O1: *Light emission from a bulb*

**Materials:**
Incandescent light bulbs, various light bulbs with unusual filament shapes, screen

**Initial definitions and givens:**
Incandescent: containing a filament that glows white-hot when a current is passed through it. (basically, a resistor)

**Initial instructions and questions:**
1) Observe a light bulb. Think about the light leaving the bulb. Draw a sketch of how the light leaves the bulb.
2) After you have discussed your ideas with the class, examine some of the special bulbs with weird shaped filaments. Imagine if that light were turned on, sketch what you think you would see and why.
3) After a class discussion, observe the light bulb with different filaments turned on. Are you predictions confirmed? If not, how do your observations differ from your predictions?

**Guide to notes in your lab notebook:**

1. *What does your sketch represent?*
2. *How do other people’s sketches differ?*
3. *What misconceptions did you have about the propagation of light?*
4. *What conclusions can you draw about light from your observations?*