

**In Class 3:**

**"The daylighting / superinsulating challenge"**

**Organization**

- Break into the groups you've created
- Do, and report on the in-class problem
- Turn in materials produced, with names of participants, for credit

**Background Information**

- This class session discussed sustainable building practices
- The ongoing work for assignment 1B will account for these practices
- The class project description calls for skylights 16 feet on center
  - Passivehaus guidelines recommend windows systems with U values no greater than 8 times the conductance
  - Skylights with the best U values are 10 times or more than superinsulated walls
  - At 4 feet by 4 feet, the skylights represent a serious thermal conductance problem
  - Skylights also generate substantial solar heat gain in the summer
- Passivhaus standards for insulation suggest 8 to 12 inches of material for typical roof assemblies
  - the presence of the skylights may require more insulation
- Each in-class group is going to propose insulation and skylight strategies to work with passivhaus standards

**Discussion / Writing / Sketching**

- **Examples of Wasco skylights with good insulating values are included**
- **Propose details which account for skylights and insulation of more than 12 inches**
- **Propose modifications to Wasco skylights to make them have**
  - a lower U value
  - a means of dealing with solar heat gain.
  - a means of mitigating their 'blackness' at night

**Presentation: Report out your results to the class**