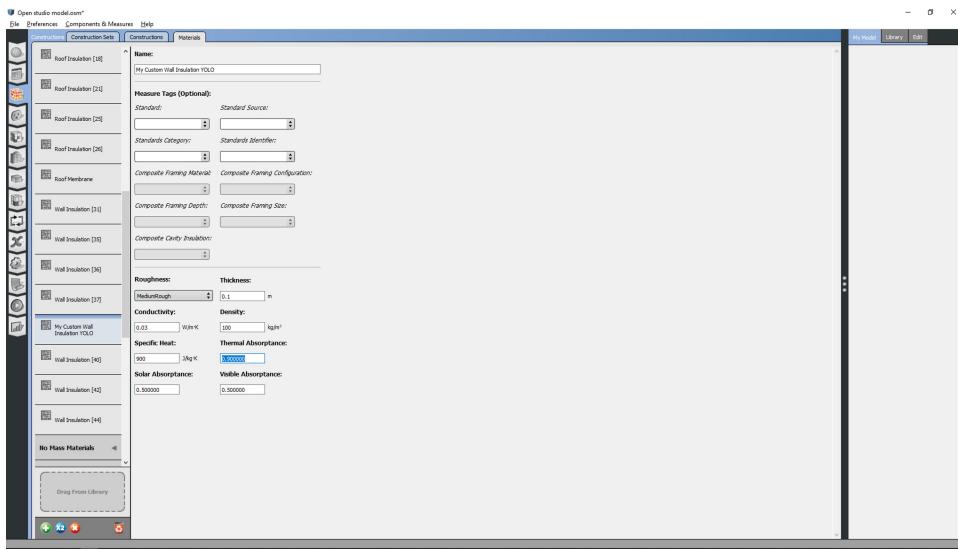
We remove the elements that compose the wall.



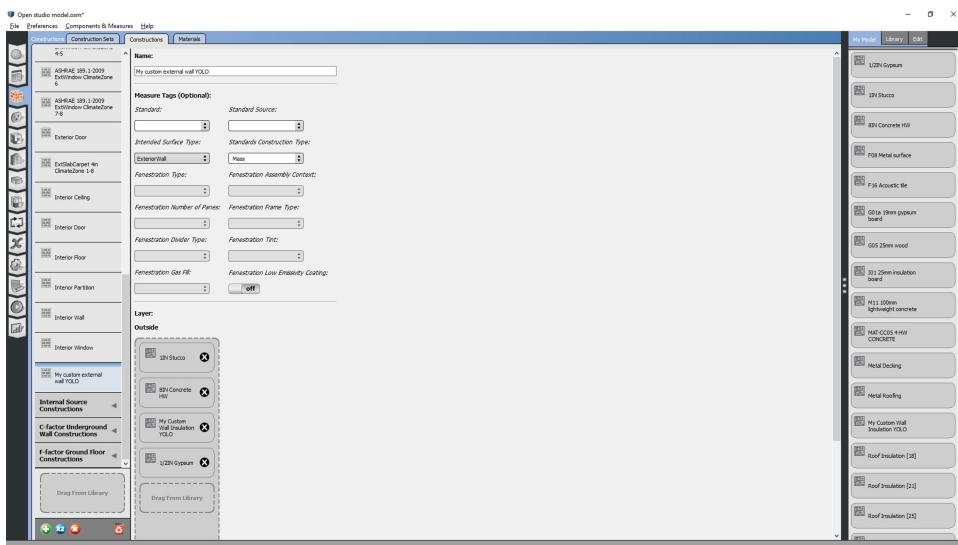
We select the materials panel, where we duplicate one of the elements (In this case, wall insulation)



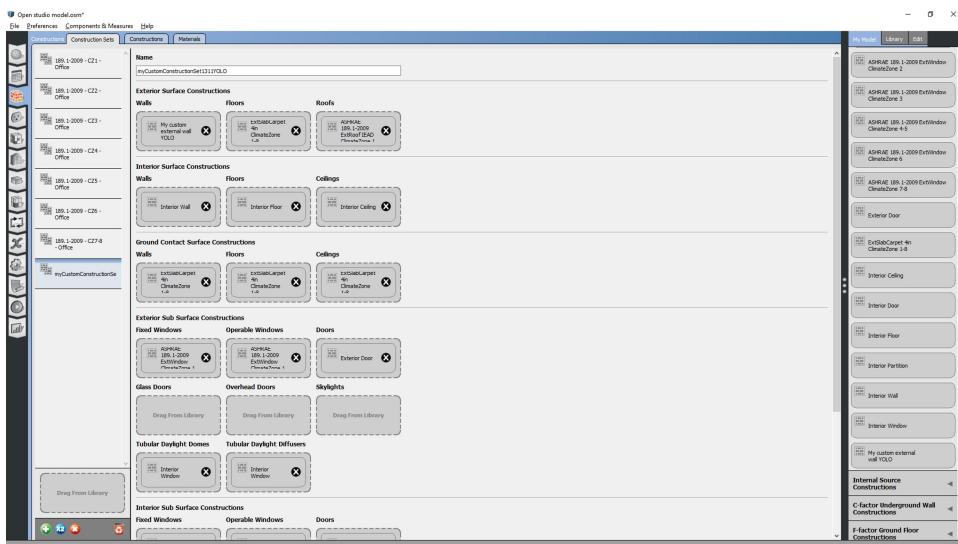
We change the element's properties.



We go back to the construction's panel and we add the materials that we just created



Back in the construction set panel we can add the wall that we created (which has the new materials)

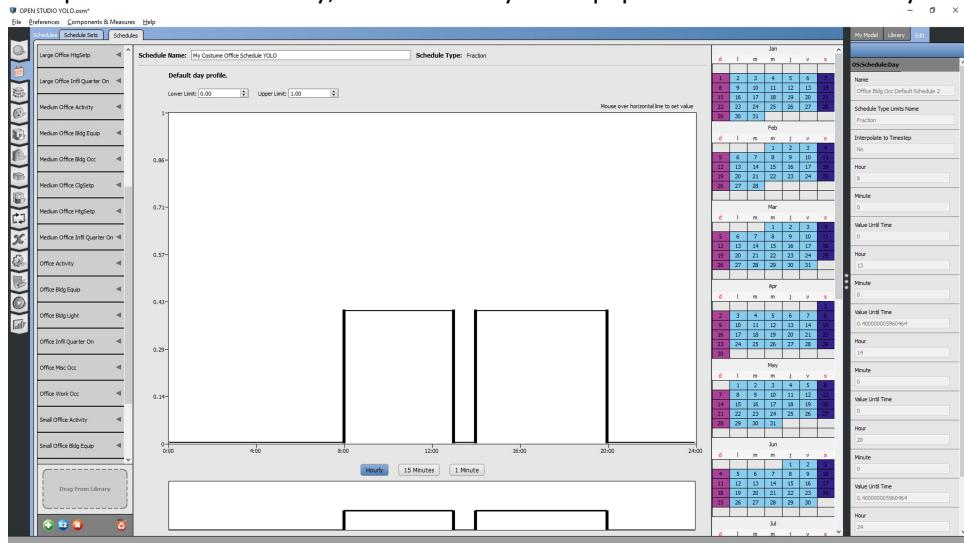


We select the "spaces" panel, where we can have a look of the different spaces and their properties.

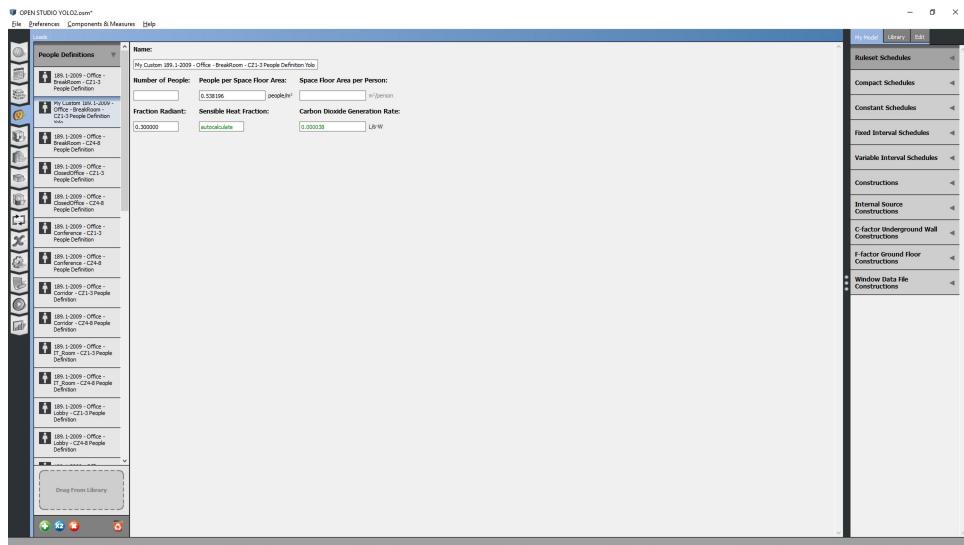
We select all of our spaces and we replace the construction set with the one that we created.

Now we select the Schedules panel

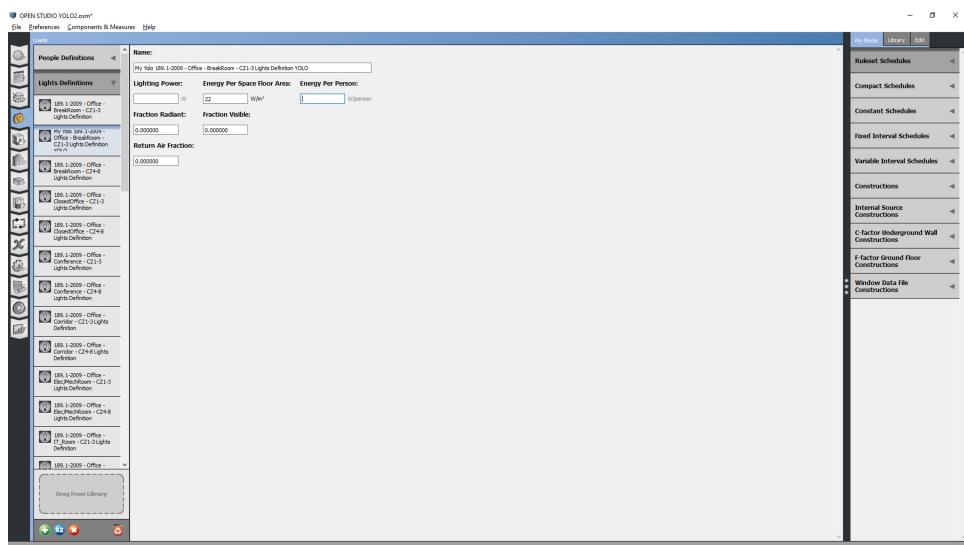
Here we can modify the schedules of the each of the spaces, related to the times where they will be occupied. In a similar way, we can modify the equipment and office activity values.



We modify the people definition, which relates to the amount of people per square meter in the office



We can also modify the lights definition



At last, we apply the changes for all the spaces we created.

