**Heating and Cooling**

**Assignment**

**Scientific Report**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Class:\_\_\_\_\_\_\_\_**

**Log Book – Hot Drinks Cooling**

**Aim:**

*What you want to achieve in the experiment*

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

(2 marks: 1 independent variable, 1 dependent)

**Independent variable:** *(change)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(1 mark)

**Dependent variable:** *(measure)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(1 mark)

**Controlled variable:** *(same)* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Max 3 marks per correct variable)

**Hypothesis:**

If … then...

(2 marks: 1 independent variable, 1 dependent)

**Materials and method**: *Please add the textbook name and page number below*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(1 mark)

**Equipment:**

*Draw a scientific diagram of your set up. Remember it should be in pencil, 2D, and labelled.*

(3 marks: 0.5 pencil, 0.5 2D, 1 correctly labelled, 1 correct drawings)

**Results:**

*In the space below please construct a table of your results. You also need to attach a graph of your results*

(4 marks: 1 title for table, 1 correct headings, 0.5 all results entered, 0.5 correct columns and rows, 0.5 units, 0.5 pencil)

**Discussion**

*Which drink cooled the fastest?*

(1 mark)

*Which drink cooled the slowest?*

(1 mark)

*Describe the trend or pattern that each graph showed. Was it increasing, decreasing or unpredictable?*

(1 mark)

*Explain why the drinks cooled at different rates*

(2 marks)

*What improvements could be made to the experiment?*

(2 marks)

**Conclusion**

*Summarise what you discovered at the end of the experiment*

(1 mark: 0.5 independent, 0.5 dependent)