**Skills Needed in the IA Investigation**

### General Skills

- Academic honesty, use of appropriate citations and referencing sources.
- Presentation skills, layout of sections in long experiment reports.
- Scientific terminology, correct use of SI units, section headings in experiment reports.

### Planning and Research Skills

- Library research skills
- Safety, reducing risks and risk assessment
- IB animal experimentation policy
- Method writing in the third person
- Apparatus, choosing appropriate apparatus and measuring uncertainties
- Variables, independent variable, dependent variable & controlled variables
- Data, how to plan for collection of reliable data, and how to decide what is sufficient data.

### Data Tables, Graphs and Analysis

- Conventions regarding labels, units and decimal points in tables of results
- Estimating uncertainties in measurements
- How to show working out & calculations in data processing
- Conventions in graph plotting
- Appropriate analysis

### Conclusions

- How to describe a trend.
- Justifying a trend using data
- Justifying a trend using scientific concepts for confirmation
- Considering the impact of measurement uncertainty
- Comparing a trend in data with a research question.

### Evaluations

- Identifying limitations in data
- Limitations of the method and apparatus
- Suggesting realistic improvements