**Worksheet 14B: Heat transfer**

**Objective F: Thermal Conduction **

**Questions:**

1. Question

**Objective G: Thermal Convection**

**Questions:**

1. Question

**Objective H: Evaporative Heat Transfer Q = mL**

**Questions:**

1. Question

**Problems:**

1. Question

**Objective I: Radiative heat transfer  **

**Problems:**

1. Question

**Objective D: Phase change graphs**

Here is a phase change graph for 0.0160 kg of a substance that starts out as a solid at 0 oC:



1. Label the graph where the KE is increasing, and where the PE is increasing.
2. What is the melting point? What is the boiling point? (30. oC, 80. oC)
3. What is the specific heat of the solid, liquid and gas phase? (104 J/kg/oC, 188 J/kg/oC, 156 J/kg/oC)
4. What is the latent heat of fusion and vaporisation? (9380 J/kg, 15,600 J/kg)

Here is another phase change graph for 0.026 kg of a substance that starts out as a solid at 0 oC:



1. Label the graph where the KE is increasing, and where the PE is increasing.
2. What is the melting point? What is the boiling point? (40. oC, 80. oC)
3. What is the specific heat of the solid, liquid and gas phase? (48.1 J/kg/oC, 240. J/kg/oC, 76.9 J/kg/oC)
4. What is the latent heat of fusion and vaporisation? (7,690 J/kg, 11,500 J/kg)