

ASSIGNMENT WEEK 7

A. Provide a summary of the main concepts that went through about solar radiation (formulas are not needed)

Solar radiation is energy emitted by sun that creates electromagnetic energy. Half of the radiation is in the visible short-wave part and the other half is in the infrared part. Minor part is also in the UV spectrum. The radiation received by the earth is modified due to dispersion and absorption phenomenon.

When sun rays are not perpendicular to the Earth's surface, the energy spreads out over a greater area, This is known as Dispersion.

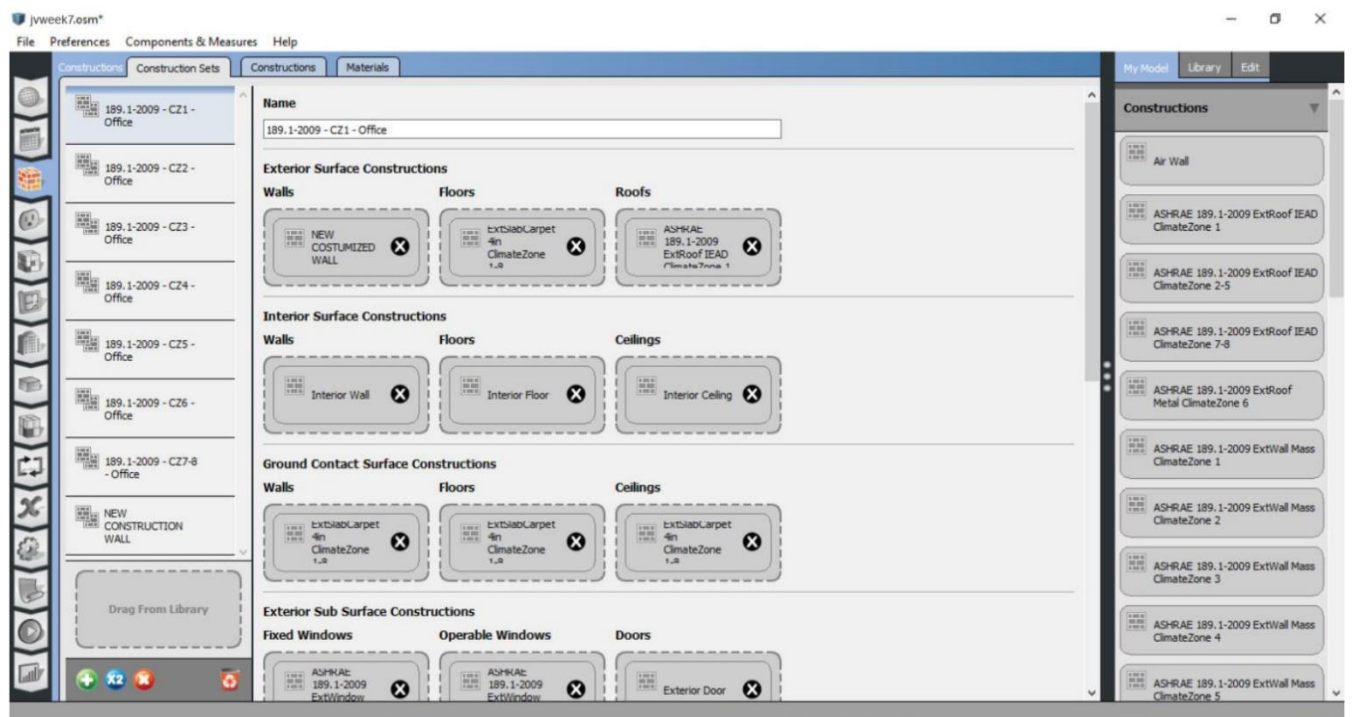
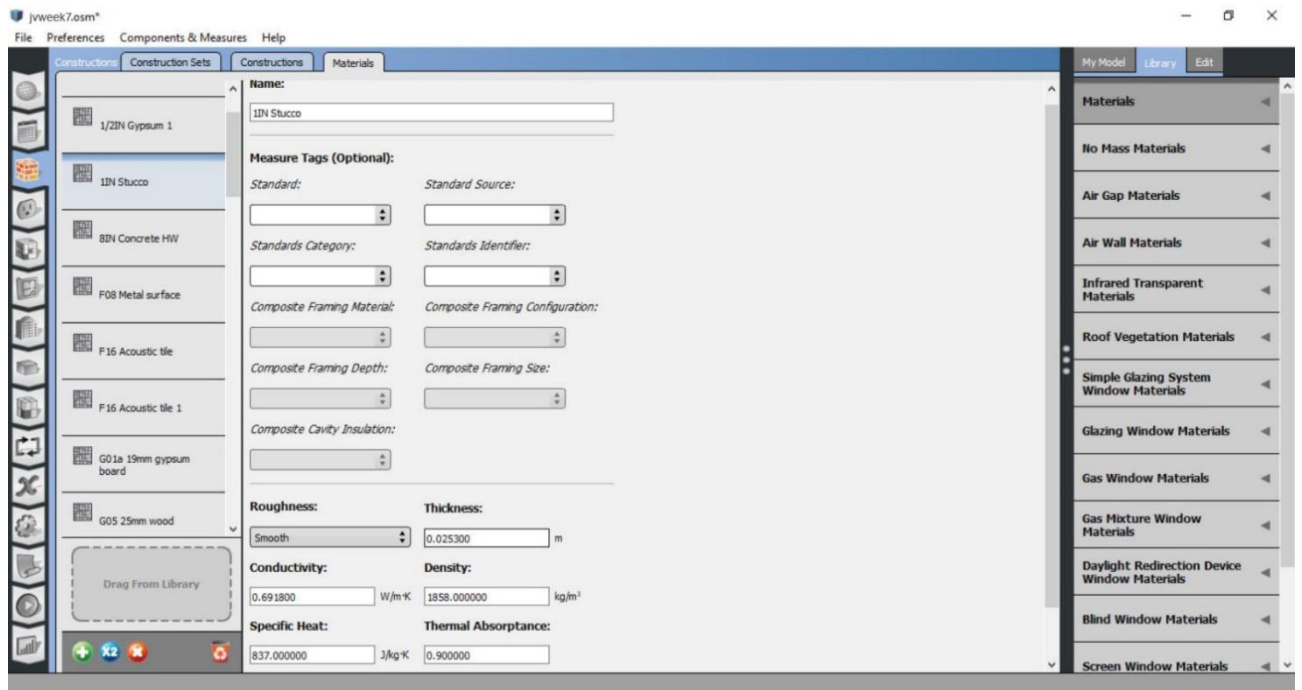
Scattering is a phenomenon that occurs when when solar radiation passes through the air and some wavelengths are deflected in various directions due to presence of gas molecules and water vapour. About 25% of solar radiation is scattered by atmosphere. Scattering of various wavelengths is why the sky is blue. It is also the reason for Red Sun at the sunset and other optical phenomena.

Solar Radiation depends on:

1. Sun's Position in the sky (altitude and azimuth angles), which changes daily and seasonally
2. The weather Conditions
3. The site altitude over the sea level
4. Sunlight Hours

B. Create a pdf file with screenshots of all of the steps we went through in the second lesson on openStudio and explain briefly the reason behind the use of each step (in your own words!)

NEXT PAGE PLEASE!!



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