

Experimental skills

Practical skills

Planning

- independent and dependent variables
- keep variables constant
- control experiment
- five values, three repeats

Results tables

- time / s
- no units in body
- same decimal places
- percentage change

Graphs and charts

- independent variable on x-axis
- more than half the grid
- × or ○, best-fit line
- histogram bars touch

Biological drawings

- sharp pencil, no shading
- ruled label lines touching
- image size ÷ actual size
- measure in mm

Evaluating

- anomalous results
- repeats and mean
- sources of error
- specific improvements

Indicators and tests

- limewater: milky
- hydrogencarbonate: yellow, red, purple
- universal indicator: pH
- litmus: red acid, blue alkali

Errors and uncertainty

- zero errors
- random and systematic errors
- equal within $\pm 10\%$
- accuracy and precision