**Stage 2 Physics** NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Assessment Type 1: Investigations Folio – Magnetic Flux Density**

For this task you are required to design and undertake a physics experiment to test the effect of a variable on the magnetic flux density at the pole of a solenoid. This will be completed in three stages:

**Planning**: The physics context will be deconstructed and an experiment will be designed.

**Experiment**: The experiment that was designed will be undertaken.

**Practical Report**: The data will be recorded and analysed, and any conclusions will be discussed.

You may work in groups up to a maximum of three people, however, each member needs to be submit their own plan and experiment report.

You can choose any independent variable to investigate provided that appropriate equipment is available.

**Deconstruction and Design**

* List all variables that could be involved.
* Which of these variables can be manipulated? Describe how and what outcomes would be expected.
* Choose independent and dependent variables, and form a hypothesis.
* How will other variables be controlled? Discuss potential effects of any variables that may be difficult to control.
* Design an experiment to test your hypothesis, including equipment, steps, data to be collected, and plan for representation and analysis.

**Report**

Each member prepares and submits an individual practical report. Your practical report should include:

* Introduction with relevant physics concepts, a hypothesis and variables, or investigable question
* Materials/apparatus, method/procedure outlining any trials and steps to be taken\*
* Identification and management of safety and/or ethical risks\*
* Results\*
* Analysis of results, identifying trends, and linking results to concepts
* Evaluation of procedures and data, and identifying sources of uncertainty
* Conclusion with justification, taking into account limitations

The report should be a maximum of 1500 words, if written, or a maximum of 10 minutes for an oral presentation, or the equivalent in multimodal form.

A summary sheet outlining the deconstruction process should be attached to the report\*. Suggested formats for the summary sheet include flow charts, concept maps, tables or notes.

\*The five asterisked sections of materials/apparatus, method/procedures, risks, results and deconstruction are excluded from the word count.