

## passive solar [overhangs]

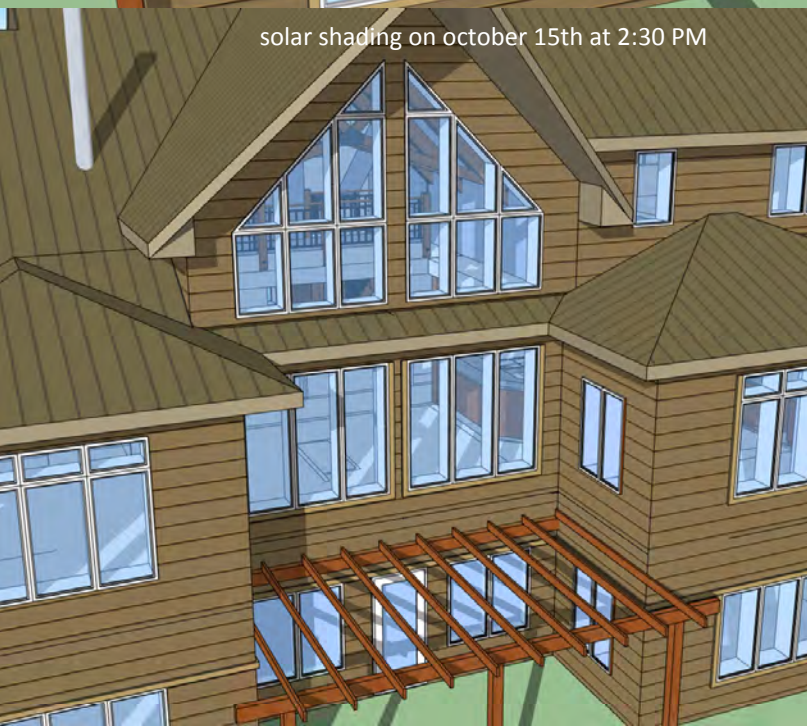
solar shading on june 21st at 12:00 PM



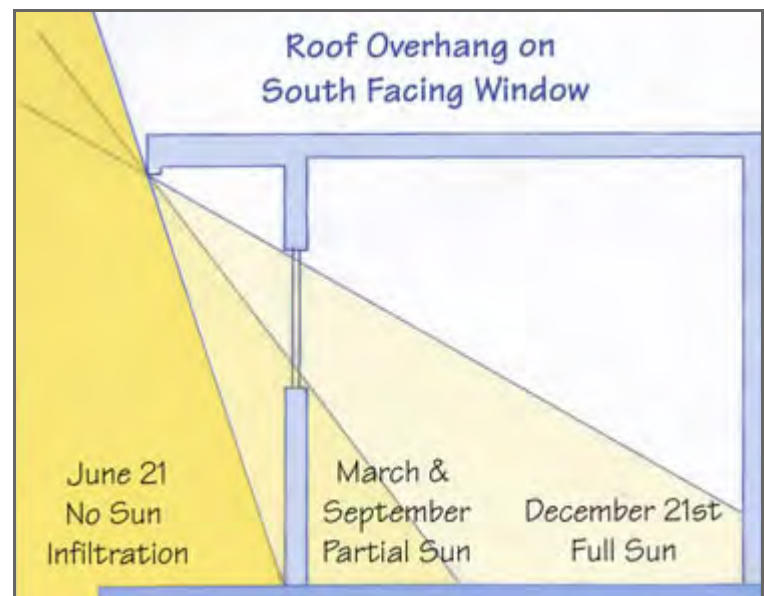
basement bedroom on october 15th at 1:00 PM



solar shading on october 15th at 2:30 PM



Overhangs and awnings can shade windows in certain seasons in order to prevent the house from overheating. We designed the south overhangs such that on December 21st (sun lowest) there is no shading from the overhangs and thus a maximized solar gain. Conversely, on June 21st (sun highest) the overhangs completely shade the flooring in order to prevent unwanted solar radiation from entering the home.



### Google SketchUp

SketchUp is a 3D drawing utility from Google. We chose to use this software in modeling the house because it comes with a built in sun .. and it was free. With SketchUp we were able to design the roof overhangs with reliability as shading inside the home is displayed graphically for any time of year. SketchUp also acted as a great communication tool between us and our builder.

### Window Coverings

During the late spring and late summer months (shoulder seasons) it may be necessary for us to close the blinds in order prevent excess solar gains. Cool and cloudy days in the same seasons may require some heat to maintain a comfortable level.