

# SUNLIGHT

## Task 2 – London, Singapore, and Melbourne

One of the apparent changes when going from one place to another in the world is sunlight. In this task you will observe this change between London, Singapore and Melbourne.

Let's begin with London (latitude = 51.5 degrees North) in the Northern Hemisphere.



Keep/input the dimensions of ROOM and the window the same as your own room, and make the window face due south (orientation = 0 degree).

Now check the white sun patch in ROOM and the two solar angles at the following times: morning (9:00), noon (12:00), and afternoon (15:00) on summer and winter solstices and equinox.

You can take screenshots of ROOM at those times by pressing the 'Screenshot ROOM' button. This shall give you a good overview of sunlight access of your room over the year in the specified location (London).

You may note down the number of hours when sunlight access is available on those days and how deep the white sun patch reaches on the floor.

Moving to Singapore (latitude = 1.4 degrees North), close to Equatorial.



Repeat the analysis and see how the sunlight access is different from which in

London, and then to Melbourne (latitude = 37.8 degrees South) in the Southern Hemisphere.



After reviewing the sunlight access in the three places over the globe, try to summarize how sunlight access changes over the day in different times of the year, as latitude varies.