1. Draw a picture of what you imagine solid sodium chloride looks like at the atomic level.

2. Draw a molecular level picture of liquid water, and a molecular level picture of liquid sodium chloride. Use this picture to help explain why it takes more energy melt solid salt than it does to melt solid water. (What interactions have to be overcome to melt each substance?)

3. Why doesn't solid sodium chloride conduct electricity, but solid aluminum does?

4 Why does molten (liquid) sodium chloride conduct electricity? Is it the same reason as for Aluminum?

5. Arrange these ionic compounds in order of increasing melting point. NaCl, KBr, CaO, Al_2O_3. Look up your answers and see if your predictions were correct. What factors did you take into account when making these predictions?

5. Arrange these materials in order of increasing melting point. CH_4, $MgBr_2$, HF, $C_{(diamond)}$ Look up your answers and see if your predictions were correct. What factors did you take into account when making these predictions?