**Writing up your investigation – Heart Rate**

Hello all,

I hope you have all enjoyed undertaking your own science experiments, investigating your heart rate. Now that you have conducted your experiment, you will need to think about how you write up your investigation and present your findings.

I have created this information sheet to help guide you in your writing and use the subheadings to structure your own report. Try and do the best you can and please do share them with me if you wish to.

Mr Harman

**Research Question**

What did you want to find out?

For example:

*The aim of this experiment was to answer the question: what impact does exercise have on heart rate?*

**Prediction**

What did you think would happen? What are the results you expected to find? Use appropriate vocabulary to explain what you think and why.

*For example:*

Use scientific language – heart rate / pulse, more / less, type of exercise, higher / lower, oxygen, energy, faster / slower, muscles, respiration, hard / easy

*For example:*

*I predict that the intensity of exercise will impact heart rate OR I predict that the intensity of exercise will not impact heart rate.*

**Equipment**

List the equipment you used to conduct your experiment.

**Safety Precautions**

What did you do to ensure your experiment was conducted safety?

**Method**

You should explain in detail exactly what you did, stage by stage. Here, you should also explain how you made sure that you carried out a fair test. Which *variables* did you use? Or did you change? Which did you keep the same?

Your report needs to tell someone else what they would need to do if they want to repeat exactly the same experiment. For example, they may want to test the same idea to see if your results are accurate. Making experiments replicable is an important part of science!

*For example:*

*To undertake this experiment, I ran for 20 seconds, with 10 seconds rest and repeated this 4 times. I took a 1 minute break in between each test and measured my pulse manually. The chosen variables for this experiment were…..*

**Results**

As you carried out your experiment, you would have recorded what you found: referred to as a table of results. Make sure your table is clear and labelled correctly.

Example table:



You may wish to present your data in a bar graph to help visually show your results.

Make sure you label your axes and give your graph a title. A template that you may want to use or adapt has been included.

**Discussion**

This is where you explain what you have found in relation to what you thought you might find. Here, you can discuss what you found, any significant results, any results of interest to you and anything of interest that you wish to share with the reader.

*For example:*

*Findings from this experiment have shown that exercise intensity does impact heart rate. These findings are of interest because …….from this I have learnt that …*

In a discussion section, you can also comment on the accuracy of results, how you might improve the experiment and what you would do if you were to undertake the experiment again.

**Conclusion**

Here you can remind the reader as to what your research question was and summarise key findings.