

Component 3 Exam Skills

Part 1—Practical Exam



Carrying out the Investigation

Watch the demo, make notes, read the brief.

Recording Results:

Write units at top of columns of table only—not next to the numbers.

Use the same interval in the left hand column. Use easy numbers—make it easier to plot the graph.

Use as much of the range of the equipment as possible.

Write the readings in order and use all the rows.

Observations:

Take note of anything that you see, hear, feel during the investigation. If it changes—record it.

Drawing a graph:

There are 2 pieces of graph paper—one for each set of data. Use as much graph paper as you can.

Left hand column of results go on the horizontal or x-axis. Use the even scale from the table along the axis. Use regular intervals.

Use an even scale for the vertical or y-axis. Make sure that both sets of data will fit on this scale.

Use the same scale on both graphs.

Line of best fit can be a straight line or a curve through most points. Not dot to dot.

Circle any obvious anomalies.

Analysis of the Investigation

You can return to the equipment if you ask.

Drawing Conclusions:

What is the pattern in results? As the increases, the increases/decreases

State there a positive or negative correlation.

Use data to describe the basic pattern (first/last result).

How much does it go up by each time?

Does the pattern change? When does it change? Use data to explain this.

How close are the points to the line?

Are there anomalies? Why?

Link back to the scenario at the start of the paper and explain the effects of your findings on the situation.

Evaluation:

Explain if the data was reliable. Find a way to improve the data.

E.g. Repeat results, improvements for accuracy of measuring.

Were there any issues with recording results/practical—how would you solve these? What effect did they have on the results?

What was the problem with the equipment?

Key vocabulary

Scenario—the real life problem that the investigation is linked to.

Observations—any readings that you take in the investigation in addition to any other effects that you notice.

Interval—the gap between the readings—for example if you change the mass by 10g, you must change it by 10g each time.

Range—The difference between the first and last reading.

Pattern—How the readings change over the investigation. The readings may increase or decrease.

Even Scale—On a graph or in a table of results, the numbers increase by the same amount each time.

Line of best Fit—The line or curve on the graph that goes through or close to most the points.

Anomaly—A result that doesn't fit the pattern.

Conclusion—A summary of the results that you took that describes and explains all the patterns in the data. It also links the results from the investigation to the scenario given at the start of the paper.

Evaluation—Describes the quality of the data collected and methods to improve it.