

## **Physics 135 – How Things Work**

### **Video2: “Some Assembly Required” Guide Questions**

Variants of these questions may appear in homework and exams. Answer them based on the video “Some Assembly Required” and keep them as part of your notes.

1. In the video on Making Windows, we learn that heating a layer of sand to 3000 °C can cause it to become clear. Around this furnace, the workers use protective headgear that is either colored white or shiny. Explain this and predict what will happen if they use dark-colored headgear instead.

Reserve the following question for a future class on polarized light:

Because of the brightness of the furnace, the hosts show that it is impossible to see the glass unless one used a polarized glass mask. Explain how a polarized glass mask works to eliminate much of the blinding reflected light.

2. In the video on Making a Piano, the soundboard is the heart of the piano, What kind of wood is used and why ?
  
3. Based on the video on Making Strong Sushi Knives, how does one combine soft iron and high carbon steel to create sturdy knives ?

A dull knife actually damages the cells of fish and leads to a different taste. How do the Japanese manufacturing process create a truly sharp knife ? How is it kept from rusting ?