

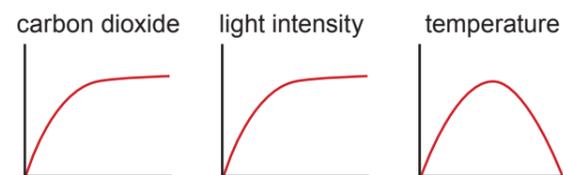
## GCSE Science 2018 examiner comment summary



Students didn't know names of cell types and structure of organs. Practise matching diagrams of cells/organs to their functions.

The value of A is greater than that of B

When a question asks you to make a comparison, make sure you clearly describe differences and/or similarities.



Carry out different experiments and analyse graphs to understand how limiting factors affect photosynthesis.

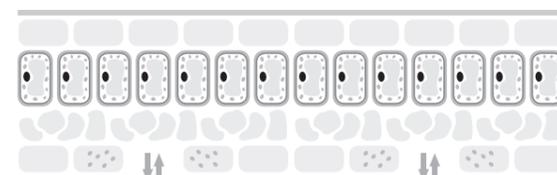
	A	a
A	AA	Aa
a	Aa	aa



Practise Punnet squares and calculating probability of genetic diseases. Ensure you know different inheritance terms.



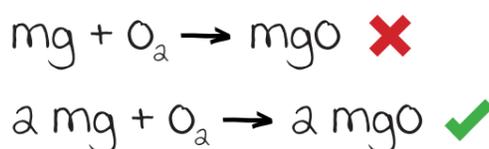
Be specific with suggested safety precautions and why they are needed.



Many students did not understand the function of guard cells and the stomata.

What would make the results more accurate?  
Doing more repeats **✗**

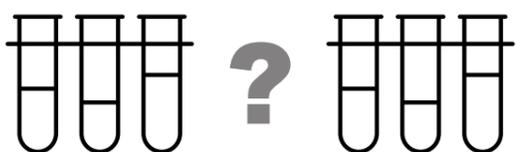
Repeats only improve precision of the set of measurements and not their accuracy.



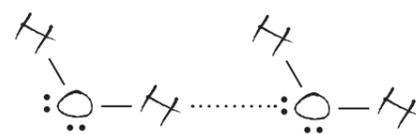
Check equations for balancing errors after writing them. Remember that any charges should also be balanced.



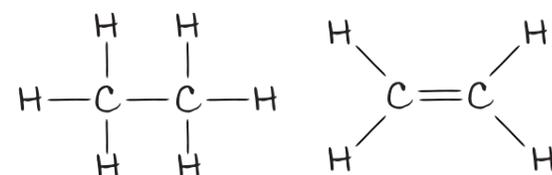
When writing the chemical formula of an ionic compound, remember the charges have to balance in ionic formulas.



Many students could not remember the chemical tests for ions in solution.



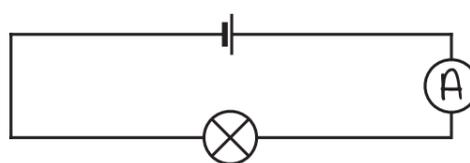
Be clear as to whether an attraction is between molecules or between the atoms within a molecule.



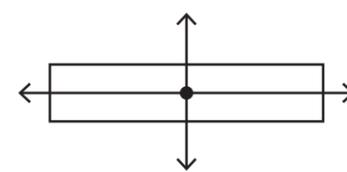
Make sure you know the names of the different organic homologous series.



Energy can be stored or transferred between stores. There are not different types of energy – only different stores.



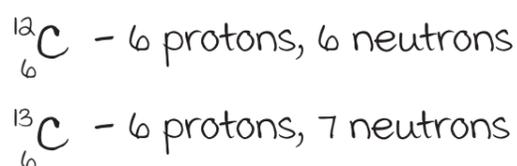
When drawing a circuit diagram, use correct symbols and make sure that all the components are connected.



A free body diagram is the scientific way to show the forces acting on an object. Most students showed artistic sketches instead.



The National Grid uses step-up and step-down transformers to reduce the current and increase voltage in transmission lines.



Isotopes of an element have the same number of protons in the nucleus but different numbers of neutrons.

Force is equal to mass times the acceleration, so...  
vs  
 $F = ma$ , so...

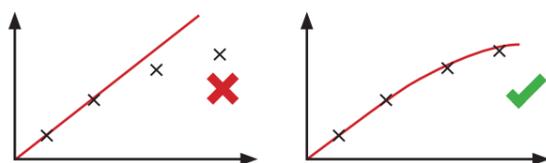
Using equations to help communicate your answer can be quicker than several sentences saying the same thing.

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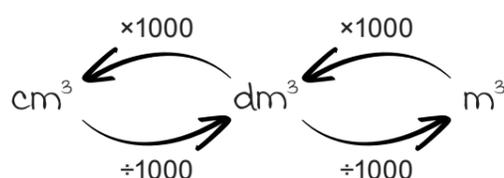
$$\frac{4.10}{202} = 0.0203 \text{ mol} \quad \frac{4.91}{94} = 0.0522 \text{ mol}$$

percentage yield = ~~38.89~~ % ✓ **ECF**

Always show your working for calculations. Students who show their working lose fewer marks.



When drawing a line of best fit it should best fit the data. Lines can be curved or straight.



In calculations always check the units and make conversions if needed.

Answer: ~~1008~~ -504

Make sure your final answer is clear. Don't scribble out incorrect answers, just put a line through them.

Use the information in the table to **describe** and **compare** the motion of the students.

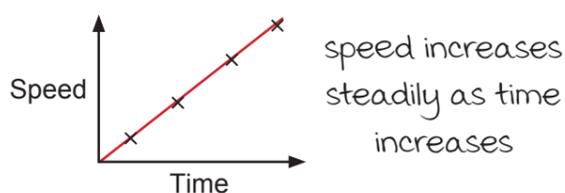
For Level of Response, answer each part of the question roughly equally. Check you have answered the whole question.



Concise responses are the best responses. All marks can be obtained within the answer space provided.



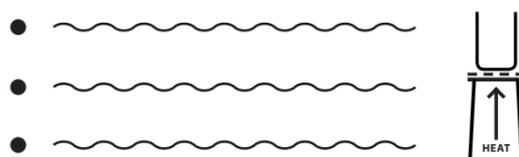
Scientific diagrams of equipment should be schematic and factual (not three-dimensional and artistic).



When describing data (graphs/tables) comment on trends, patterns and correlations, not just single data points.

- a. ~~~~~ X
- b. ~~~~~ ✓
- c. ~~~~~ X

For MCQs, if you don't know the answer try eliminating options by annotating. It could help you find the correct answer.



Write like a scientist, not like a storyteller. Using bullet points or diagrams can reduce the amount you have to write.

- ~~~~~
- ~~~~~
- ~~~~~

If describing a practical method use bullet points to give a list of simple, clear instructions someone else can follow.

Give your answer to two significant figures.

Answer: 25 cm<sup>3</sup> ✓

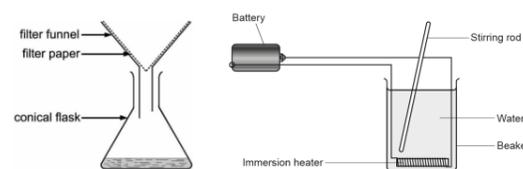
Remember to give your answer to the number of significant figures or decimal places that are asked for in the question.

Describe and compare the bonding of the materials and suggest which of them would be best to use, giving reasons for your answer.

Underlining or circling key information in questions will help you remember, as will jotting down ideas and equations.

- a. ~~~~~
- ↳ b. ~~~~~
- ↳ c. ~~~~~

The different parts of extended questions are linked. Information and answers from part (a)ii may help with part (b)i.



Practice applying what you know to new situations. Unfamiliar experiments will still use apparatus and techniques you know.

The full candidate exemplar materials for the 2018 GCSE Science papers can be found on Interchange.

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