**Designing an Experiment - Notes**

The Scientific Method

1. Purpose – why are you doing it? What do you hope to learn?
2. Hypothesis – Prediction. What do you think will happen?
3. Materials – list of what you need
4. Apparatus – how to set up your design \*diagrams\*
5. Procedure – list of steps to follow
6. Results – what happened? Numbers charts diagrams
7. Conclusions – was your prediction correct?
8. Sources of Error – things that might affect the outcome of your experiment

Ex – human error (calculations, measurement, timing, etc)

Ex. Environmental factors (time pf day, wind, temp) etc

1. Controls – the parts that must stay the same for the experiment to measure only one thing.
2. Variable – the one part that is different, that you are testing for

**Experiment Design Mini-Project**

Critical Thinking questions:

1. After listening to the other groups and the teacher’s comments, what was something you did in your experiment that you would do differently if you could do it over again? Explain why. (2 marks)
2. What is a variable? Explain what it is in your own words, and also why it is important to only have one variable in an experiment. (2 marks)
3. What is a control? Explain in your own words. (1 mark)
4. List 4 controls from your experiment. (2 marks)
5. What is a theory? Explain in your own words. (1 mark)