# Open Chemistry Online – Post Quiz #15 (OpenStax Ch: 10.1-10.3)

1. State the strongest IMF present on each of the following molecules: CH4, H2O, H2CO
2. Based on the answers above, which of the compounds in A do you expect to have the highest boiling point? Which do you expect to have the lowest boiling point?

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| --- | --- |
| **cice** | **2.093 J/g oC** |
| **cwater** | **4.184 J/g oC** |
| **ciron** | **0.449 J/g oC** |
| Δ**Hvaporization(H2O)** | **44.01 kJ/mol** |
| Δ**Hfusion(H2O)** | **6.01 kJ/mol** |

1. Using the following information, calculate the amount of energy required to bring a mixture of 50.0g ice in 250g water at 0.00 oC to all water at 27.0 oC.
2. If the warming of the water was caused by the dropping of a hot 150g iron rod into the ice water, calculate the initial temperature of the hot iron rod. **Assume 100% of the heat from the rod goes into the ice water.**