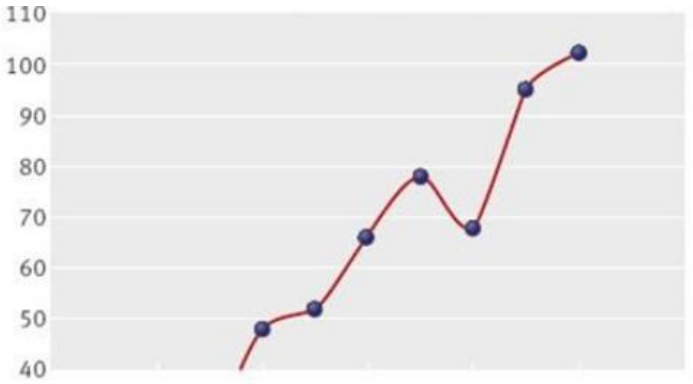
10 Mistakes to avoid in your Science exam

1) don't lose easy marks to sloppy graphs:



- Fill at least half the graph with data points.
- Label both axis with words and units.
- Never dot to dot data points. Draw a straight line of best fit with roughly half the points above and below.
- Be accurate to half a small square.
- The data you control (often the time you take a measurement) goes on the bottom. The data your measure goes on the y axis.
- Circle any anomalies (points that don't fit)

2) Remember units!

3) Round your answers: 2.0 m ÷ 3.0 s should be written as 0.67 m/s not 0.6666666666

4) If a value has a k in front of the unit you should multiply it by 1000.
   For example 30 kN should be changed to 30,000 N before a calculation.
   This is often one mark even if you cannot do the calculation!
   The only **exception** is mass which **should** be in kg (20 grams should become 0.02kg)

5) Don't give up on the long written 6 mark questions. They have some of the easiest marks in the exam. Write bullet points if you have to:

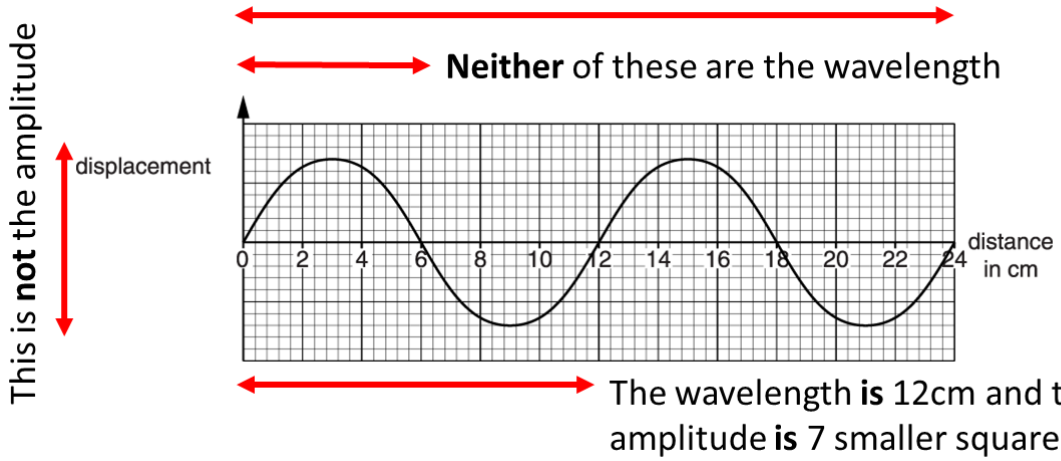
- wear goggles
- turn it off between measurements
- measure distance with a ruler
- measure time with a stop watch
- take repeats and find the mean (ignore anomalous results)
- take more precise measurements

Could get you marks even if you have no clue what the question is asking for.

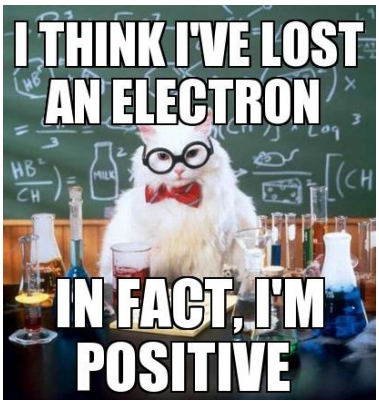
Try to write more than 6 marking points and squeeze in every relevant key word you can remember.

Specifically for physics where lots of mistakes are made:

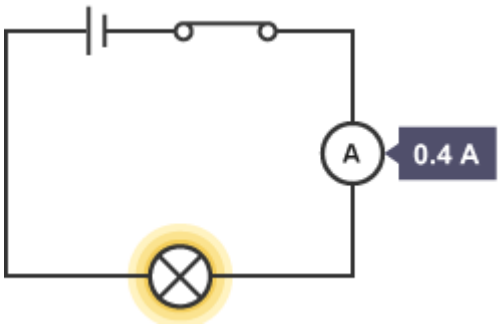
1) Wavelength is peak to peak. Amplitude is peak to centre.

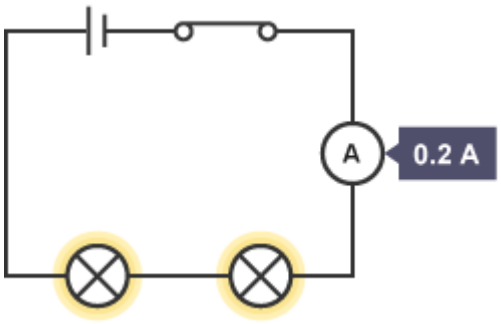


2) If a material gains a positive charge it is because the material has **lost** electrons It **cannot** gain protons, they are trapped in the nucleus of atoms and cannot be transferred.



3) Electrical current is **not** "used up". If it has to flow through two lamps the current will be half **because** the resistance is twice as high. In a series circuit current is always the same everywhere (the same electrons pass through everything). However, the potential difference (energy carried by each unit of charge) **is** shared.





4) Not remembering: $speed = \frac{distance}{time}$ $V = I \times R$ or $F = m \times a$

These 3 equations are all **bound** to come up. (You should learn all the others as well though!) If you can remember the nonsense lyrics to "Barking" you can remember these!