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**REVISE**



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**YOUR**



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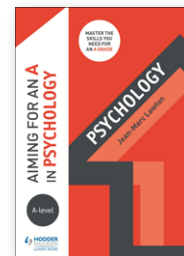
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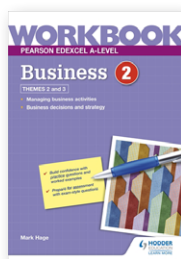
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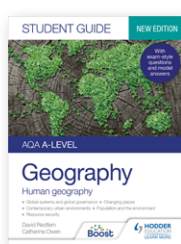
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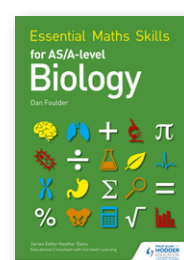
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# Revision tips and guidelines for all subjects

## Transitioning from GCSE to A-level

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Moving from GCSE to A-level is a big step up in many ways. The amount and complexity of the content at A-level is highlighted by students as being a factor. Another very important element is that as an A-level student, you will be more responsible for, and able to improve, your own learning. This guide will support you in developing the skills needed to succeed at A-level. It should be used at the start of the course to help you begin your studies and you should also refer to it throughout your A-levels, particularly in the run-up to mocks and the real exams.

## In class

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### Developing a successful approach to classroom study at A-level

The most successful A-level students make the most of their time in lessons, maximising their opportunities to learn and develop their knowledge and understanding. Some of the key aspects of a successful approach in the classroom are:

- Fully engaging in lessons – this means taking an active role in your learning, focusing on the particular task you've been given and the impact it's having on your learning.
- Asking and answering questions – this is one of the best ways of developing your understanding and addressing areas of weakness. Answering questions gives you the opportunity to gain immediate feedback from your teacher, reinforcing your learning and allowing you to correct any errors.
- Working with your peers – the other students in your class can provide support, motivation and the opportunity to discuss your learning. Listening to the ideas of others is a great way to reflect on your own understanding and consider how you might improve.

### How to take effective notes

One major difference between GCSE and A-level is that you are likely to move away from using exercise books and towards using written notes and handouts. Ensuring you organise and use these effectively is a vital skill which will give you the foundation to succeed at A-level.

The most important thing to remember when considering notes is that they are *your* notes, therefore they have to work for you. If you can't study and revise effectively from the notes you have, then you will not be able to achieve at A-level.

Effective notes should be:

- **Organised** – you should be able to find the notes for any particular topic easily. This allows you to use your study time efficiently, because you're not wasting time searching for individual pieces of paper. It also makes it easier to cross-reference your notes to see the links between topics, allowing you to build a holistic understanding of the subject.
- **Complete** – your notes will be one of the primary methods by which you will study and revise for your assessments. If they are incomplete this could lead to gaps in your learning, which will mean losing marks in the exam. Don't put off asking for help if you have sections missing, and be proactive in filling these gaps as soon as possible. This will mean you will have a complete set of notes when it's time to prepare for assessments. It also removes the stress of having to fix missing notes while revising.
- **Correct** – this may seem obvious, but it is very easy for inaccurate information to find its way into your notes. If this information becomes incorporated into your learning it can not only lead to you giving incorrect answers in your assessments but also damage your ability to fully develop your wider understanding of a topic. Ensure you check your notes thoroughly, and ask if you have any doubts about them.
- **Annotated** – actively engaging with your notes is a great way to develop your knowledge and understanding. This can be through adding emphasis to key areas, by underlining or highlighting, or writing annotations which provide additional information or links to other topic areas. This should always be done in a meaningful way. (Don't highlight everything, as that defeats the object of trying to emphasise one particular area.)

## What questions to ask

Support from your teachers is one of the most important methods of improving your grades over the course of your A-levels. One of the key skills to develop is how best to ask for the right kind of support:

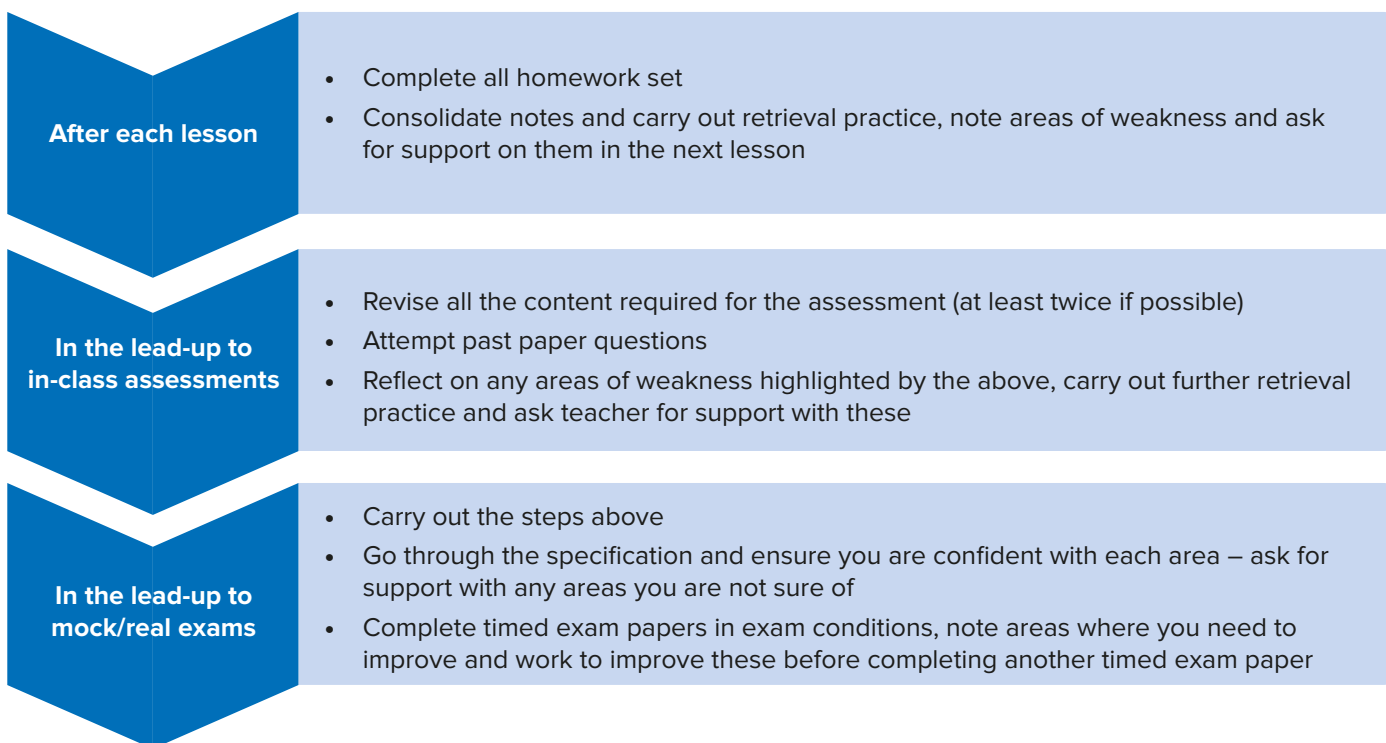
- Many students are reluctant to ask for help. This can be for a number of reasons, but one of the main ones is the worry that asking for support may create a perception that they are struggling or not 'good enough' at the subject. The opposite is actually often true – the students who ask the most questions often go on to get the best grades. This is because they are constantly evaluating their learning and then asking for help to address the areas of weakness which they have identified.
- You should be proactive when asking for help with a particular topic but make sure you've done the preparation work first. (Just saying you don't understand anything about the entire topic isn't the right approach!) Going through your notes carefully first and identifying the areas you don't understand, as opposed to the areas you just haven't revised properly, will ensure you're able to ask for the support that will be best targeted to allow you to improve.
- Many students ask what they need to do to achieve a certain grade. This is often not the most effective approach, as there's rarely a simple answer and it can lead to a fixation on achieving particular grades in class assessments, rather than developing learning properly. It is much better to ask for specific help in a particular area in which you are not performing as well as you would like to. If you improve these areas your grades will then improve too.
- If you're having difficulty in identifying the areas where you need to improve, ask your teachers for advice on this. Listen carefully, act on their advice and then after a period of time, discuss with them the progress you have made (including if you've not made much). Then you can decide the next steps you should take.

## Outside of class

At A-level, your work outside the classroom is the real key to achieving the very best grades. However, it's not just about the amount of time that you put in, but how effectively you use that time.

### What to do, and when

Many students begin A-level study with the intention of doing many hours of independent work a week. They then find that this becomes unworkable, and lose motivation because they're not able to match their unrealistic expectations. The truth is that hours and hours of extra work aren't necessary throughout the whole A-level, and shorter realistic goals can produce real gains. An example approach is shown below:



More detail on these approaches is given later in this guide.

### SMART targets

Using SMART targets is a good way of managing your time efficiently and ensuring you're setting goals that are realistic and achievable:

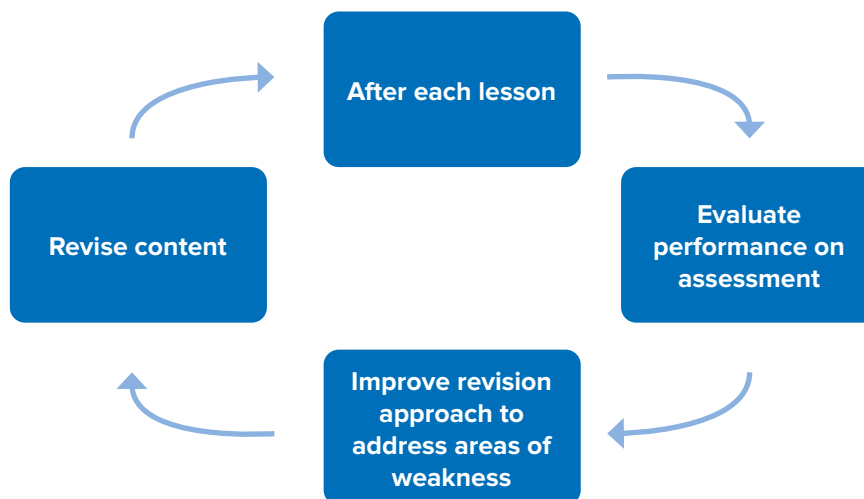
- **Specific** – the target should have a particular focus, for example not simply 'get better marks.' An example of a specific target could be: 'Use my teacher's feedback to improve the structure of my next homework essay so I score a higher mark'.
- **Measurable** – the target should have a clearly defined measure of success, for example achieving at least a certain mark on a question. These questions could be in a class assessment or mock, but could also be a question you set yourself from past papers or revision guides. Make sure you check your answers carefully against the mark schemes provided by the exam board or revision guide to determine if you have met your target.
- **Achievable** – the target should be achievable in the timeframe you have allotted. If it seems as though it won't be, then consider breaking it down into a series of smaller targets which you can spread over a longer period of time.

- **Realistic** – the target should not be too simple, but it should also be realistic. Unachievable targets can be demotivating. Over the course of your studies you can increase the difficulty of your targets as you grow in knowledge and confidence in the subject.
- **Timely** – targets should have a fixed time limit – this creates pace in your studies and ensures you continue to make progress.

## Effective study habits

The most important aspect of your work outside class is ensuring you are studying and revising effectively. The key word here is 'effective'. Many students spend a lot of time studying and revising and yet see little impact from their work. The means to success is to consider how you are studying and how you can improve.

Revising and studying are skills, and like all skills they can be developed and improved through practice and evaluation. Such an approach could be summarised by the figure below:



- The assessment shown here doesn't have to be an in-class assessment. It can be one you set yourself. More detail on this is given in the next section.
- The key aspect in this process is evaluating your performance and then improving. Many students continue to repeat the same approaches (for example not using active revision strategies or not leaving enough time to fully revise the whole topic) despite them not producing the outcomes they want. If you want a different outcome, then you have to take a different approach.
- It is important to remember that this is a process of continual improvement. There will never be a point when your study skills cannot be further improved or you have 'finished' revising.
- An important element of evaluating your study habits is being honest about how effectively you are studying and revising. It can be very easy to fool yourself into thinking you have spent hours 'studying', when in fact a large amount of that time has been spent on your phone, chatting to people, getting a drink or something to eat. It's important to be honest and disciplined about the quality of the study you are carrying out.

## Revision activities

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### Passive vs active revision

Many students start their A-level studies saying they do not know how to revise. Many more may be using revision techniques that are ineffective. It is vital to develop methods that will actually improve your performance in exams.

There are a huge range of different revision techniques. Different subjects may have particular ways of working which will be effective for them. However, there has been lots of research that shows active approaches to revision are successful across different subjects:

- Passive techniques such as simply reading notes are generally ineffective, as you are not doing anything active with the information you are reading. This makes it difficult to retain the information.
- The key to effective revision is to make it active. Using active revision means you are actually doing something with the information you are reading. An example of active revision would be making revision notes and then testing yourself on these notes. This is an example of retrieval practice, which is covered in more detail below.
- By actively thinking about the information you are revising, you are increasing your chances of recalling it later and helping to build links between different topic areas. In this way it actually becomes easier to learn and understand new facts, as you develop a greater level of interconnected knowledge of a subject. Building this kind of deep, holistic understanding of the course is key to success at A-level, particularly as thinking synoptically and applying knowledge across topic areas is a requirement for exams in many subjects.

### Retrieval practice

One of the most simple but effective active revision techniques is retrieval practice. This usually involves the following steps:

#### 1. Consolidating notes

- This means taking information from your notes and presenting it in a different form. It can be as simple as writing out the key points of a particular topic as bullet points on a separate piece of paper.
- Other effective consolidation techniques may involve taking this information and turning it into a table or diagram.
- Some students find flashcards and mind maps useful. However, if these are not detailed enough they can be of limited use at A-level, particularly if they take time and focus away from revision that is more effective.

#### 2. Testing yourself

- This is a vital part of retrieval practice. It allows you see if the process of consolidating your notes has improved your knowledge recall and understanding.
- There is a range of test activities you can carry out with the notes you have consolidated. The simplest of these is writing out what you can remember from the notes you've just been revising.
- You could also make your own quizzes, ask friends or family to test you, attempt past exam questions or questions from textbooks and revision guides.



### 3. Checking your answers

- After testing yourself, check your answers using your notes, textbooks or past paper mark schemes. Be hard on yourself when marking answers. An answer that is *almost* right might not gain full credit in an exam. When answering questions you should always strive to give the best possible answer.
- If you get anything wrong, correct your answers on paper (not just in your head) and annotate your answers with what you missed, along with additional aspects you could improve, such as using more key words. You can then use these notes as guidance when asking your teacher for support in lessons.

### 4. Repeating the process

- Revisiting activities will help you memorise key aspects, and ensure you learn from your previous mistakes. This is especially helpful for topics you find challenging.
- When repeating, do not immediately revisit the same topic. By leaving time before revisiting topics you have recently revised, you will be able to better judge the long-term effectiveness of your revision.
- As noted above, consolidating notes and retrieval practice is something you should do after every lesson, as well as when preparing for assessments. It doesn't have to take a large amount of time, but carrying out these activities little but often will build your overall understanding and improve your ability to learn new facts.

## Practice questions

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Another example of active revision which is vital to A-level success is completing practice questions, particularly exam-style questions. Doing this allows you to apply your knowledge and most importantly check that your revision is working.

As we've discussed, it's essential that your revision is effective. If you are spending lots of time revising, but find you cannot correctly answer exam questions, then your revision is ineffective and you need to make changes to try and improve it.

Another mistake students make when using practice exam questions is that they rush to complete them before they have fully revised content using other methods. This is usually counterproductive, as you need to have revised the content properly before you can gain the full benefits of completing exam questions. Otherwise, the main lesson they will teach you is that you need to revise the content more thoroughly.

Practice exam questions can be approached in a number of ways:

- Answer questions using notes – this may seem like cheating, but it is effective, active revision and will show you if there are any areas of your notes that need improving.
- Complete questions on a particular topic – after revising a topic area, answer past exam questions on that topic without using your notes. If you find you get questions wrong, go back over your notes before returning to try questions on this topic area again at a later date. Repeat this process until you are consistently answering all the questions correctly. In this way you are addressing areas of weakness and taking steps to improve them.
- Answer questions under exam conditions – towards the end of your revision, when you're comfortable with the topics, attempt questions under timed, exam conditions. This means in silence, with no distractions and without using any notes or textbooks.

When working your way up to completing an exam in timed conditions, it can be helpful to begin with timing one or two questions to get used to the speed at which you should be answering them. You can then slowly work your way up to answering full-length papers in the time you would have in the real exam. Make a note of areas where you found you were spending too much time and try to improve them.

## Revision checklists and timetables

A revision checklist is an important tool to ensure you are covering all the required specification content. Your teacher may provide you with a revision checklist, but even so, making one yourself can be a useful learning activity. The steps for making and using a simple revision checklist are shown below:

1. Split the specification into short statements and place them into a grid (see table below).
2. Work through the grid, ticking as you complete each stage for a particular topic.
3. Use practice exam questions to check that your revision has been effective.
4. Return to the areas in which you are weaker, and focus on improving them.

Specification statement	Completed in class	Revised	Past questions completed	Questions to ask teacher

### Revision timetables

Revision timetables are a useful tool to help you organise and structure your work. Remember that the key is to be realistic – don't plan to do too much, or you will become demoralised if you don't meet the dates you set.

#### Creating a revision timetable

- Revision works best in shorter blocks. So, don't plan to spend two hours solidly revising one topic – you probably won't last that long. Even if you do, it's unlikely the studying you do towards the end of this time will be effective.
- Don't avoid topics you find challenging. It is very easy to plan to spend lots of time revising topics you are good at, while avoiding the topics you find more difficult. This, of course, gives you a confidence boost but you should allow more time for revising topics you find taxing. This will give you the time to fully cover these topics and ask for further support if you need it.
- If you are making a revision timetable for mock exams (before you have finished your course), you will need to allow time for any homework set in addition to revision.
- Identify the long-term and short-term targets you're trying to achieve (and make sure they are SMART). Is this a general timetable to use during the term, or one aimed at preparing for a particular exam or assessment? This will affect how you build your plan as your commitments will vary.

- Whatever the end goal, don't organise yourself so you only just finish in time. Make sure you plan to cover all the topic areas you need well before the assessment. In this way, if you encounter problems which slow you down, you won't run out of time.

## In the exam

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Exams are inherently challenging experiences, but there are a number of key things you can do to maximise your chance of achieving high marks:

- Know your timings – make sure you know roughly how long you have to spend on each question. Ensure this still gives you time for any answer planning you need to do as well as time to check back over your answers.
- Be aware of the time – do not get too obsessed with the clock but make sure you are checking regularly to see if you are approximately sticking to the timings you originally planned for. You need to have some flexibility as you may find that some questions take longer and some take less time. If you start to fall behind, try to speed up.
- Plan longer answers – it is tempting to rush into answering longer questions, particularly if you're conscious of time. However, writing a short plan at the start of longer questions can significantly improve the quality of your answer. This allows you to structure your whole answer, reducing the chance of you missing out key points and having to try and squeeze them in later when you remember. It also reduces your stress when writing the answer, because you are not constantly wondering about what to write next.
- Read the questions carefully – students often lose marks because they haven't read the question carefully and therefore miss out some key points that needed to be included. Aim to read each question twice and underline key information, particularly the command words. In longer questions, refer back to the question as you write to ensure you are staying on track. You can also reread the question after you've finished to double-check your answer covers everything required.
- Answer the question asked, not the one you wish had been asked – it can be very frustrating if you have a very good understanding of a particular topic area which then doesn't come up in the exam. It can be tempting to try and force this information into an answer for which it isn't appropriate. This will not score you the marks. Always specifically answer the question being asked.
- Do not spend too long on a very challenging question – if you find you are really struggling to answer a particular question, mark it with an asterisk (\*), skip it and come back to it at the end of the exam. Spending a long time on one more difficult question can use up valuable time. This could be spent on questions for which you will be able to score more marks.
- Find time to answer every question – the only way to be certain of scoring zero marks on a question is by writing nothing. You should try and write something for every question even if you do not know where to start. Try noting down key words that apply to the topic to help jog your memory.
- Leave time to check your answers – this is crucial, even if it is not a very enjoyable task. Basic marks are often lost through obvious mistakes. By spotting these mistakes and correcting them, you can gain marks that might make all the difference.

# Revising A-level Biology

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## Answering maths questions

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Ten per cent of the A-level Biology exams will be maths questions. However, there's no need to panic about this. With practice you can maximise your marks in these questions. Remember:

- The maths skills that might be included in the exams are listed in the specification. Go through this list and make sure you've practised each skill, and are confident in applying them.
- Use textbook and revision guide questions as well as past papers to practise these skills. When carrying this out, make sure you apply the points discussed earlier in this book.
- Complete questions under timed conditions and apply the mark scheme strictly, so you're only awarding yourself marks when you've got the right answer. Continue to practise these questions until you are consistently scoring full marks.

### Example

During a sampling activity, 25 woodlice were caught, marked and then released. The sampling was repeated a week later, and of the 45 woodlice caught this time, 10 were found to be marked. Calculate the size of the woodlouse population. (2)

$$\text{Population size} = \frac{(\text{total number in first sample} \times \text{total number in second sample})}{\text{number marked in second sample}}$$

$$= \frac{(25 \times 45)}{10} = \frac{1125}{10}$$

$$= 125 \text{ (to the nearest whole number)}$$

In this example, the student has made a mistake and written an incorrect final answer, but would still be awarded one mark for the correct working.

**Four** common areas of maths that cause students issues in biology exams include:

### 1. Showing your working

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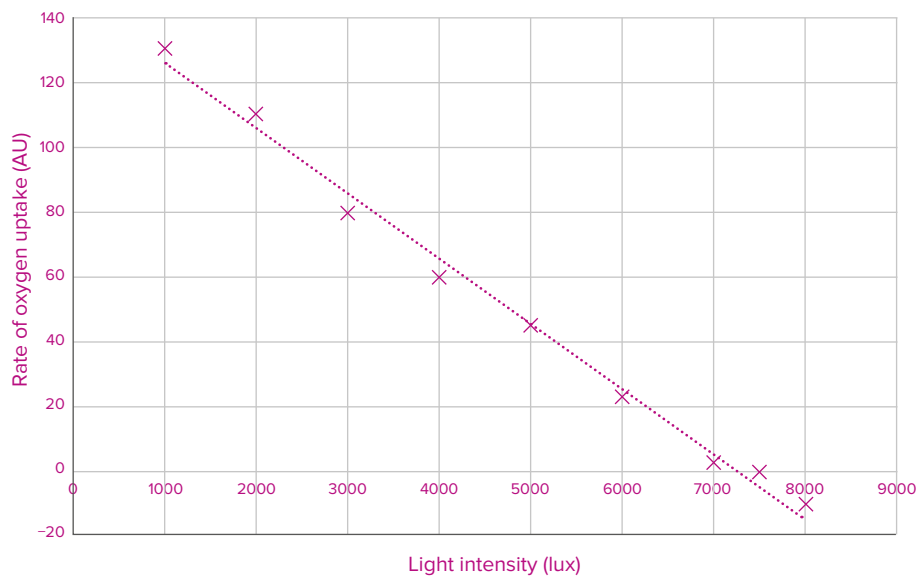
Examiners often complain that students do not show their working – they do the whole calculation on the calculator and write down the final answer. It is incredibly important to show all working because you can still be awarded some method marks even if you get the final answer wrong.

## 2. Drawing graphs

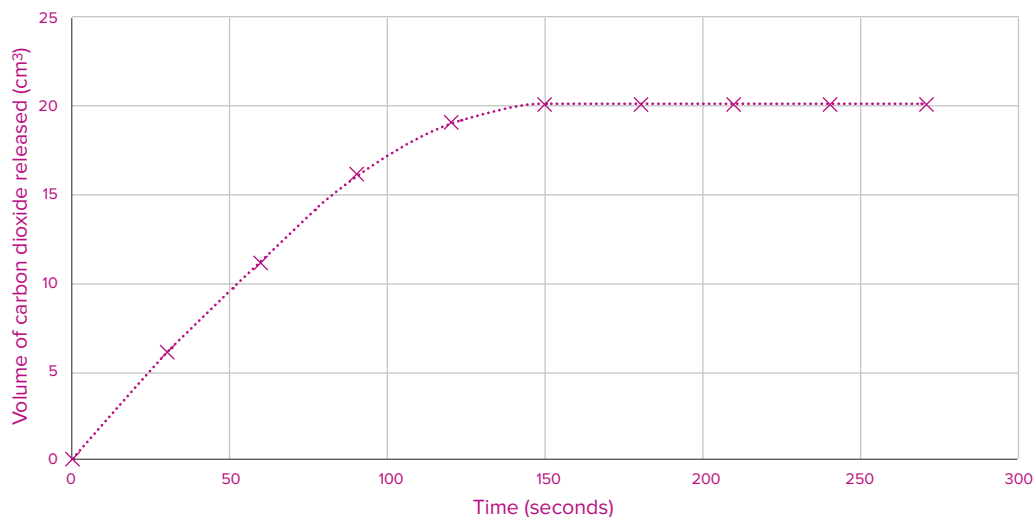
This can seem straightforward, but a significant proportion of students fail to gain all the marks in these types of questions. Use the graph checklist below to help you when practising drawing graphs:

- Linear scale, including origins for the x and y axes (doesn't have to be zero).
- Scale needs to be easily useable, e.g. not each little square being 3.33333.
- Correctly label axes including units – independent variable should be on x axis.
- Carefully plot points – the examiner will check them all.
- Lines of best fit – it's important to remember these can be a curve or a straight line.

### Straight line of best fit example



### Curved line of best fit example

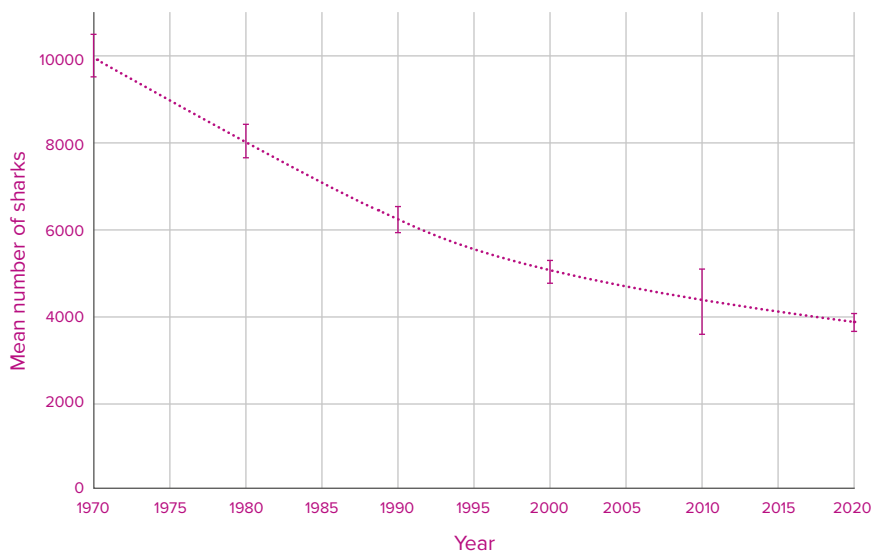


### 3. Standard deviation

It's important you understand what standard deviation shows:

- Larger standard deviation means there is a greater spread of data around the mean. The data are therefore less precise or reliable than data that have a smaller standard deviation.
- Standard deviation is not a measure of accuracy of the data, so do not use accuracy in any of your answers to questions involving standard deviation.
- If bars on a graph show  $\pm 2$  standard deviations (95% of the data), they can be used to indicate if there is a significant difference between means. If the bars of two means overlap, there is not a significant difference between them.

#### Example



- The standard deviation bar at 2010 overlaps with both 2000 and 2020.
- Therefore the data do not show a significant difference between the mean number of sharks in 2010 and 2000 and 2010 and 2020.

### 4. Statistical tests

Make sure you have checked which statistical tests you will be assessed on, and how you will be assessed. For example, could you be asked to calculate values? It's also vital to ensure you understand how to interpret the results of a statistical test. Some common issues are highlighted below:

- You should be able to select an appropriate test for a given situation and, most importantly, explain **why** you have selected that test.
- Be careful how you word your answers when interpreting the results of statistical tests. For example, in the case of chi-squared and the *t*-test it is significant **difference** that is being tested for, and in the correlation coefficient it is a significant correlation. It is therefore incorrect to say that the statistical test shows **the results** are due to chance, or to make any reference to the results being significant, accurate or reliable.

## Answering practical questions

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There are required practicals that you must complete as part of your A-level. Your teacher will let you know what these practicals are and there is a list of them in the specification. It is vital that you revise these thoroughly.

### What you need (and don't need) to know for each practical

- How to carry out each practical – including the names of the apparatus involved.
- The relationship between the variables involved.
- How to change or improve the method – e.g. to investigate a different independent variable or improve accuracy.
- What is the point of the investigation and the underlying science behind it?
- You **don't** need to learn specific volumes or concentrations.

### Wording your answers

It's very easy to lose marks by being imprecise when wording your answers. Below are some common errors that lose students marks in practical questions:

- Amount, level and size are generally not acceptable when describing variables. Wherever possible use a quantity that has a unit, such as length, mass or volume.
- Simple descriptions such as pH, light or nutrients are not detailed enough when describing a variable. Fully develop your answers, e.g. pH of solution, light intensity or mineral ions.
- Stating something acts as a control is often not enough to score full marks. You also need to state what the control is showing – for example, that it is the presence of the enzyme causing the colour change.

## Control variables

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Control variables are a common subject of practical questions in exams and students often struggle to score full marks in them. Here are some tips:

- Be careful that none of the variables given in your answer are in the stem of the question, as you will not score marks for these. This may seem obvious but in a recent exam the most common answers were variables that were already stated in the question.
- Common control variables which are controlled are temperature of solution, pH of solution and type of organism. It's very important that you make sure that your answer is appropriate to the question. For example, it's highly unlikely any of these examples would be suitable in a human study. In that case, severity of condition, weight, ethnicity or age are more likely to be appropriate.

## Evaluating practicals

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You may be asked to evaluate a practical or study and discuss the validity of results or conclusions. There are a number of reasons why the results of an investigation may not be valid. You can find some common examples in the following table.

Reason	Explanation
Small sample size	Conclusions drawn from a small number of results may not be representative of the wider dataset, e.g. they contain outliers which skew the data.
No statistical test carried out	It's unclear if any difference in results is significant. As highlighted above it is very important <b>NOT</b> to state that results themselves are not significant.
Correlation does not mean causation	Just because there is a correlation between two variables, it doesn't mean that this is due to one variable affecting the other, for example.
Not enough time given during the investigation	The variable you're investigating hasn't had enough time to have a significant effect, e.g. for plants to grow, or between capture and release.

## Answering application questions

Application questions involve novel examples which you will never have seen before. Some tips:

- Although the examples are novel, remember that they – and therefore their answers – must reference the specification. If you have revised everything thoroughly you will have the required knowledge to score marks in these questions.
- As application questions involve novel examples you shouldn't try to learn 'set' or model answers. Answering them is a skill, and like all skills you will improve with practice.
- Often the most initially challenging part of the question is working out what the question is actually asking. It can be useful to jot down some ideas of the topic area of the question around the stem. This will help you to determine exactly what part of your knowledge you need to apply.
- For practice in this skill, use examples from textbooks, revision guides and past exam papers. Note the common mistakes you are making. Are you just writing everything you know without answering the question? Have you missed a key bit of information in the stem of the question? Try to improve on them as you go along.

These questions are usually the ones which students say they find the hardest (and with good reason as they're difficult). However, it is very easy to get stuck in a negative approach to these questions and think you'll never be able to answer them. It's important to persevere and with practice you will be able to improve and score marks on these questions.

**Dan Foulder is a co-author/technical adviser on numerous GCSE Science and A-level Biology revision guides, as well as a former senior examiner for a major examinations board.**



# Revising A-level Business

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As a student of A-level Business, it is important that you are familiar with the assessment objectives (AOs) and command words. Command words are typically linked to specific AOs which helps you to identify what type of answer to write.

Assessment objective		Typical command words
AO1	Knowledge	Identify, Outline, Choose
AO2	Application	Describe,
AO3	Analysis	Analyse, Explain how, Explain why
AO4	Evaluation	Assess, To what extent, Discuss

Application (AO2) is arguably the most important skill in A-level Business. This is because so many of your questions will relate to a particular case study. That case study will have a specific context: a specific country (or countries), specific industry and specific moment in time. It is vital that you relate your answers to this context at all times. This is because AO3 and AO4 command word questions will have application (AO2) marks embedded within their mark schemes.

## Answering maths questions

A significant percentage of the A-level Business exams are designed to test your quantitative skills.

### Multiple-choice question example

A pizza chain has the following (annual) data:		Tick one
<b>Staff</b>	4	
<b>Labour costs</b>	80,000	
<b>Pizzas</b>	50,000	
Calculate the labour cost per unit.		
A	£1,250	
B	£1.6	
C	£0.625	
D	£0.4	

Answer: C

## Short-answer calculation example

From the information below, calculate the operating profit margin:

Total sales	50,000
Price	£15
Cost of sales	£500,000
Expenses	£100,000

Answer:

$$50,000 \times 15 + 750,000 = \text{revenue}$$

$$\text{Gross profit} = 750,000 - 500,000 = 250,000$$

$$\text{Operating profit} = 250,000 - 100,000 = 150,000$$

$$\text{Operating profit margin} = (150,000 / 750,000) \times 100 = 20\%$$

## Long-answer written response example

Using the data above, discuss whether the pizza shop should conduct more staff training in order to increase its profitability.

- There are formulae booklets in A-level Business exams, so it is important that you go through the subject specification and make a note of all of the calculations that you are required to know. You should then try to learn these by rote (tip: you could write out flashcards showing this information). It is important that you are comfortable in rearranging each equation and understanding how certain equations link together.
- For example, in the second question above you would have needed to know how to calculate revenue and operating profit before you could calculate the operating profit margin. Note: it is important to show your working on these sorts of questions. This is because an examiner might be able to award marks for a partially correct answer or even just identifying the correct formula.
- In long-answer questions, even if you are not explicitly told to do so, you should always be looking to see if there is a calculation you can do that will support your points. Examiners tend to look favourably on candidates who can justify their points using maths, because it demonstrates a higher level of analysis (AO3).

## Keywords

Business is a technical subject – there is a lot of vocabulary for a new learner and those words have specific meanings. For example, *liabilities* on a balance sheet and the concept of *limited liability* for an LTD are very different ideas.

- Liabilities – what a business owes; the legal debts or obligations that arise during the course of business operations.
- Limited liability – restricts the financial responsibility of shareholders for a company's debts to the amount that have individually invested.

It is important to learn definitions of keywords. You may get a multiple-choice question that asks you to identify the correct definition of a particular term, but the real value in learning keywords is responding to both short- and long-answer questions effectively. In this regard, it is both useful for knowledge (AO1) and analysis (AO3).

For example:

- Identify two influences on the shop's *organisational design*.
- Using the data, explain why pizzas might be considered *price elastic* but not *income elastic*.
- To what extent should the pizza shop become more *decentralised*?

If you did not know the meaning of these italicised words then it would be difficult to answer these questions. Examiners (like teachers) frequently give candidates low scores when they are not answering the specifics of the question.

Tip: It can be useful to write out definitions of any keywords at the beginning of your answer. But be careful, this will not gain you many marks just by itself – definitions are only low-level knowledge (AO1) marks. The main benefit is for you. The definition can set out the parameters of your answer and prompt you to keep linking back to that keyword.

## Models

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Like maths formulae and keywords, A-level business is also designed to test your knowledge of, and your ability to use, certain models and tools. For example, the *Boston Matrix*, the *Ansoff matrix*, *Bowman's strategic clock* and *Porter's Five Forces*.

You should know these models (AO1) as well as be able to apply them (AO2) to a certain scenario and evaluate their usefulness (AO4).

For example:

- Identify the four key areas of the Boston Matrix.
- Using the Boston Matrix, assess whether a UK clothes retailer should eliminate a particular product range.
- The CEO believes the company should invest a significant percentage of its gross profit into research and development. Discuss the value of the CEO using a Boston Matrix to aid her decision.

Again, if you did not know the meaning of the Boston Matrix then it would be difficult to answer these questions. However, the key to scoring well on the higher-tariff question is not just to describe the model, but to actually use it. For example, a good answer to the second question might read:

The Boston Matrix is a marketing tool that allows companies to undertake portfolio analysis based on the product's market growth and its market share. While the clothes retailer is a leading brand in the UK, the data show that it has a relatively small market share in two product areas: fur coats and jewellery. In addition, fur coats are a fast-shrinking market which implies that they should be classified as a 'dog' according to the Boston Matrix. The company should certainly be thinking about eliminating this product from their product range.

## Chains of analysis (AO3)

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One of the worst things you can do in an A-level Business exam is to just make lots of assertions. 'Assertion' means making a (bold) statement without any justification. For example:

- The clothes retailer should no longer sell fur coats.

There may well be enough evidence in the case study to justify this statement, but examiners can

only mark what you put in front of them. Unless you show how you came to this conclusion, the examiner will give you a low score. The statement above would gain zero marks in any exam. Use words like *because* and *therefore* to keep forcing you to dig a little deeper in your own analysis. The following examples shows how we can increase the value of our answer by building a chain of analysis.

- The clothes retailer should no longer sell fur coats **because there is a lack of demand for that product. 1 mark for knowledge.**
- The clothes retailer should no longer sell fur coats because there is a lack of demand for that product. **This is shown by the fact that sales have been declining since 2011. From 2011 to 2021 (10 years), fur coats sales have declined by 70%. Additional marks for application – good use of quantitative data.**
- The clothes retailer should no longer sell fur coats because there is a lack of demand for that product. **This is because there has been a significant movement away from the wearing of animal fur – supported by animal rights organisations like PETA. This is shown by the fact that sales have been declining since 2011. From 2011 to 2021 (10 years), fur coats sales have declined by 60%. Additional marks for analysis – telling the examiner, in more detail, why there is a lack of demand.**
- The clothes retailer should no longer sell fur coats because there is a lack of demand for that product. This is because there has been a significant movement away from the wearing of animal fur – supported by animal rights organisations like PETA. This is shown by the fact that sales have been declining since 2011. From 2011 to 2021 (10 years), fur coats sales have declined by 60%. **According to the Boston Matrix, the company should be wary of continuing to sell any product in a declining market. Given the fact that fur coats have never been a significant element to the retailer’s overall revenue either, they could be considered as a ‘dog’. Therefore, the company should probably stop selling them. Full marks for analysis – bringing the answer back to the question which was about the Boston Matrix.**

The PEEL paragraph structure is a useful tool here. POINT, EXPLAIN, EVIDENCE, LINK BACK. Most students are good at the first two but less good at the latter two. This is an opportunity, therefore, for you to differentiate yourself from the rest.

## Answering evaluative questions (AO4)

Evaluative questions will be signposted by certain command words: ASSESS, JUSTIFY, DISCUSS, TO WHAT EXTENT and of course EVALUATE. They usually carry a higher level of marks as well; evaluation is considered the highest value skill.

Evaluation should not be simplified to: ‘give a two-sided’ answer. Examiners do not like reading answers that begin ‘on the one hand ...’ and then a paragraph later ‘on the other hand ...’ – especially when the second half of the answer completely contradicts the first half. This is not evaluation.

Evaluation (AO4) is more about being your own critic and critiquing your previous chain of analysis. Before writing your evaluative paragraph, read through your previous paragraph and ask yourself: what assumptions have I made here? Is there any evidence in the data that tells a different story? Could someone else, with a different point of view, come to an alternative conclusion? This should be the basis for your evaluation. It is about qualifying your previous analysis rather than completely dismissing it. Common ways to evaluate would be look at time periods (short-run v long-run), different stakeholders, a big or small effect, type of industry or different countries. For example, evaluations that might work in our previous example:

- However, the demand for fake fur coats has remained relatively stable. Therefore, while the company should stop selling real fur coats, fake fur is a cash cow.
- The demand for animal fur is not declining in other countries around the world. Therefore, while the company should stop selling fur in the UK, the financial case for doing so in other outlets is less obvious.
- The real 'dog' in the scenario is not fur coats but the jewellery section of the retailer's business. The information shows that this is where the company has the least market share and a low-margin product. The company should stop selling jewellery before it stops selling fur.

Notice in each example that the author did not dismiss the original statement ('the company should stop selling fur') but the evaluation came to a slightly tweaked conclusion.

## Coming to balanced judgements (AO4)

The final important skill is being able to come to a balanced judgement. The word 'judgement' is important here because it moves us away from the idea of a conclusion. Conclusions imply that students should simply offer a summary of their point, often 'it could be this but it could also be that'. This will gain few marks in the exam. Instead, you must reach a clear view on what you think the answer to the question is. You should write a definitive statement that either agrees or disagrees with the hypothesis. Get off the fence.

Top tip: To give yourself the best opportunity to score well, you should be intending to write one sentence at the end of every paragraph that links back to the question. Using this process, you will quickly build up a series of mini-judgements in your answer along the way. You can then use these mini-judgements as the platform for your final judgement.

Another top tip: A-level Business questions often have a 'discriminator' word in them such as 'always' or 'all'. Nothing in business can ever be absolutely certain, so the examiner is likely to have included this word as an invitation for you to discuss the circumstances in which something is true and when it is not.

A sensible final judgement structure might look something like this:

- Give a direct one sentence answer to the specific question that has been asked – you should use the words from the question in your answer.
- You then need to 'qualify' your judgement. For example, 'However, the extent to which this is true depends on x, for example in this case then y happens but for this different case then z happens'.
- A good idea is then to consider your conclusion in a more 'dynamic' way or give it a context, for example: 'My judgement is only likely to be true in the current context of high uncertainty due to ongoing Brexit negotiations. In the future, when businesses have a better idea of the trading relationship with the EU, then it may be more likely that lower interest rates can stimulate investment'.

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# Revising A-level Chemistry

3

## Chemical symbols, formulae and equations

Remember:

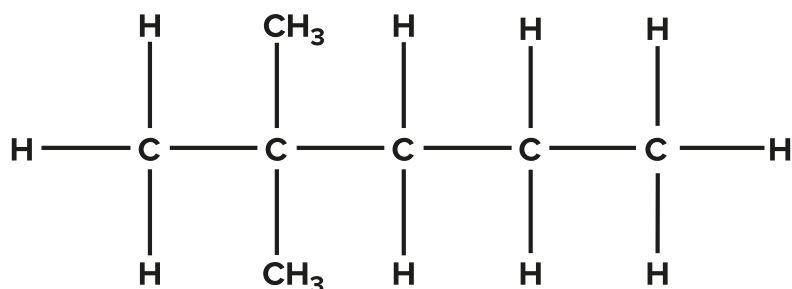
- Chemical symbols are made up of one or two letters. The first letter is always a capital. If there is a second letter, it should be lower case.
- The use of incorrect symbols will be penalised in the exam. For example, writing 'h' for hydrogen, 'CL' for chlorine or 'br' for bromine will all be penalised.
- Be careful to use the correct formula for diatomic elements – hydrogen ( $\text{H}_2$ ), oxygen ( $\text{O}_2$ ), nitrogen ( $\text{N}_2$ ) and the halogens (e.g.  $\text{Cl}_2$ ). Incorrect formulae will be penalised. For example,  $\text{NaCO}_3$  or  $\text{CaOH}$  will not be credited – the correct formulae for these compounds are  $\text{Na}_2\text{CO}_3$  and  $\text{Ca}(\text{OH})_2$ .
- Use brackets in a formula only when necessary. For example,  $\text{Mg}(\text{OH})_2$  and  $\text{Ca}(\text{NO}_3)_2$  are correct formulae, but  $\text{Ca}(\text{CO}_3)$  and  $\text{Mg}(\text{Cl})_2$  are incorrect, as brackets are not necessary.

When writing symbol equations:

- Check that all the formulae are correct. One error in a formula can cost you all the marks for the equation.
- Then balance the equation by using numbers in front of the formulae.
- Read questions carefully to determine if you need to put state symbols in your answer.
- Half equations include electrons on one side of the equation.
- Ionic equations show the reacting ions in a chemical reaction.

## Naming and representing organic structures

Make sure you are familiar with IUPAC rules of nomenclature. When naming compounds in an exam, check that you have included commas between numbers, as well as dashes between numbers and words. Also ensure that you have given the name based on the longest chain of carbon atoms. For example:



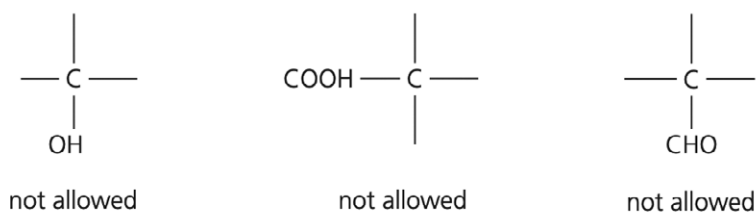
The correct name for this compound is 2,2-dimethylpentane. Writing 22- dimethylpentane, 2,2dimethylpentane or 2,2-methylpentane is incorrect.

Each specification requires knowledge of different types of formulae, such as general, molecular, structural, displayed and skeletal. Check your specification carefully so you know which type of formulae to concentrate on.

**Displayed formulae** must show all of the bonds and all of the atoms in the molecule but need not show correct bond angles. When drawing displayed formulae, make sure the bonds are located correctly between the relevant atoms.

In **structural formulae**, the atoms must be connected correctly. No credit is given for the alcohol group presented as C–HO – it must be written as C–OH. Similarly, no credit is given for writing CH<sub>3</sub>COH for the aldehyde ethanal as it must be CH<sub>3</sub>CHO.

For **functional groups** such as –OH, –CN, –COOH and –CHO, the vertical bonds in a displayed formula should be halfway between the vertical bond and the relevant atoms in the attached group. For example, the formulae shown below are not given credit because the bonds to the functional groups are not correctly placed.



## Organic reaction mechanisms

You will need to learn how to represent mechanisms for the organic reactions mentioned on your specification. A reaction mechanism must include curly arrows, and often lone pairs of electrons. Curly arrows must originate either from a lone pair of electrons or from a bond; they should touch the bond. Remember that curly arrows represent movement of electrons.

### Listing

Be careful if a question requires one answer. If you give two answers, no mark is given if one answer is correct and one answer is incorrect. (There is no penalty if both answers are correct.)

#### Example

State a suitable oxidising agent to oxidise ethanol. (1)

If your answer is 'acidified potassium dichromate(VI) or NaBH<sub>4</sub> in aqueous solution', then no marks will be awarded – the first answer is correct, but NaBH<sub>4</sub> is a reducing agent and is incorrect.



## Command words

Command words are the verbs used in exam questions. They tell you what the examiner is asking you to do. You need to be familiar with command words for the specification you are using. The website for each examination board should give these. For example:

- If the command word is 'describe', don't waste time giving explanations. If the command word is 'suggest', then it means you need to apply your knowledge and understanding to an unfamiliar situation.
- The command word 'identify' allows you to choose to use either the name or the formula in your answer. However, if you chose to use the formula, it must be a correct formula. Following on from the listing principle mentioned above, if you give a name and a formula and one is incorrect, then no marks are awarded.

## Answering practical questions

During your A-level chemistry course you will have opportunities to use different types of apparatus and develop different chemical techniques. As part of your practical assessment, you are expected to carry out required practical activities.

Check your examination board specification to determine which practical activities you need. Your written papers will also assess knowledge and understanding of the required practical activities and the skills exemplified within each practical. You will need to be able to do the following:

- Describe how to use the instruments shown in the table below to record a range of measurements.

Measurement	Instrument
Volume	Measuring cylinder, pipette, burette
Mass	Balance
Temperature	Thermometer
Time	Stopclock
pH	pH meter

- Understand the different practical chemical techniques outlined in the required practical section for your specification. For example, to 'recrystallise' you should be able to describe the process of dissolving the solid in the minimum amount of hot solvent.
- Fully describe each practical method, giving the names of the chemicals involved and the observations which occur. Exact volumes, masses or concentrations are not required.
- Draw diagrams of the apparatus set-up. For example, for reflux, distillation or suction filtration, it is important that you draw these diagrams as two-dimensional cross-sections and show a free flow of the liquids and gases in the apparatus with no blockages caused by lines drawn across the flow. Diagrams should be labelled.
- Plot graphs as directed and analyse tables of results.



- Apply scientific knowledge to solve problems in practical contexts. For example, how would you practically separate ethanal from a mixture of ethanal and ethanol? Applying your chemical knowledge, you may realise that to separate the molecules you need to break the intermolecular forces between them. You may also be able to identify that in ethanol there is hydrogen bonding, which holds the ethanol molecules strongly together, but in ethanal there are only weaker dipole-dipole interactions between the molecules. As a result, ethanal has a lower boiling point and distillation could be used to separate the mixture, since the ethanal will boil off first. By thinking logically through the process, you should be able to solve problems set in practical contexts.
- Reflect on why you are carrying out each step and be prepared to evaluate the method and suggest improvements. For example, if a question asks you to suggest two practical steps that you could follow to ensure that a burette measures an accurate volume of hydrochloric acid, you should realise that rinsing the burette with hydrochloric acid and filling the jet both lead to more accurate volumes being dispensed.
- Identify reagents. A reagent is a chemical which can be taken out of a bottle or container. When asked to identify a reagent you must give its full name. For example, no credit would be given for the cyanide ion or  $\text{CN}^-$  when the reagent should be potassium cyanide or KCN, or the hydroxide ion or  $\text{OH}^-$  when the reagent should be sodium hydroxide or NaOH. Also, to test for halide ions, a few drops of silver nitrate solution are used. It is the silver ions that react with the halide to form a precipitate of silver halide. The name of the reagent is silver nitrate. Do not refer to the reagent as silver ion solution.

## Answering calculation questions

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- Usually, a correct answer alone will score full marks unless the question requires you to show your working.
- However, it is best practice to always show all your working. If you make one small mistake, for example an arithmetic error or an incorrect transfer of a numerical value from data given, then the error is carried forward and you will get most of the marks.
- If you show no working and the answer is wrong then you get no marks.

## Significant figures and decimal places

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- In most calculations, where a level of precision is required in the answer, you will be guided in the question to the number of significant figures or decimal places required.
- In other calculations you will need to give your answer to an appropriate number of significant figures. To do this, you should check the number of significant figures for each piece of data provided in the question and give your answer to the same level of precision as the least precise piece of data.
- For example, if a question states that in a titration,  $20.5 \text{ cm}^3$  of  $0.25 \text{ mol dm}^{-3}$  sodium hydroxide solution reacts with  $1.20 \text{ mol dm}^{-3}$  hydrochloric acid, and you are asked to calculate the volume of hydrochloric acid required to neutralise the sodium hydroxide solution, giving your answer to an appropriate number of significant figures, you should give your answer to two significant figures as this is the level of precision of the least precise piece of data ( $0.25 \text{ mol dm}^{-3}$ ).
- In calculations which have intermediate answers, it is best to leave these in the calculator and use these in subsequent steps, rather than rounding answers at each step. This will minimise rounding errors in the final answer.

## Drawing and interpreting graphs

It is important that you can plot graphs correctly:

- Choose a suitable scale for the data to ensure you use as much of the graph paper as possible. Ideally it should increase in multiples of 2, 5 or 10. Label the axes correctly with units.
- Plot points and draw a line of best fit.
- Calculate a gradient of a straight-line graph using  $\text{gradient} = \text{rise/run}$ .
- Identify any anomalous results.

## Mark schemes

As part of your revision process, make sure you attempt past paper questions. These are available online. You should then mark your answers using the online mark schemes. Study the mark schemes carefully and ensure that you note which marking points you did not include in your own answer. Mark schemes show exactly what the examiner is looking for and they will enable you to adopt a more detailed, precise and focused approach, which will help you improve your examination technique and answering style. The mark scheme for each question shows:

- the marks available for each part of the question
- the total marks available for the question
- the typical answer or answers which are expected
- extra information used by the examiner to determinate what is acceptable

### Example

Explain why the H–Cl bond is more polar than the H–I bond. (2)

The mark scheme for this question would be presented as below and shows exactly how the two marks of the question are awarded.

Marking guidance	Mark	Comments
Greater difference in electronegativity between H and Cl/Cl is more electronegative than I	1	<i>Not</i> HCl/Cl <sup>-</sup> is more electronegative
So the electron density in the covalent bond is drawn more strongly towards the Cl (than towards the I)	1	<i>Not</i> more attracted to Cl but allow e <sup>-</sup> cloud more distorted towards Cl

The solidus (/) means that either phrase is acceptable and brackets indicate a part of the answer that is not essential.

## Mark allocation

The mark allocation is given at the end of each question. Use this to estimate the amount of detail to include in your answer. A 1-mark question should not require as much detail as a 3-mark question. Read each question carefully and make sure that you answer what was asked. It is sometimes useful to underline or highlight parts of the question to ensure you are focused on the key words.

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# Revising A-level Computer Science

## 4

The A-level Computer Science assessment is intended to test three specific areas, or Assessment objectives (AOs).

- **AO1** Knowledge and understanding of the principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- **AO2** Applying this knowledge and understanding, including to analysing problems in computation terms.
- **AO3** Designing, programming and evaluating computer systems that solve problems, making reasoned judgements about these and presenting conclusions.

AO1 is largely about remembering and understanding key knowledge. For example, the difference between an SSD and a HDD, or how to convert between binary and hexadecimal numbers.

AO2 is largely about how to apply that knowledge and understanding. For example, knowing what type of storage device to recommend in a particular situation, or explaining why a computer scientist might choose to represent a value using hexadecimal rather than binary.

AO3 is about programming skills, plus wider understanding of computer systems and algorithms. Assessment will ask you to read and write code and to evaluate algorithms.

## Answering programming questions (AO3)

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You will either be asked to write program code in a written exam (OCR), or an on-screen exam (AQA). Make sure you are familiar with the following:

- Declaring and assigning values to variables, including complex structures such as arrays and lists.
- Using a range of selection and iteration structures (IF statements, SWITCH/CASE statements, WHILE and FOR loops, etc).
- Using standard arithmetic operations, including rounding, truncation, DIV and MOD, and exponentiation (powers), including roots.
- Using string handling techniques including substrings, concatenation and conversion between characters and their ordinal values (e.g. ASCII).
- Declaring and using subroutines, including both functions (with return statements) and procedures.

## AQA onscreen assessment

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The onscreen assessment (Paper 1) for AQA is split into four sections.

Section B is focused on a single programming task. No prior information is given ahead of the exam for this question, so make use of programming challenges you can find online as well as past papers to practise solving these kinds of problems.

It is very important to consider time constraints. Many students will spend far too long on Section B in an attempt to produce a perfect result. When practising past paper questions, set yourself a time limit and stick to it. Come back to it later if you need to, but remember that marks come from completing various parts of the task and it is better to drop 1 or 2 marks here than to run out of time.

For Sections C and D you will be provided with a pre-release skeleton program. It is important to have a sound understanding of the skeleton program and to prepare by looking for examples of complex data structures, including classes. As part of your preparation, it is useful to create hierarchy charts and class diagrams to help you understand the big picture of the program.

## Answering trace table questions (AO2)

Many students find trace tables to be particularly challenging, though they can be worth quite a lot of marks if completed accurately. Being able to follow a program or algorithm accurately, step-by-step, will help you to score more marks. It will also help you to understand how standard algorithms work and improve your own programming and debugging skills.

To prepare for trace table questions, use past papers and example code from your own projects. Draw a table with a column for each variable and always point to your current position in the code with your non-writing hand while you complete the table. As you move through the table, only ever move your pen to the right, wrapping back around to the start on the next line. Never move up, and never move left along the same row.

### Example

Tracing the following program, a table would be needed with 3 columns. In this case, a fourth column has been added to help demonstrate the processing.

```
prime ← true
num ← 25
FOR i ← 2 TO num/2
  IF num%i = 0 THEN
    prime ← false
    i ← num
  ENDFOR
```

prime	num	i	num%i

Filling in the first few passes around the table will result in the following situation. The line of code in bold is the one currently being pointed to and i is currently 5.

```
prime ← true
num ← 25
FOR i ← 2 TO num/2
  IF num%i = 0 THEN
    prime ← false
    i ← num
  ENDFOR
```

prime	num	i	num%i
true	25	2	1
		3	1
		4	1
		5	0

The next line of code says to update the value of prime. However, you should never go up or left, and so this must happen on the next line.

```
prime ← true
num ← 25
FOR i ← 2 TO num/2
  IF num%i = 0 THEN
    prime ← false
    i ← num
  ENDFOR
```

prime	num	i	num%i
true	25	2	1
		3	1
		4	1
		5	0
false			

One of the most common mistakes when working through a trace table is to carry out a calculation with an old value for a variable. Always look and check the current value, even if you think you remember. It might make you feel as though you are working more slowly, but you're working more accurately – and this is the key point.

## Answering knowledge questions (AO1, AO2)

At GCSE it is often sufficient to show your understanding. However, at A-level it is important to show accuracy in your understanding. Always take the opportunity to develop your answers and demonstrate the accuracy of your knowledge, even for single mark questions.

For example, if asked to describe a feature of Big Data for 1 mark, don't simply say 'velocity'. Although this is correct, it is not detailed enough to be accurate, and so a better response would be 'the velocity, or rate, at which data is collected is so high that a single server would not be able to keep up'.

The same is true for questions worth more marks. Always try to expand on your point and demonstrate your understanding of the following:

- What the key answer is: identify what the question is getting at and make it clear that you have made that connection.
- What this means: expand on your point to explain it in more detail. Rather than describing the key answer for someone who doesn't know much about the subject, imagine you are describing the key answer to someone who is an expert and wants to test your knowledge.
- Why this matters: consider the consequences of the key answer. Why is it better than an alternative, what are any downsides and why are things done this way?

Mark schemes can be very specific on the detail that is needed in order to access the full range of marks and so adding more detail makes it much more likely that you will hit those key points.

## Tackling long answer questions (mostly AO1 and AO2)

It is normal to see a number of long answer questions, each worth 8–12 marks. These questions typically use command words such as **discuss**, **evaluate** and **consider**.

These questions rarely have a 'correct' answer and are aimed at providing you with an opportunity to show off your technical knowledge, and your understanding of how varying elements combine to produce a bigger picture that is more complex.

Mark schemes for these questions are usually banded, so a response is judged to be in mark band 1, mark band 2, or mark band 3 (for example). Though each mark scheme is different, the following table indicates the type of content most suitable for each mark band.

Mark Band 1	Mark Band 2	Mark Band 3
An answer that shows basic knowledge and understanding, containing inaccuracies	An answer that shows reasonable knowledge and understanding, with few (if any) inaccuracies	An answer that shows thorough knowledge and understanding, with lots of detail and no inaccuracies
A limited attempt to apply technical knowledge to the scenario or context of the question	A clear attempt to apply technical knowledge to the scenario or context of the question	A direct and consistent application of technical knowledge to the context of the question
A one-sided argument or a narrow focus on one aspect of the issue	A balanced argument that considers a range of issues	A balanced argument that covers all relevant issues
Little in the way of backing up arguments and statements	The discussion is logical and uses a line of reasoning to use knowledge to back up any statements	A clear and well-developed line of reasoning in which all arguments are relevant and thoroughly supported
Typically 1–4 marks	Typically 5–8 marks	Typically 9–12 marks

It is important to try to use as much technical vocabulary as possible, and to structure your answers in a logical manner.

For example, in a question about network security, try not to make unsupported assertions.

`'Wi-Fi transmissions are insecure'`

Back your statements up with concise explanation of why this is so:

`'...because radio signals are broadcast in all directions and no physical access to the network is required'`

In this example, it would be helpful to discuss what can be done to mitigate the risks involved:

`'...and so it is important for the network administrator to use security measures such as secure encryption, SSID hiding and MAC address whitelisting'`

This could be followed by an explanation of each technique. Always try to provide a balance in long-answer questions and consider the scenario from a range of viewpoints.

# Revising A-level Economics

5

## Knowledge

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While there are rarely any stand-alone definition questions at A-level, there is still a significant amount of credit (typically around 20% of the total marks) throughout most of the exam papers for demonstrating knowledge and understanding. For example:

- Clarifying key terms at the start of an extended response.
- Demonstrating knowledge of real-world events to support your analysis and evaluation.
- Being able to identify the correct (and incorrect) answers in multiple-choice questions.

## Answering quantitative questions

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Around 10% of the A-level Economics exams will have a quantitative (i.e. maths) element. With practice, you can maximise your marks in these questions. Remember the quantitative skills which can be included in the exams are listed in the specification. Go through this list and make sure you've practised and can apply each skill.

**Five** key areas of quantitative skills which cause students issues in economics exams are:

### 1. Showing your working

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Examiners often complain that students do not show their working, doing the whole calculation on the calculator and writing down the final answer. It is important to show all working because you can still be awarded some method marks even if you get the final answer wrong.

#### Example

Calculate the income elasticity of demand for a product based on incomes falling by 5% and demand for a product increasing from 200 to 220 units.

If an answer was stated as '+2' it would score zero as this is incorrect. However, if the workings were shown as follows: ' $YED = \% \text{ change in demand} / \% \text{ change in income} = +10 / -5 = +2$ ', then the answer may still get some credit for correct workings even though the final answer is incorrect.

### 2. Correct units and degrees of accuracy

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In calculation questions, the question will often stipulate that the answer should be presented with specific units, e.g. £, \$, % and a specific degree of accuracy, e.g. two decimal places or to the nearest £. Failing to present your answer in the required format can lose 'easy' marks.

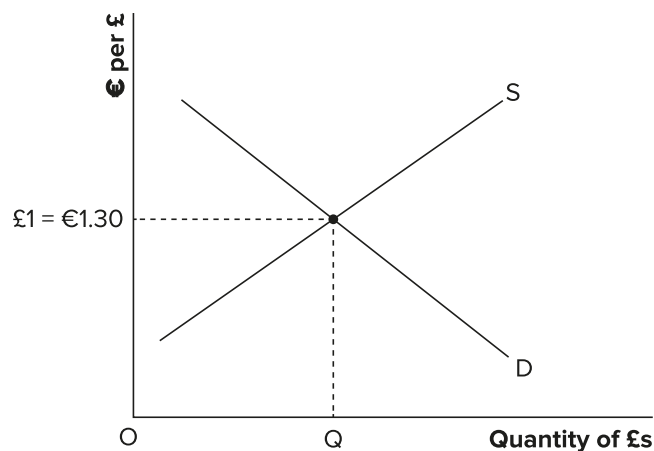


### 3. Drawing diagrams

This may seem a straightforward skill, but many students make fundamental mistakes when drawing diagrams. Use the ACE-U diagram checklist below to help you when practising drawing diagrams:

- Axes – make sure these are clearly labelled.
- Curves – make sure these are correctly drawn and clearly labelled.
- Equilibrium – make sure you draw clear construction lines to show, for example, the equilibrium price and quantity in a supply and demand diagram. This also applies to showing useful pairs of coordinates in other diagrams.
- Units – it is sometimes important to illustrate units on a diagram, e.g. specific exchange rates.

An example of a fully labelled diagram can be found below:



(Note that although the diagram here uses currency units, in nearly every case actual numbers will not be used and abbreviations will be used instead, such as P1, Q2, Y3, etc.)

Another important point is to refer clearly to your diagram and some features of it in order for it to be given credit as being used to support your written answer. Even if your diagram is otherwise drawn perfectly, if it is not mentioned, it is unlikely to gain any credit.

As you approach the exam, you'll see that there are a large number of diagrams beyond the basic demand/supply and AD/AS diagrams. It is therefore worth spending time practising the full range of diagrams so that you can draw these accurately from memory in the exam.

### 4. Understanding index numbers

Students often struggle to interpret or use data presented in index number format:

- Index numbers help economists make large numbers more straightforward to deal with.
- The data associated with a particular year or month is used as the 'base' for comparison and is given the index number 100.
- This means the data from any time period before and after this base period can easily be compared in terms of a percentage change.

Some students find it difficult to calculate percentage changes. One area of common confusion is to mistakenly believe that a change in the index number is the same as a percentage change. For example, a rise in an index number from 100 to 105.2 is a 5.2% rise in the value of the index



number. However, a rise from 105.2 to 108.2 is not a 3% rise in the index number. The correct percentage change would be calculated as a normal percentage change calculation, i.e.  $(108.2 - 105.2)/105.2 \times 100 = 2.85\%$  (to 2 dp).

Therefore, remember the formula for calculating a percentage change:

$$\frac{\text{Change}}{\text{Original}} \times 100$$

## 5. Interpreting key features of data

Some students struggle in interpreting questions such as 'Identify two significant features of the data...'

Most questions are looking for points that give an **overview** of the whole time series. You could, therefore, identify the highest value in the time series, the lowest value, the overall change, or the range of the data. Simply stating that the time series went up, then down, then up again doesn't give a sense of overview, and would be regarded as a weak 'trawl' of the data.

## Application

Application is the ability to apply the concepts, theories and diagrams to a given economic context. There are a number of ways you can show application in an exam answer:

Description of application	Example
Selecting the appropriate policies, diagrams, and theories	If the question is looking for an appropriate response to rising inflation, then the correct policy would not just be monetary policy (or fiscal policy) but would be contractionary monetary (or fiscal) policy. Diagrams must be appropriate for the scenario presented. For example, the effect of rising incomes on house prices could be accompanied by a demand and supply diagram showing a rightward shift in the demand curve.
Showing knowledge of real-world events and statistics	An answer on the consequences of expansionary monetary policy can gain application marks by referring to the UK (or another similar economy) over the last ten, or so, years – such as record low interest rates and the Bank of England's quantitative easing programme. You should always have a broad knowledge of the current levels for the main macroeconomic variables, such as interest rates, economic growth, unemployment and inflation.
Using the written or statistical data provided in the question	You should be able to use this to support your written response. It is also important to select the correct data to support your answer. A table of data may be used to comment on economic performance, or a written extract may consist of ideas that can be used to support a particular piece of analysis or evaluation.

## Analysis

Analysis involves developing a written explanation of how the effects of a change in some economic variable (policy, instrument, or indicator) affects various groups in the economy. In an exam, marks are gained for detailed analysis:

- Producing detailed 'chains of reasoning'. A chain of reasoning is a step-by-step argument, where each part of the argument logically progresses from an earlier point made. Logical arguments are built up from an initial first change to fully explore the consequences, effects and issues which logically follow (or could follow) from the initial change. For example, an increase in interest rates would normally lead to a fall in the rate of inflation. A detailed chain of reasoning would explore how the change in interest rates affects economic agents and other economic variables via the

various channels of the monetary policy transmission mechanism so that the explanation is fully developed.

- Your analysis could also make reference to diagrams that are linked to the argument, as well as examples/data that illustrate the causes, effects and changes taking place.
- In most written answers, logical, extended chains of reasoning are vital for scoring high marks. In long-answer questions, at least one fully developed chain must exist for scoring top-level marks and it is probable that multiple chains of reasoning will be required.

## Synopticity

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This means showing an appreciation of the interrelationships between economic concepts covered across the entire A-level course. Opportunities to demonstrate a synoptic approach include:

- Understanding that macroeconomic policies often have a microeconomic dimension.
- Understanding that demand-side policies often have supply-side effects, and vice-versa.
- Remembering relevant concepts from the first year of the A-level.
- Being able to make use of the entire 'toolkit' of economic skills.
- Showing an understanding of contrasting schools of economic thought.
- Being able to reflect upon the extent to which the theories you have covered on the course are supported by real-world events.

## Evaluation

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At A-level, evaluation will most likely be credited in essays and extended-answer questions. The best examples of essays will have a detailed final conclusion as well as ongoing evaluation throughout the answer. Tips for effective evaluation include the following:

- Using evaluative words/terms, such as 'overall', 'however' and 'in contrast'.
- Linking an opinion to evidence which might support that opinion.
- Making sure you refer back to the specific question frequently.
- Justifying answers while demonstrating appreciation of alternative points of view.
- Discussing the extent to which theories and models are supported by real-world events.
- Not treating all points as if they are equally important. Identify the points, arguments and priorities which are more significant than others. This can be done initially in the essay plan, by rejecting less complex ideas, but also can be referred to in an essay when showing the relative importance of ideas.

## Essays

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At A-level, essays are likely to represent the largest proportion of marks on each exam paper. Essay practice therefore warrants its own specific focus. It is worth practising your essay skills so that you can produce successful extended responses in the time constraints of an exam.

## Essay planning

- Creating a very detailed plan is self-defeating. You will be wasting valuable time needed for actually writing your essay and scoring marks, while a plan on its own tends to score few, if any marks at all.
- However, jotting down a brief plan can be useful in order to clarify a clear structure for your essay, helping you to be selective in choosing the most important arguments for and against government intervention, for example.
- Planning can also be useful in deciding which essay question to choose, whenever a choice is available. It may be time well spent if a quick plan confirms that you should not opt for a particular question.
- A plan should not take more than a couple of minutes to create and does not need to be legible to anybody other than you.
- It is worth identifying the key terms you might define, two or three diagrams you might use and the main subject of three or four main paragraphs, along with an indication of where your conclusion might take you. The detail will obviously depend upon the specific question you have chosen to answer.

**Steve Stoddard is an experienced author, examiner and head of department; David Horner is an experienced author and senior examiner, and currently teaches in Sheffield**

# Revising A-level English Literature

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Revising for A-level English literature involves a range of study skills: knowing your syllabus and how you are assessed, rereading and annotating texts, knowing a range of quotations, reviewing secondary texts, critical views and contexts and writing essay plans and practice answers. This brief guide offers common sense tips to improve your skills and reach the grade you deserve for all your hard work.

## Knowing your syllabus and how you are assessed

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Before you do anything else, become familiar with your syllabus. This means you can tailor your revision to how you are going to be assessed. If you are unsure of which assessment objective is which, they can be found [here](#). They are the same across all exam boards.

Some exam boards want you to address all five assessment objectives in every essay, while others may require you to focus on two specific assessment objectives for a particular question. Once you are clear about which text requires which approach, you will then be able to plan your revision accordingly.

If you need a detailed breakdown of how each question is assessed for your particular board then search online using one of the links below:

[AQA – A](#)

[AQA – B](#)

[OCR](#)

[Pearson](#)

[Eduqas](#)

## Rereading and annotating set texts

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Reread your set texts *several times* during Year 13 – at least once before the mock examination and once again before the final exams. Every time you reread, you will notice new things. This means you can find better key moments to refer to in your exam answers and do so more quickly, as you will be familiar with the text. If you find it hard to read at speed, download an audiobook version and listen to it at the same time as reading.

Annotate every chapter/scene/poem. Do this on the page itself. Use highlighters, sticky labels or whatever method works best for you to keep track of particular aspects of the text. Mark up key moments (not longer than two pages long) of every set text. Anchoring your answer in key moments makes your essay focused and specific. Knowing these moments well makes finding them easier either in the text itself (if you have an open book exam) or in your memory if you cannot take your copy of the text into the exam hall.

## How to annotate most effectively

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Underline key phrases – pick ones that stand out to you for one of the following reasons:

- It gives you a good quotation to help you understand a character (especially look out for moments when characters seem to change).
- It will give you good material for an essay on a specific topic.
- Striking imagery helps you to demonstrate a writer's craft, for example, underline imagery of sight and blindness in *King Lear*.
- It means you can discuss the structure of a text by noting key sentences or phrases at turning points in the text and noting where they come (for example, scrutinise the ends and openings of scenes and chapters or look at the ends of poems).
- It enables you to identify, and later use, key short passages – use a clear line to show the start and end of each passage.

In addition to underlining, jot down a quick note in the margin. This can be for information, for example if you are tracking a character in a novel or play you might write down their name or. Even better, jot down why you are underlining it: 'Imagery of blindness – Lear blind to his own folly'. This works because you now know how you can use the line or short section in an essay.

## Retaining your set texts – selecting and knowing a range of quotations

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Some of your exams may be open-book exams, but many will be closed book (i.e., you will not have the book with you in the exam but will need to rely on your memory). Check with your syllabus to be sure.

For open-book exams it is best to know some short-phrase quotations (so there is no need to waste valuable time in the exam checking these) and practise finding key moments in the text, so that in the exam itself you can open the book at the key place and pick out relevant quotations. In other words, astute preparation of selecting and finding passages at speed will mean you take full advantage of having the text with you. Do not assume that just reading it will mean you can retain the detail – it won't!

For closed-book exams, revise the key moments you have selected (see above for how to do this) and learn the quotations that are most important within each passage. Practise writing a paragraph in which this is your key example without your book and see which bits you feel you need to support a point but can't remember. Go back to the text afterwards and underline and then learn those quotations.

## Ensuring you have a good range of quotations

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It is easy to limit your selection of quotation to the topics you have already covered in class. Make sure you cover a wide range of topics – check with your teacher and look at past papers, so you have a comprehensive list of possible areas from which a question might come. For each of these you will need five to ten quotations – of course, the same quotations can be used in several different contexts, so be alert to this shortcut. Swap lists of quotations with a friend to see what they have selected. This process will help you to find gaps in your understanding of the texts. In addition, ensure you have quotations that help you to comment on the writer's craft, as well as those that enable you to write about social, political and literary contexts.

## Learning quotations

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Learn brief quotations throughout the year when you are preparing for a regular term-time or timed essay. In this way you won't have all of them to learn at the last minute. Having them in your brain for months, rather than weeks, leads to better retention. Have quotation-learning sessions with your friends. Put the topic on one side of a card and the quotation on the other. Do not learn more than a sentence at a time – keep quotations brief – there won't be space or time to put down long quotations in the exam.

## Reviewing secondary texts and critical views

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As you know, the study of literature at A-level involves you reading and thinking about conflicting views or readings of the texts. In addition, you may well engage with secondary texts. For example, if you are studying *The Bell Jar* by Sylvia Plath you may want to read some of her poems, journals or letters to deepen your understanding of how her writing works. Reading another related play by Shakespeare or one of his contemporaries makes your understanding of your set play more sophisticated. For example, if your set play is *Hamlet*, you might read another revenge tragedy to enable you to realise how different Shakespeare's play is from earlier examples of this genre.

For revision, aim to read one short related text to each of your set texts or read a summary of it online and dip into the online text. For suggestions, look in the introduction to your texts, as the editor will very often refer to other, related, texts. If there is no introduction, you will need to look elsewhere. Search in Hodder Education's *English Review* online archive for articles on your set texts, as here you will find suggested further reading at the end of each article or within the article itself.

## Finding and engaging with critical readings

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You may already have a bank of brief critical readings that you have researched in Year 12, or perhaps your teacher has provided you with a helpful list. This will prove very useful, although you may want to add to it or remove critical readings that repeat the same point or which you don't find interesting or useful. If you don't yet have a list, then start now by picking out three short quotations from the introduction of your set text, if there is one. Very often the editor will quote from critical readings or you may find a review of a performance of your set play. Once again, use articles from *English Review* to give you critical readings. Remember to note down the author of the original comment as you should always include their name when quoting their reading.

Aim to find critical readings that speak to each other so you can pair them when discussing the text. If you select totally opposing views it may be hard to engage with them in a rational discussion within the essay. Remember that to reach the top bands you need to *engage* with the readings, not just put them in at random. They should be introduced sparingly, in order to help you make or develop a point of your own. Rather than starting your paragraph with a critical reading, weave the right one in further on in the paragraph to help you make your own point more clearly. If you are unsure about how to engage with critical readings, look at top band answers on your board's site or search articles in the *English Review* online archive to find examples of how to do this. Practise writing paragraphs that use a critical reading and ask your teacher for some quick feedback. Then keep practising it until it becomes second nature.

## Finding and learning how to use contextual material

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It is tempting to think that all you need to demonstrate the significance of contexts is a few arbitrary pieces of information about the writer, or the period in which they are writing. Instead, you

need to curate your contextual material so that it really casts light on your texts. For example, if studying Gilead's misogynist regime in *The Handmaid's Tale*, it helps to understand the rise of the conservative right and the anti-feminist backlash in the 1980s.

Make sure that you have a reliable source for your material. For example, The British Library has an excellent range of short articles written by top academics for most of your set texts. The advantage of this site is that the contextual material is already embedded within an article about a text.

Remember that texts interrogate their contexts, they don't reproduce them. The way the academics use contextual material to engage with the texts will provide you with a great model to enable you do the same thing in your essays. In addition, if you want to quote some of their words to help you make a contextual point, then you are also including a critical reading, thus killing two birds with one stone.

## Writing essay plans and practice answers

Efficient essay planning is the key to success. It is better to write a shorter, focused essay that answers the question than a long, rambling answer that loses its sense of direction. Writing a short, efficient plan is the way to keep your essay sharp. Over and over again in examiner reports, you will see despairing comments on answers which do not address the question. If you nail your planning, you will get higher marks.

There are a number of techniques for generating ideas for essays. Using mind maps or spider diagrams may work for you. Drawing up a list of pros and cons (if you have a title statement to argue with) can be a way of finding points. Remember you need to get from a list of points to a structured, linear argument so aim to write down what you are going to argue in your introduction and make sure the points you write down are in the same order, with links that hang the overall argument together.

- **Practise writing timed plans** to check if you have the information you need at your fingertips. If you find you do not know which points to make or which passages to use, then go back to the rereading and annotating stage to gather more relevant material or discuss the question with your teacher or a friend. Then try again. Bit by bit, you will get quicker at sketching out a plan with an example to go with each point.
- **Practise collecting key passages, and for each passage a point you could make about it for each of the core topics.** You will not know the exact question until you see it on the question paper but at least you will have done some thinking and planning on the topic.
- **Check out past papers for your exam board so you can see the particular question format,** as this will help you to prepare in a more targeted way.

## Final thoughts

Remember to involve your family, classmates and even siblings to help you think about your set texts in more inventive ways. Vary your approach when you are revising, so you do not spend three hours doing one kind of task. Break up reading and note-making in short 20-minute bursts with debates with your parents, quotation hunting and essay planning with friends and act out scenes with your siblings. Make the process of revision interactive, as this is the way to develop your understanding and make you quicker, more flexible and sharper at answering questions in the exam itself.

**Cathy O'Neill taught English at schools in London and Oxford for over 30 years. She is now a freelance education consultant and school consultant for the *English Review*.**



# Revising A-level History

7

## Answering source questions

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There are two types of sources you will be faced with in the exam: primary and secondary – and they require slightly different skills in approaching them.

### Primary sources

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These are sources written at the time of the event, or contemporary to the period you are studying.

- You will need to be able to explain what the source is saying about the issue in the question. Many candidates make the mistake of just explaining the source in general terms and not specifically considering this aspect.
- To check that your explanation of the source is correct, ensure you have selected a short piece of evidence from it to support the explanation.
- Check that you are using the correct source – using the wrong one will lead to marks being lost. Use only the source or sources specified in the question.
- If the question requires you to use all of the sources, then use them all, as failure to do so will cost marks.
- In organising your answer, it is helpful to think which source most strongly supports the view in the question and work through to the one that least supports the view.

### Provenance

- You will need to consider the provenance of each source – that is, who wrote it (origin), why it was written (purpose), when it was written (time), its tone (language) and whether the view in the source is typical of the time (typicality). It is unlikely you will need to consider each element for each source, but the skill is identifying which of these elements best allows you to comment on the validity of the view contained within.
- Avoid simply describing who wrote the source or when it was written. You need to use that information to explain why that might make it more or less valid.
- You will also need to use contextual knowledge – that is your own knowledge – to test the view in the source. Does your knowledge support or challenge this view? However, a common mistake is not to use that knowledge to test the view but simply write all you know about the topic in the source without linking the knowledge to it. You need just one well-chosen piece of knowledge to show whether the view is valid or not.
- Having explained the source in relation to the question, considered its provenance and applied contextual knowledge, then you can make a judgement about the source – does it support the view in the question?



- Repeat this for each source and use the judgements to reach an overall conclusion about the view.
- To score highly, you need to explain the view of each source about the issue in the question, consider its provenance, apply contextual knowledge to it and reach a judgement about it in relation to the question.

## Types of primary source questions

Exam board/level	
AQA AS	With reference to these sources and your understanding of the historical context, which of these two sources is more valuable in explaining ...?
AQA A-level	With reference to these sources and your understanding of the historical context, assess the value of these three sources to a historian studying...?
Edexcel AS	Why is Source X valuable to the historian for an enquiry about...? How much weight do you give the evidence of Source Y for an enquiry into...?
Edexcel A-level	How could the historian make use of Sources 1 and 2 together to investigate...?
OCR AS	How useful is Source X as evidence for...? Using these three sources in their historical context, assess how far they support the view that...
OCR A-level	Using these four sources in their historical context, assess how far they support the view that...

## Secondary sources

These are sources written after the event and the ones you will be dealing with are usually written by historians.

- As with the primary sources, you will need to be able to explain what they are saying about the issue in the question. Again, avoid the trap of just explaining the source or interpretation in general terms.
- Identify the main view of the source about the issue in the question.
- Do not simply explain the view of the source or interpretation as this will not get you into the higher mark levels.
- In dealing with secondary sources, you may not need to consider their provenance, but do check the exam board requirements or ask your teacher.
- In order to check that you have understood the source or interpretation, what evidence is there contained within to support the view?
- You should test the validity of a view in secondary sources using your knowledge, but as with primary sources you need to link that knowledge to them.
- In order to link the knowledge to the source, it is a good idea to build up an evaluative vocabulary. This could include words such as 'however', 'although' and 'indeed' and phrases such as 'this is supported/challenged by' or 'the view is questionable because'.
- Having used your contextual knowledge you are in a position to reach a judgement about the view in the source or interpretation. How valid is the view?

- This process should be repeated for each source and an overall judgement as to which view is the strongest can be reached.
- In order to score well you need to evaluate each source or interpretation using detailed contextual knowledge and reach a supported judgement as to which view is most convincing.

## Types of secondary source/interpretation questions

Exam Board/Level	
AQA AS	With reference to these extracts and your understanding of the historical context, which of these two extracts provides the more convincing interpretation of...?
AQA A-level	Using your understanding of the historical context, assess how convincing the arguments in these three extracts are in relation to...
Edexcel AS	Historians have different views about X. Analyse and evaluate the extracts and use your own knowledge of the issues to explain your answer to the following question...
Edexcel A-level	In light of differing interpretations, how convincing do you find the view that...
OCR AS	Evaluate the strengths and limitations of this interpretation, making reference to other interpretations that you have studied.
OCR A-level	Evaluate the interpretations in both of the two passages and explain which you think is more convincing as an explanation of...

## Essay writing

There are a number of types of essays that you may have to write in the exam. Each essay requires slightly different skills and emphasis, so it is important that you know which types of essays appear on which examination papers.

### General essay advice

- Spend five minutes planning long or thematic essays.
- The plan should be an indication of your line of argument and issues that will be discussed in the essay – this will help to keep the response focused on the question.
- Avoid the plan being a list of events or dates. If the plan is like that, then there is a good chance that is how the essay will turn out – a narrative or chronological run-through of what happened. It will therefore be a descriptive response, which does not score well.
- Ensure your answer has a consistent line of argument.
- If there is a named factor or issue in the question, ensure that you write a good length paragraph on it before considering other factors or issues.
- If the question asks about the success or failure of a leader or policy, establish some criteria against which to judge the success or failure and link your material back to them.

### Long essay

- Each paragraph should deal with a different issue which focuses on the demands of the question.
- Discuss both sides of the argument for the issue and then reach a judgement about the issue.

- Ensure the argument is supported by relevant and accurate facts.
- Ensure that the material is relevant to the focus of the question, not just the topic.
- The opening sentence of each paragraph should put forward a view about the issue to be discussed. An examiner should be able to read the opening sentence for each of your paragraphs and see the line of argument you are taking.
- The opening sentence should relate directly to the focus of the question.
- The last sentence of each paragraph should be your judgement about the issue discussed.
- Ensure your judgement is supported, otherwise it is just an assertion and will not score highly.
- The conclusion should follow from the judgements you have made about each issue, and it should focus on the overall line of argument.
- In order to score well, you should analyse a range of issues and reach a judgement about each before reaching an overall, supported judgement.

## Types of long essays

<b>Assess the reasons... (OCR)</b>	Weigh up the relative importance of a range of factors
<b>To what extent was X responsible for Y (OCR, AQA)</b>	Weigh up the relative importance of the named factor and compare its importance with other factors
<b>'Quote' How far do you agree? (OCR, Edexcel)</b>	Weigh up the relative importance of a range of factors, comparing the named factor with other issues
<b>How important was X in bringing about Y? (OCR)</b>	Consider a range of factors and weigh up X against other factors in bringing about Y
<b>How accurate is it to say... (Edexcel)</b>	Consider the arguments for and against the statement
<b>How far do you agree with this opinion? (AQA)</b>	Consider the arguments for and against the statement and reach a balanced conclusion
<b>'Quote' Explain why you agree or disagree with this view. (AQA)</b>	Analyse a range of factors and consider the arguments for and against the view, reaching a balanced judgement
<b>How successful...? (OCR, AQA)</b>	Establish a set of criteria against which to judge success and consider the evidence for and against each to reach a balanced judgement
<b>'Quote' Assess the validity of this view (AQA)</b>	Analyse a range of factors and consider the arguments for and against the view, reaching a balanced judgement

## Thematic essay

- The plan should focus on the themes you will discuss.
- The opening paragraph should identify the themes and offer a hypothesis or view about the issue in the question.
- Cover the whole period in the essay in a balanced way, so that all areas of the period receive reasonable focus.
- Ensure that comparisons are made between different periods in every paragraph. This is the important skill of synthesis and is essential if you want to reach the higher levels. You must make links between different parts of the period, explaining similarities and differences across the period. A common mistake is to simply list different examples from across the period in each paragraph.

- Reach judgements on each theme discussed and an overall judgement.
- Turning point essays should be tackled in exactly the same way as other thematic essays – by theme, not event.

## Types of thematic essays (these appear on the OCR Unit 3 Paper)

<b>X was the main reason for Y throughout the period... How far do you agree?</b>	Consider a number of themes and weigh up their relative importance throughout the period
<b>To what extent was there more continuity than change in X during the period...?</b>	Consider a range of themes and how far they remained consistent throughout the period, or whether there was change. Reach a judgement for each theme discussed
<b>'Quote' How far do you agree with this view of the period...?</b>	Identify a range of themes and compare the issues across the period to reach a judgement
<b>X was the most important turning point in the development of Y in the period....How far do you agree?</b>	Identify a range of themes and compare the named event with other events for each theme and reach a judgement as to the importance of the named event

## Short-essay (OCR Unit 2)

Short essays, which appear on the OCR Unit 2 paper, will be worded as follows:

Which of the following was of greater importance in X?

- (a) A
- (b) B

Explain your answer with reference to (i) and (ii).

- Long introductions are not needed, so do not waste time writing a long introduction that describes the events or issues in the question.
- Avoid simply describing the events or issues in the question as that will score low marks.
- You must deal with both issues and reach a supported judgement as to which is the most important or significant.
- The explanation of the events, issues or people must be linked back to the actual issue in the question – focus on the issue, not the topic.
- The judgement should be substantiated – supported – otherwise it is an assertion.

**Nick Fellows was a Head of History for over 20 years. He is a senior examiner and an author of numerous A-level texts.**

# Revising A-level Geography

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Revising for your A-level Geography begins from day one.

In geography, it will not be about simply recalling facts and figures of places, processes and events you have studied. To achieve the highest grades, you will need to be able to apply the knowledge you have learnt to the context of the questions asked. This is why knowing the subject is important. To regularly review knowledge, try some of the following strategies:

- Create flashcards – have the core concept/process on the front of the flashcard and the correct answer on the back.
- Use electronic testing programs such as Seneca learning to practise recalling knowledge from memory.

Geography is a continually changing subject with events happening every day. Keeping up to date with these changing events will help you to bring additional evidence to support your thoughts as a geographer, as well as deepening your understanding of places, processes and events you have learnt about in lessons. Developing your wider reading of geography will help you to think deeply about the subject. There are several ways you can keep up to date with topical events:

- Using sources such as *The Economist*, downloading articles and updating relevant class notes that link.
- Reading Hodder Education's *Geography Review* magazine.

Throughout the two years of your A-level course you will need to spend some time practising the different exam-style questions you will be asked. The exam board your school has decided for you will affect the structure of the paper. However, there will be similar demands to questions that apply for all the exam boards. As mentioned in the introduction, it's important that you are sure of the exam structure, what's expected in relation to the command word, and that you read each question twice.

Across the different exam boards, your knowledge and understanding of geography will be judged by assessment objectives (AOs).

AO1	AO2	AO3
Demonstrate knowledge and understanding of places, environments, concepts, processes, interactions and change, at a variety of scales.	Apply knowledge and understanding in different contexts to interpret, analyse and evaluate geographical information and issues.	Use a variety of relevant quantitative, qualitative and fieldwork skills to: <ul style="list-style-type: none"><li>• investigate geographical questions and issues</li><li>• interpret, analyse and evaluate data and evidence</li><li>• construct arguments and draw conclusions</li></ul>

In terms of the different styles of questions, you might be asked the following:

- Knowledge-recall questions, such as ‘*State...*’, ‘*Outline...*’ and ‘*Explain...*’.
- Resource-based questions where you will need to use evidence from different sources such as maps, graphs, data tables, photos and newspaper articles.
- Statistical/graphical questions where you will be expected to use datasets to perform different calculations such as Spearman’s rank, chi-squared, mean and percentage increase/decrease.
- Extended synoptic questions where you will need to draw on your wider geographical knowledge to argue a particular viewpoint.

For each of the types of questions asked, there will be different ways you can approach them in order to be successful. Here are some key tips to use when practising these questions prior to your geography exams.

## Knowledge-recall questions

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- Knowledge-recall questions will test your understanding of key concepts and processes you have studied in lessons.
- For example, you might be asked to outline why infiltration rates may vary in a drainage basin, explain how flows of energy cause the formation of an erratic, or explain how physical factors can affect energy security.
- In these questions you will need to use chains of reasoning to develop your sentences through using sentence structures like: ‘*this means that...*’, ‘*this leads to...*’ or ‘*this will result in...*’
- The question will be looking for you to focus on one concept or process and develop chained sentences to explain why or how. So, avoid providing more than one point in your response. Stick with one point and develop this point to explain the concept, process or issue.
- In this type of question you may include a place-specific example or some statistics to support the point you make.

## Resource-based questions

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You will encounter a variety of resources in your geography exam which might include maps, photographs, data tables and graphs.

The exam question will often ask: ‘*Using Figure 1... explain, suggest, analyse or evaluate*’. For example, ‘*Explain the role of one geomorphic process in forming landform A.*’

To achieve the higher marks in this type of question you should aim to do the following:

- Take time to familiarise yourself with the resource.
- Make explicit reference to the resource in your response, e.g. ‘*Figure 1 demonstrates that...*’; ‘*This is supported by Figure 1.*’
- Extract specific facts and figures from the resource.
- Manipulate data rather than simply lifting from the figure.
- Identify patterns or trends and offer supporting reasons for these.

## Statistical/graphical questions

All the exam boards will expect you to know how to perform a range of statistical skills. For example, you might be asked to work out the mode or mean from a dataset for 1–2 marks. An example of a question can be found below:

		Summer	Winter
Input (m <sup>3</sup> )	Cliff erosion	43	100
	Fluvial deposition	50	20
	Beach nourishment	50	0
Output (m <sup>3</sup> )	Marine erosion	20	69
	Longshore drift	93	130

Calculate the sediment budget for each season shown in Table 1.

You must show your working. This is important because you can achieve marks for demonstrating the accurate process for working out the calculation even if you don't arrive at the correct answer. If the question asks you to 'show your working', you will need to demonstrate how you arrived at your answer to achieve full marks.

Spend time practising these statistical skills to ensure you are confident at tackling these questions in the exam.

## Extended synoptic questions

You will have several extended questions in all your exams worth 8, 9, 12, 16 and 20 marks. Examples of these questions might include:

- *Evaluate the view that development aid has been largely ineffective in reducing inequalities in developing countries. (20)*
- *'Geology is the most significant influence on coastal landscapes.' To what extent do you agree with this statement? (16)*

For these questions you will need to demonstrate your wider knowledge by drawing together different concepts and processes into a logical argument. Before you begin to write your response, write out a quick plan of the key points you intend to cover.

Avoid just writing everything you know about a particular case study you have learnt in lessons. Remember that these questions are looking for you to use case studies as examples to support the points you want to make. Think of it a little like sprinkling chocolate chips on a cookie. You want the chocolate chips to be spread evenly. Try to do the same with the examples or evidence you use in your answers.

Organise your response into a logical structure. This might include a quick introduction, several paragraphs with your key arguments that you want to get across, and finally a conclusion. In a 16- and 20-mark question, you should provide a conclusion that draws together your points. If you are asked about a particular view or to consider 'the extent', you don't need to wait until the end of your essay to do this. This will all come down to your own writing style. You may prefer to tell the examiner your view at the start of your essay. The most successful candidates in the 16- or 20-mark questions think like a geographer with the following common in their responses:

- A snappy introduction that sets the scene for your response.
- Make three to four points that are supported with evidence that you have learnt.
- Draw together your point at the end of each paragraph with a mini-conclusion that links back to the question.
- Aim to link each of your paragraphs so that they are not written in isolation. This will create a more coherent essay.
- Draw together your findings through a conclusion that answers the question set. If the question says 'to what extent' then this is what you need to do. Say if you believe it is a high or low extent. Remember, this is your decision and you will achieve the marks if you back this up with evidence.



# Revising A-level Maths

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## Know what you need to know

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The A-level Maths content splits into three areas – pure, statistics and mechanics.

It's a good idea to be honest with yourself about what you know and be aware of any gaps in your understanding – you may have missed topics at GCSE, so spend the time going back to these topics if they are causing a problem to you at A-level. It is not a waste of time to use questions from a GCSE book to practise a skill like factorising that you may have missed in Year 11.

Don't spend ages writing notes for maths; make sure you practise answering questions as this is what you are tested on.

## Be familiar with the large data set

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- Make sure you have read the notes that come with the large data set so you know what the quantities are, what units they are measured in and how the quantities relate to each other. For example, what does mean air pressure tell us (Edexcel), what is a hybrid car (AQA), what is a unitary authority (OCR A) and what does per capita GDP measure (OCR B)?
- Practise your statistical techniques using subsets of the large data set so you get an idea of what groups you might need to compare and what correlation you might expect between quantities.
- You won't find out everything an examiner might ask about and you don't need to remember any detail about the data. However, you will have what the specifications call a 'material advantage' if you understand the context and the language to use when discussing the quantities.

## Understand the question words

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- Each exam board has a list of command words: calculate, draw, determine, explain, find, prove, show that, simplify, sketch, verify and more, which indicate what you have to do. They also give clues as to how much working you need to show to get full marks, so check them out.
- Be aware of words like 'exact' which means a rounded decimal answer will not get full credit and suggests you need an algebraic method and not a calculator method that gives decimals.
- The word 'hence' in the second or later part of a question is an instruction to use what you have just done for the next part of the question, and you may not get any marks if you do the later part by another method.
- The phrase 'hence or otherwise' is used when the examiner thinks that using what you have is a good way to do the next part, but you can do it another way if you prefer.

## Practise routine questions (AO1)

About half the A-level paper consists of marks for using and applying standard techniques (AO1). Answering these questions will probably give enough marks to pass the exam on their own.

- Know where to find the formulae you need and how to apply them in common questions.
- Know which formulae are not given in the exam and make sure you know them – for example, the double-angle formulae in trigonometry.

Practise algebraic manipulation like rearranging, factorising, completing the square, using the binomial expansion, writing in partial fractions and using trigonometric identities to write an expression in  $R, \alpha$  form.

Practise other standard techniques such as differentiating and integrating, calculating probabilities and applying Newton's second law.

Make sure you know all the steps and the outline script for hypothesis testing as you need to have the correct form of words to get full credit. This practice will help you get the marks for these questions, but you will also make fewer mistakes and answer more quickly, leaving more time in the exam for the harder questions and the additional marks for the higher grades.

## Answering 'Show that...' and proof questions (AO2)

About a quarter of the papers test whether you can 'reason, interpret and communicate mathematically' (AO2). This might be a question that uses the command word 'prove' or be a question where the answer is given.

- Don't be afraid to use words in your proof to explain your thinking to the examiner – people often lose marks when they collect all the evidence for their proof but do not write down their final conclusion.
- A 'Show that...' question gives you the answer to work towards which you might find helpful, but it means that you have to show all the steps of working that leads to that answer.

A 'Show that...' question is not necessarily a non-calculator question, so use your common sense about what you write down. For example, the question 'show that  $\int_1^2 x^2 dx = \dots$ ', cannot be answered with 'I typed it into my calculator and that was the answer it gave'. You need to show the algebraic answer for the integral, the substitution of both limits and the final answer, but you could use your calculator to simplify the fractions.

If you don't get the correct answer in a 'Show that...' question, or if you can't answer it at all, use the given answer in the next part of the question – that's not cheating. The examiner may have put the answer there deliberately to enable you to pick up marks for later parts of a question even if you can't do the first part. Don't assume you can't do part (b) just because you couldn't do part (a).

## Dealing with problem-solving questions (AO3)

About a quarter of the paper tests problem-solving and modelling skills (AO3). Problem-solving means you have to decide what techniques to use and interpret your answers in the context of the original problem.

- Sometimes you might not see straight away what to do and that's OK. You can take as many minutes as there are marks for the question before giving up and moving on and still get to the end of the paper in the allotted time.

- If it is not clear what to do, you could start by writing down the key pieces of information in the question using the mathematical notation you would normally use. For example, in a mechanics question where acceleration is constant, write down the values for  $s$ ,  $u$ ,  $v$ ,  $a$ , or  $t$  and use them to decide which formula to use.
- Think what you could do with the given information and try something, even if it is not obvious whether it is helpful or correct – if you leave it blank, you know you will get zero marks, but writing incorrect work doesn't get you fewer marks. Your work may be awarded part marks if it is correct, even if you don't get all the way to the solution for the problem.
- Alternatively, think what you would need to know to answer the question and figure out a way of finding out what you need. You might find you need techniques from different parts of the syllabus in the same question. There has to be a question like this on an A-level paper.

## Answering modelling questions

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Modelling is when you describe a situation in context and use maths to predict what happens in the real situation. For example, the models used to predict the number of positive cases in the Covid-19 pandemic use exponential functions.

- Make sure you know what modelling assumptions are made about the situation to allow the model to be used – sometimes they are not quite what is happening in real life, but they mean approximate predictions can be made that might be helpful. For example, we neglect air resistance when modelling a projectile, but there always is some air resistance.
- Sometimes the model is given to you as a formula or equation, and you have to substitute appropriate values and interpret the outcomes of the calculations. Sometimes you have to evaluate constants in the equation of the model to best fit the data. Make sure you then write the formula for the model at the end of your answer using the value(s) you have found.
- Remember to interpret your values in the context of the question – for example, in a mechanics question about projectiles, make sure you use your value for the height to determine whether the projectile hits the target or not, and write down your conclusion in words.
- Sometimes you are asked to comment on whether the model fits the given data. Remember that the model needs to predict values that are close to the actual values in the context, but they do not have to be exactly the same for it to be a good model.
- You also have to be able to evaluate the outcomes and recognise the limitations of the model – where and when might it not be useful. Often it is values near to zero or very large values that cause problems with a model. For example, a constant acceleration model predicts huge speeds after a long time which cannot be achieved in the real world.

## Making the best of your calculator

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- Whatever type of calculator you have, scientific or graphical, make sure you know what it can do – do you know how to use the solve facility, statistics and table modes?
- Use the calculator for routine things but make sure you show how you've used your calculator. For example, in a mechanics question, you might get a quadratic equation for ' $t$ ', which you can solve on your calculator. It would be good practice to write the equation in the standard form needed for equation mode and both roots as evidence of your working, even if you then reject one of the roots for the problem in context.

- In a question that asks you to sketch a function, you could use a graphical calculator to draw the function, identify the key features like the points where the graph crosses axes, the stationary points and the asymptotes and make a sketch from this information. Make sure you label everything you have found.
- If you have a scientific calculator, you can find out a lot about a curve from creating tables of values in table mode. Make sure you include the supporting algebra for these features as well, if you can.

## Checking strategies

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- Everyone makes mistakes, especially under exam conditions, so allow time to go back and check your work so you can find the mistakes and correct them before your work is marked. Sometimes it is worth checking as you go along if you have to use one answer in the next part of the question, but keep an eye on the time – if you haven't got time to make the corrections, then don't spend the time checking.
- Be aware of the kind of mistakes you are prone to, for example some people often reverse digits or mix up repeated digits or make sign errors when expanding brackets. Check for those errors.
- It is always worth checking that you have used the correct values from the question in your answer. A misread might only cost one mark if you follow through your error and show all the steps of your calculations, but it often leads to more difficult algebra as the values in the question have often been carefully chosen so the algebra works out nicely.
- You can use your calculator to check exact answers by comparing the decimal value of your exact value with the answer in decimals that your calculator gives for the same question.
- Often a question requires algebra rewriting, for example completing the square or expressing in partial fractions. You can check this with table mode on your calculator by creating a list of values of the original algebra and another for the rewritten algebra – if you are correct, you will get identical lists.
- Check how the question wanted the answer – exact values or rounded to a given number of significant figures or decimal places, in the form... etc. If it says it in the question, then marks will have been allocated to that step, and it's a shame to lose a mark for an answer that is pretty much right.

## Practise, practise, practise

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- The more questions you can do the better, but choose them for your level. If you're catching up on a topic, choose easier questions and grow your confidence and skill. If you're targeting a high grade, answer questions from past papers or revision guides.
- Go back to a question that you could not finish on your first attempt after looking at the mark scheme or model answers. Can you do it now?
- Mark your work as you go along, giving yourself credit for 'the right idea' or 'nearly there' where appropriate. Make notes of where you lost marks and how to improve if necessary. This way, by the time you get to your exam, you will have seen most of the types of questions before, which is going to help you to succeed.

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# Revising A-level Physical Education

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## Read the question and fully understand the command words

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It may sound obvious, but one of the main reasons that PE students do not do as well as they would have hoped in A-Level PE exams is down to how they read and interpret the questions.

Think of the command word as the lead examiner telling you what he or she wants you to do. You are unlikely to get questions that simply require you to write everything you know about a topic. The command words set the context for the answer you should write and the mark scheme for each question is written in line with the command that has been used.

## Basic commands

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When the examiner uses commands like **state**, **identify**, **give** or **name**, the examiner simply wants a list. There is no need to explain or reason your answer, you simply need to provide named features or aspects.

### Example 1

State two characteristics of a slow-twitch type I muscle fibre. (2)

In this example, the basic command to 'state' is supplemented with a need to give two answers. Only two answers would be marked, as the number of answers required has been stated.

Answers can simply be 'stated' rather than articulated into full sentences. Acceptable answers could include:

- Many mitochondria
- Lots of myoglobin
- Thin diameter
- Many oxidative enzymes

However, it is important to understand how a simple change in command word could completely change what answer is expected.

### Example 2

Identify how two characteristics of a slow-twitch type I muscle fibre allow it to fulfil its function. (2)

In this particular question the command is to 'identify how'. Thus, in this question, merely stating the characteristic would not suffice. For example:

- Answer: 'many mitochondria' (is not enough to be credited).

- Answer: ‘many mitochondria allow nutrients to be converted into the molecule ATP for energy to prevent fatigue’. ✓ (identifies one mark for how the mitochondria allow the slow-twitch fibre to fulfil its function).

## More detail in your answer

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Many answers in an A-level PE examination require more detail. This again is set by the command word.

**Describe** as a command requires you to describe ‘characteristics’.

### Example

Describe the various components of Bandura’s model of self-efficacy (4)

Therefore, characteristics of the model need to be described:

- ‘Past performance accomplishments show whether they have previous success in what they are doing’.
- ‘Vicarious experiences is the belief that you could copy or mimic performers of a similar ability’.
- ‘Verbal persuasion is having verbal comments from others that are positive and encouraging’.
- ‘Emotional arousal is being able to control arousal levels when performing the skill in question’.

(Four marks for four descriptive points).

Perhaps one of the most problematic command words is ‘Explain’. Explaining requires you to set out reasons. In many ways it is a command for you to treat the person reading your answer as a complete novice to the subject. In other words, you have to explain it to them so that they understand it.

For example, a question might be worded as follows: ‘Explain two reasons why more people started to play sport in post-industrial Britain (1780–1900)’, merely stating the reasons would not gain any credit:

- Answer: ‘improvements in transport’ and ‘role of factories’ (would not gain any credit as they are not explained).
- Answer: ‘improvements in transport allowed teams and spectators to travel further so regional leagues could be completed’ (gains one mark as the reason is explained).

## Commands with assessment objective 3 (AO3) context

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Some command words have a particular requirement, which is covered under AO3. It looks for you to provide analysis and evaluation to produce well-reasoned conclusions.

**Justify** as a command word requires you to say ‘why’ with an argument.

### Example

Justify why a need to achieve (N.Ach) performer would be likely to accept the opportunity to take a penalty flick in hockey. (2)

You would be required to say why they would accept, with reasons.

An example of a suitable answer to gain two marks would be:

- ‘Because they are likely to be motivated by the challenge of the of the 50/ 50 situation – i..e score or miss’.
- ‘Because the are not afraid to fail and even if they have before, they persevere and try again’.

(Two marks for two justified points).

**Analyse** as a command word is about looking at parts or components involved in something and commenting on them. For example, Bandura’s model of observational learning has four parts to it:

- Attention
- Retention
- Motor reproduction
- Motivation

So, if you were asked to analyse Bandura’s model you would be required to comment on the varying parts of the model. ‘Analyse’ can be used for any theory or concept that different parts that make that theory or concept up.

**Evaluate** is a very common command word at A-level and requires you to argue and reason about how appropriate something is, or is not.

### Example

Evaluate the reasons for and against taking performance-enhancing drugs. (4)

For such a question, it would be strongly advised to use the idea of:

- point
- because and
- impact

For example:

Point: PEDs may be taken to level the playing field because there is a belief that others are taking PEDs.

Impact: so they take drugs as they believe it is the only way they have any chance of beating other performers. (One mark awarded of the four available.)

Evaluate questions can also be extended questions, see below.

## Answering long extended-answer questions

All long extended-answer questions in the PE exams require you to show a mix of AO1 (knowledge and understanding), AO2 (application of knowledge) and AO3 (analysis and/ or evaluation).

The command words used tend to be ‘analyse’, ‘evaluate’ or ‘discuss’. ‘Discuss’ simply means that you should provide a balanced argument for and against.

It is important to appreciate the balance of assessment objectives, as a common error is to have a lack of AO3 in the response. AO3, or in other words reasoned arguments, should make up nearly 50% of your extended answer.



- 8-mark questions should have a balance of: 2 x AO1, 3 x AO2 and 3 x AO3.
- 15-mark questions should have a balance of: 4 x AO1, 5 x AO2 and 6 x AO3.

You can structure your answers to extended questions in any format you like, but it may be worth considering the following two ideas:

15-mark answer: potential way to write your answer	15-mark answer: potential way to write your answer
AO1: write all of your AO1 knowledge and understanding about the topic or topics in question	Make an AO1 point to show knowledge and understanding
AO2: write all of your AO2 application of knowledge – i.e. apply the knowledge to the context/sport within the question so as to show how it applies	Apply this point to the context/ sport in the question (AO2)
AO3: write all of your AO3 – i.e. argue and reason what the topic or topics would do to performance, focusing on the impact on performance to conclude with a reasoned conclusion	Argue and reason what impact this would have on performance (AO3) Repeat this process over and over for the varying points to be made....

## Synopticity

When sitting A-level PE exams it is vital that you realise that in some extended questions you may be required to draw on knowledge from across the course. Drawing together knowledge and understanding from more than one area of the course is known as synopticity.

A key factor to consider when looking at extended questions is:

- Is this a synoptic question?
- Does this extended question have more than one topic stated within the question?

If the question does have more than one topic, then both topics must be referred to in the answer. If a question has some obvious links to topics not stated in the questions, then these can be referred to as long as the reference still allows you to answer the question – you should not mention other topics for the sake of it. They must be used to add to the answer and to continue answering the question.

For example, if an extended question included a focus on ‘guidance’ as a topic, an answer could bring in the concept of ‘self-efficacy’, for example: ‘when providing manual guidance the performer may feel more supported and subsequently increase in self-efficacy as they start to complete the move with some success’.

## Answering sport-specific questions

Be very careful when sitting you’re A-level PE exams to ensure you take note of the context sport in each question. It is common for students to miss the context or to forget the context when writing their answers. For example, if the question refers to golf or netball then the answers must relate to golf or netball.



# Revising A-level Physics

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## Answering maths questions

Forty per cent of the questions in your A-level Physics papers will contain mathematical skills at a Level 2 standard. This means that while you may still be tested on simple substitutions with little choice of equations, data or more structured mathematical questions at GCSE standard, these will not count towards the 40%. However, there is no need to worry as practice really does improve your ability to answer these questions.

Remember:

- Your specification will include a section at the end which details the mathematical requirements of your qualification, and often provides exemplification of what these skills mean in the context of your A-level. Get a copy of this section of the specification and practise each skill if you aren't confident with them.
- Use your textbook and revision guide to find practice questions. You can also use past papers as practice.
- When completing questions, have your data sheet with you. If you don't have a paper copy, print one off from the exam board website to mimic your real exam experience. Your data sheet is there so you don't have to learn all the equations (although you will become very familiar with them), and instead you can really focus on the maths applications. Working with your data sheet regularly will help you become familiar with where to find key information.
- Complete these questions in timed conditions, to get used to working at speed. This is usually between 1.2 and 1.4 marks per minute, depending on your paper. A good rule of thumb is that for a 4-mark calculation you should be completing this in 5 minutes, unless you have access arrangements that mean you receive extra time. Only award yourself the marks if you have definitely got the correct answer using a correct method (more on that below).

Here are **six** common mistakes that are made in A-level Physics maths questions.

### 1. Substitution errors

Lots of students make errors by substituting values into equations incorrectly when working at speed. This is particularly true when you have to select the correct velocity to use and more than one is given. It is really important to double-check your method and your substitution. A good way to avoid this is to annotate the question labelling the variables as you read.

### 2. 'Show that...' questions

'Show that...' questions will provide you with a numerical answer that you are aiming to reproduce.

- It is really important that you make sure that your cause and effect are correct in these questions. You **cannot** use the numerical answer provided in the question in your calculations; this value must be your end point.

- It is also important to remember that you must give your final answer to more significant figures than the question asks for – do not round unduly. If the question asks you to show that the mass is 0.40 kg, your answer must be provided to at least 3 significant figures. This means that 0.402 kg is acceptable, 0.4 kg is not. Don't worry if you can't reach the answer identified in the question, as you can still gain marks from error carried forwards. Remember it is fine to use the numerical value that you were trying to show in subsequent parts of questions if you need to (you can still gain full marks in the latter parts of the question).

### 3. Degrees and radians

It is likely that you will need to switch between using degrees and radians in your exam. Practise changing the settings on your calculator to allow you to do this accurately and with speed. Take note of the symbols on your calculator to make sure that you are always using the correct setting when completing calculations using trigonometry.

### 4. Working logically

- Error carried forward or method marks can usually be obtained in calculations worth 2 marks or more, even if you get the incorrect answer.
- It is important that you show your mathematical working clearly, and that this is logically displayed on the page; examiners must be able to follow your calculation.
- Remember it is convention to work down the page with your calculations in columns.
- You also must write down the actual calculations that you complete (so if you use a value of 2.567 in your calculation, write this, don't write a rounded value of 2.6). Writing a rounded number could prevent you from gaining method marks.
- Lastly, it is always good practice to write down intermediate answers as these are usually shown on the mark schemes, so it makes it easier for examiners to award you marks. For example, if the question asks you to calculate a final velocity, but you need to calculate an acceleration first, write down the value of the acceleration clearly in your method.

### 5. Using logarithms and exponentials

- Logarithms and exponentials are probably the most complicated mathematical skills that you will need to employ in your A-level exams, and they are covered in A-level Mathematics. It is important to practise using these, including how to rearrange these functions as they have a different set of mathematical rules.
- Check that you are confident in using both  $\log_{10}$  and  $\ln$ .
- Check that you are confident in plotting log graphs as well, including the convention for axis labels and how to interpret these graphs.
- Your textbook and revision guide will often feature these mathematical skills, but remember that questions on capacitors and radioactivity are those most likely to make use of these functions.

### 6. Using correct physics

Often calculations in A-level Physics can be approached in numerous ways, but sometimes only one method is valid, despite different methods giving the correct value. This is often the case in mechanics questions. To avoid using an incorrect method, carefully read the question, looking for clues from the examiner. For example, if the question says that the acceleration is not constant then you cannot use a 'suvat' equation – answering the question using energy transfers might be more appropriate.

## Answering written questions

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Physics students often struggle with the written questions and are sometimes more confident working mathematically.

The key to improving in this area is practice, but also carefully looking at the mark schemes for past papers. Pay close attention to any terms in bold as these are usually needed to gain the marks. Only award yourself the marks if you have used exactly the correct language. Don't award yourself 'benefit of the doubt' marks. It is far better to be overly rigorous with your own marking, as you will perfect your responses. Also, look at the right-hand side of the mark schemes, as these will often give you examples of what is not credited by examiners. Learn from these mistakes so that you don't make them in your actual exams.

Some other top tips are listed below:

- Be precise in your language and use the full term, don't abbreviate. If answering a refraction question, comment on the optical density of the medium not the density.
- Don't start your answers with 'it'. This is ambiguous and examiners can't credit your answer. Tell the examiner the exact answer, e.g. the 'momentum of cart A increases', not 'its momentum increases, or 'it increases'.
- When answering a state question, don't write too much. Tell the examiner what happens or what a term means and then don't try to add extra information. This extra information can detract from your answer and sometimes it makes it unclear what you believe the answer to be.

## Extended questions

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There will be at least one extended written question in your examination and these are 6-mark questions. Sometimes students find these questions intimidating because they have a longer section of text to read at the beginning of a question, and a large space in which to write their answer below.

When answering these questions, remember the following:

- Take your time reading the question carefully – often the question can be split into two or three parts. These are either given as bullet points as things you should discuss, or the question includes a list of things to consider. Deal with each part of the question separately.
- While you shouldn't bullet point your answers, it is appropriate to use paragraphs to section your answer, making sure that you are answering all the parts raised.
- If the question includes numerical data, use it. The examiners will be expecting you to comment on, and include, this data in your answer. Sometimes it is appropriate to complete a calculation or two as part of your answer – if so, include this in full.

## Answering multiple-choice questions

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Multiple-choice questions are a quick way for the examiners to check your understanding across the breadth of the syllabus. These sections have between 10 and 25 questions that will cover a broad range of the specification.

Things to remember when completing these questions include:

- A common mistake is to get caught up in these questions and spend too long on them. Your

exam papers may give you an estimated amount of time that you should spend on them, but really you should spend no more than two minutes per question. Remember, these questions are only worth 1 mark each.

- Look for ways to get to your answer quickly. Often, two of the answers can be ruled out quickly as the values are implausible or contain incorrect physics or units.
- Some multiple-choice questions are best solved by using ratios rather than calculating the question fully. For example, if the radius of a circular path doubles, the area swept out will increase by a factor of 4.
- If in doubt, always give an answer. You have a 25% chance of getting the mark regardless.

## Answering practical questions

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While your A-level includes a practical endorsement, which your teacher assesses you on during the course, your knowledge and understanding of practical work will also be assessed in the exams. Around 15% of questions will be devoted to practical skills.

Remember:

- Your specification will include details of the practical skills to be assessed in the written papers either at the end of the specification (AQA and Edexcel) or in the content section of the specification (OCR). Check that you are confident in each of these areas.
- Make sure that you can confidently recall each of the required practicals, including the methods, strategies to improve the accuracy of the results, safety information and how to analyse the results, including if the independent variable were to change.
- Use precise language when answering questions – being too vague can risk dropping marks.. For example, rather than writing that human error could cause inaccuracy, state that it might be due to reaction time. Similarly, when using apparatus don't just check for a calibration error, state that you would close the jaws of a micrometer to check for zero error.
- Name the apparatus appropriately – remember that 'weighing scales' won't get you a mark but a 'mass balance' will.
- Check that you are confident in calculating uncertainties (both absolute and percentage uncertainties) and know how to display these on graphs.
- Make sure that you are clear on the correct use of the terms 'accuracy', 'precision' and 'reliability' and how to improve each of these aspects separately.
- You may see a practical question about an experiment that you haven't completed. Look for the similarities, and apply the skills that you have learnt to this new context. For example, the student might be using a vernier scale. Think about how to successfully read this scale from your experience with vernier callipers and what inaccuracies there might be in reading this value.

# Revising A-level Politics

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## Assessment objectives

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When revising for A-level Politics, you need to remember that you need more than knowledge to get marks in the exam, although it is an important building block. The following list of the AOs will help you understand what you need to revise and show in the exam.

### AO1 Knowledge and understanding

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If you don't get to grips with this, you can't move on to AO2 and AO3. This is the groundwork. To revise for this you need the traditional methods – flashcards, revision notes and testing yourself. AO1 needs accuracy and detail. For example, if you are describing a voting system make sure you get it right in terms of its name and exactly how it works – don't confuse SV with STV. Make sure you know examples of where it is used and what impact it has. AO1 is also about focus – don't just add everything you know about a topic, make sure you use the AO1 that the question requires. This is also where you will gain marks for using the correct terminology.

### AO2 Analysis

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You need to show that you can look at both sides of an argument. This is where you examine facts and look at different viewpoints. You will use phrases such as 'this shows that...', 'therefore...', 'because...' and 'this means that...', showing how your argument develops in a logical way. You can then contrast arguments, such as: 'This argument can be criticised as...'. The structure of your essay can help with this – match arguments and counterarguments within a paragraph (see essay planning model above) rather than writing half an essay in favour of a particular viewpoint and the second half against.

### AO3 Evaluation, reaching a judgement

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Arguments are not of equal status. You need to show that arguments are competing and you will be critical, e.g. 'this is a weaker argument because...'. Explain why one argument is stronger than another, for example: 'Clearly the argument that all socialists reject capitalism is weak and outdated, as social democrats believe that capitalism can be tamed and regulated – supporters of the Third Way embrace the free market'. AO3 must be evident in each paragraph, not just in the conclusion.

### Up-to-date examples

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To get a high grade it is essential to use up-to-date examples, to supplement the older ones in your textbooks. Find them by keeping up to date with current affairs and building up your example database.

However, just knowing a range of up-to-date examples is not enough, you also need to understand how to use them. They are not just about bulking out your answers. They need to be used with care – to support and develop your arguments and help you reach a judgement.

Make yourself an example database for each topic on the specification:

Topic	Example	What point can it be used to argue?
Elections: should we abolish FPTP?	In the 2019 election, the Conservative Party gained an extra 48 seats (7.4% more than in 2017), but only increased their vote by 1.3%	This shows that first-past-the-post usually gives the winning party an enhanced majority – a winner's bonus – and is clearly a disproportionate system
	In the 2020 Senedd election, the Labour Party won 30 seats, one short of a majority	This shows that a hybrid system like AMS, designed to be proportional and fair, can also create strong one-party government

Once you are in the second year of the course, it is tempting (if you studied UK in the first year) to imagine that UK politics is now finished. However, you must continue to keep up to date with the news and develop your example database. Otherwise at the end of the year you will have too much to do to catch up. You will be very glad that you have done this.

## Using political terminology

The specifications include lists of terminology that you are expected to understand and use accurately. Make sure you have learnt them (add them to your notes and test yourself to make sure you have remembered them) and include them in your answers, rather than using more simplistic and less political/academic language. For example, using the term 'democratic deficit' to link the different problems within UK democracy such as low voter turnout, the first-past-the-post system, the unelected House of Lords and no votes for 16- to 17-year-olds.

## What are the key debates for each topic?

Politics is about argument and differing opinions. For example, should the House of Lords be further reformed? How effective is Parliament in representing the electorate? You need to be able to find the debate in each question. This will help you avoid just writing everything you know about the topic in the question and instead, write a focused analysis. For each topic on the specification, write a list of key debates that are likely to come up in questions. You can find these controversies in your textbook and on the sample and past exam questions.

## Stimulus-response material – evaluating political information

Stimulus-response questions ask you to identify arguments and opinions from the source and form a judgment. There will be two competing viewpoints in the source – start by finding them. For examples of questions, look at past and sample papers, mark schemes and examiners reports. They can also be found in textbooks.

You must use the information in the source as the basis of your answer – don't just use it as a starting point, this is not a normal essay question. On the other hand, it is not a comprehension exercise either, you must include your own knowledge to develop your answers. If you add arguments that are not mentioned or alluded to in the source, you will not gain many marks. Focus on developing and analysing what is there. Please note that for AQA you are expected to include comment on the provenance of the source – date, author, purpose, type of publication and relevance.

Start by using **two highlighters**: pick out the points on either side of the debate. Match the arguments up to create three to four paragraphs with a point and a counterpoint in each. Now: what can you add from your own knowledge?

## Politics source essay planner

AO1 Point from source (Passive) – the one you don't agree with	AO2 Evidence and analysis from your own knowledge Must must be linked to source	AO1 Counterpoint from source (aggressive) The more convincing point	AO2 Evidence and analysis from your own knowledge	AO3 Judgement Why is the second argument more convincing?
PARAGRAPH 1				

## Essay writing skills (for questions without sources)

The table below will help you to write an essay that meets all the assessment objectives and helps you to stay focused and avoid a descriptive approach where the AO3 judgement is just tacked on at the end.

### Politics essay planner

AO1 Point Passive – the view you don't agree with	AO2 Evidence (This is where you add your examples) to develop and analyse the point	AO1 Counterpoint Aggressive – the more convincing point	AO2 Evidence/own knowledge To develop and analyse your counter argument	AO3 Judgement Why is the counterpoint more convincing?
PARAGRAPH 1				

## Useful evaluative language (for both source-based and non-source-based essay questions)

- This argument is flawed/weak/naïve/not convincing because...
- The previous point fails to recognise that...
- A more convincing argument is... because...
- Put a 'however' midway through every paragraph rather than starting each paragraph with it. This will ensure that you contrast arguments in each paragraph and get those essential AO2 and AO3 marks.



Don't leave your judgement to the end. Make sure you introduce evaluation in your introduction and within each paragraph. This shows ongoing evaluation and will feed into your conclusion, which should come as no surprise to either you or the examiner. For example, in an essay on whether there should be further devolution in the UK, you might end a paragraph by stating: 'Although it is clear that the argument that devolution is asymmetric is clearly accurate, the threat to the future of the UK that further devolution will create is stronger, as the UK is clearly stronger and more economically stable together.'

## Synopticity

Some questions require you to compare, contrast or link material from across topics and units. For example: 'Examine the methods used by pressure groups in the USA and UK' (12 marks, Edexcel) or 'Pressure groups make a positive contribution to democracy in both the UK and the USA'. Analyse and evaluate this statement' (25 marks, AQA). Make sure you are aware of which questions and papers require you to do this and which do not. Your revision needs to be synoptic: don't revise topics in isolation. When you are creating your revision notes, try creating spider diagrams that connect up topics across the syllabus – when learning examples, how many topics can you link them to? Use coloured arrows to connect topics across units.

## Shorter-answer questions

Both AQA and Edexcel also include shorter-answer questions. These are one-sided, and do not require debate. Make sure you know which these are. No introduction or conclusion is needed – this is about definitions, explanations, examples and assessments. Try to write three separate points. For example, 'Examine the similarities between the powers of the UK prime minister and the US president' (Edexcel, 12 marks) and 'Explain and analyse three ways cultural theory could be used to study party systems in the UK and USA' (AQA, 9 marks).



# Revising A-level Psychology

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In order to perform well in your A-level Psychology exams, you will need to have a knowledge and understanding of the different types of questions you will be asked (broadly speaking there are six types of questions) and the common pitfalls in answering them. Although listed below, your textbooks, the exam board website and your teacher will have the information about exact wording, questions and timings of the questions in the papers. In particular, look to identify the command words (the words that inform what specific information/aspect of a study is required).

Once you have become familiar with answering all the different types of questions, practise answering them under timed conditions.

## Question type one: selection questions

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### Example

Select which of the following statements relating to Asch's study of task difficulty is true. (1)

- A:** Asch found conformity decreased if he made comparison lines more similar to each other.
- B:** Asch found conformity remained the same if he made comparison lines more similar to each other.
- C:** Asch found conformity increased if he made comparison lines more similar to each other.

This question type involves candidates being given information from which they select appropriate choices. There will generally be more options available than selections required. There are several types of possible selection questions. For example, ones where you:

- Select from information to match statements you are given.
- Select from information you are given to complete a table.
- Select from information you are given to label a diagram/graph/table.
- Select from information you are given as to whether statements are true or false.
- Make correct selections from information you are given.

Common mistakes include:

- Unfamiliarity with such questions.
- Not understanding the requirements of the question.
- Not making sufficient selections.

Strategies you can use to improve your performance on selection questions include:

- Before answering, make sure you identify the command words (words that inform what specific information/skill is required). For example, whether a question is specifying that a true or false statement has to be identified.
- Use the marks in brackets as an indication of how many selections are required. If two marks are available, it probably means two selections need to be made.

## Question type two: short-answer questions

This question type generally involves questions worth a few marks where specific answers are required, with a need for elaboration (detail) to gain all the marks available (though 1-mark questions will generally require a specific answer with no elaboration/detail).

This question type is generally assessed by examiners using mark descriptors, where they look for certain amounts of information/elaboration to gain each available mark. Short-answer questions can involve the following:

- Demonstrating specific knowledge and understanding of a topic area.
- Providing evaluation (strengths and/or weaknesses) of a topic area.
- Applying knowledge and understanding to a given example.

Common mistakes include:

- Unfamiliarity with such questions.
- Not understanding the requirements of the question.
- Providing too much or too little elaboration (detail).

Strategies you can use to improve your performance on selection questions include:

- Creating your own short-answer questions (including 1-mark questions). You could even swap short-answer questions with other students to practise.
- Before answering short-answer questions, again make sure you identify the command words. For example, the command word 'describe' would signify that an outlining of knowledge is required without any evaluation, such as: 'Describe one component of the working memory model.' However, if the command word 'evaluate' was used, it would signify that strengths and/or limitations need to be given, e.g. 'Explain one limitation of the multi-store model of memory'.
- Using the marks in brackets as an indication of how much elaboration is required. If one mark is available, then providing detail would just be wasting valuable time you could be spending answering another question. For example, more elaboration would be required with the question: 'Explain what is meant by informational social influence' (3 marks), than with the question 'Explain what is meant by interactional synchrony' (2 marks).
- Identifying where the marks are in your responses to short-answer questions. You could use highlighter pens to achieve this. Use one colour to identify where in your answer the content for one mark is and another colour for where the elaboration/detail is to gain the second mark (for additional marks additional elaboration would need to be similarly identified). (Only use this technique when practising/revising this type of question – don't highlight content in the actual exam.)

## Question type three: application questions

Application questions generally require relevant psychological knowledge to be first combined with information provided in the question, and then to be stimulated by information provided in the question. The information provided in application questions usually occurs in the form of a 'scenario' (some teachers refer to these as a 'stem'). Common mistakes include:

- Giving the correct psychological knowledge, but not linking this to the scenario (stem) provided.
- Commenting about the stem but without linking it to relevant psychological knowledge.
- Not writing sufficient information to gain access to all the marks available.

Strategies you can utilise to improve your performance on application questions include:

- Practising engaging with scenarios until it becomes a familiar/automatic thing to do – you can even practise by reading media stories and trying to identify the 'psychology' in them.
- Using the **PEA** rule: (P) make a critical point (give the required psychological knowledge), (E) explain it (to show your understanding), (A) apply it (show how it occurs in the scenario/stem).
- When practising application questions use highlighter pens; one to highlight the knowledge and one to highlight the application – ideally there should be equal amounts of both colours.
- Practising application questions by working in pairs – one supplies the required psychological knowledge, while the other does the application part.
- Using the marks in brackets as an indication of how much to write.
- Using media/real-life stories to write your own application questions. This will give you an insight into the construction and requirements of such questions – you could even swap such application questions with other students to attempt and mark each other's answers.

## Question type four: research method questions

These involve questions that require focus on specific areas of research methods outlined in your exam board's specification. Ask your teacher if you're unsure what this contains. Research method questions will often be focused on scenarios and examples provided in the questions and so will generally require focus on these specific scenarios and examples to gain the marks available.

A quarter of the overall marks for the A-level will be awarded for research method questions. This includes 10% of marks for questions involving mathematical skills. These will not always require calculations (a calculator would be permissible), but can also include questions underpinned by relevant mathematical knowledge (for example knowing which statistical test to apply in a given scenario).

Although most research method questions will involve aspects of short-answer and application questions, they could also involve aspects of selection questions, research study questions and essay/long-answer questions – be prepared for all eventualities.

Research method questions can involve the following:

- Demonstrating specific knowledge and understanding of an element of the topic research methods, such as explaining what an independent groups design is.
- Providing evaluation (strengths and/or weaknesses) of an element of the research methods topic, such as giving a strength of an independent groups design.

- Applying knowledge and understanding to an element of research methods, such as explaining why a given scenario/example involves an independent groups design.

Common mistakes include:

- Not addressing the requirements of the question (e.g. giving a description, not an evaluation).
- Not writing/elaborating enough to gain access to all of the marks available.
- Using relevant knowledge, but not applying it to the specific circumstances, e.g. when the question says 'in this study' but only giving a generic answer.

Strategies you can use to improve your performance on application questions include the following:

- If a question tells you to 'make reference to the scenario provided' (or similar), then your answer would have to include information/examples drawn from the scenario provided to gain access to the highest level of marks.
- Using marks in brackets as a guide to how much to write/how much elaboration is required.
- Identifying where the marks are in your responses to short-answer research method questions. You can use the differently coloured highlight pens technique explained above to achieve this.

## Question type five: research study questions

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Research study questions will be specifically about research studies, either wholly or partly. These could be about named studies on the specification e.g. Milgram's obedience study, or they could be about studies in general, such as 'a study of memory' – you would then select which study to focus on in your answer.

Common mistakes include the following:

- A lack of necessary detail.
- Focusing on the wrong elements of a study.
- Using the study as a form of evaluation rather than describing the necessary features.

Strategies you can use to improve your performance on application questions include:

- Knowing the named studies on the specification in detail (if you're not sure what these are, your teacher will tell you). This involves their aims, hypotheses, methodology, results, conclusions drawn and evaluative points (strengths and weaknesses of the studies).
- For topic areas where there are no named studies, having a 'key study' that you know in detail (as for the named studies).

## Question type six: essay/long-answer questions

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For these questions, marks will be awarded for the quality of your answer, not the number of points you make, or how many studies you refer to.

- Essay/long-answer questions will generally require both descriptive and evaluative material, but can require just descriptive or evaluative material (this will be determined in the wording of the questions). They can also be framed as an application essay question, requiring description, evaluation and reference to information drawn from a scenario/stem.

- For example, the question ‘Outline two definitions of abnormality’ would only require descriptive material, while the question ‘Assess the effectiveness of drug therapy as a treatment of schizophrenia’ would only require evaluative material. But the question ‘Discuss the behaviourist explanation of phobias’ would require both descriptive and evaluative material’.

Common mistakes include the following:

- Not addressing the requirements of the question (for example giving a description when an evaluation is required).
- Not writing to the mark allocation – often too much description and not enough evaluation.
- Not linking material on issues, debates and approaches to the question.
- Irrelevant use of methodological points. For example, in a question requiring you to evaluate a theory where you have talked about a study that supports (or refutes) the theory, it wouldn’t be creditworthy to include evaluation of the study itself, unless such points were specifically linked to the question (commenting on the validity of the theory).
- Lack of organisation into paragraphs.
- Lack of specialist terminology.
- Lack of detailed elaboration/commentary.
- Use of unsubstantiated personal opinions.

Strategies you can use to improve your performance on essay questions include:

- Using relevant psychological terminology in answers to demonstrate a deeper understanding that will ‘elevate’ the quality of your answer to a higher mark level.
- Providing elaboration (some teachers refer to this as ‘commentary’) by using detailed points added to each other (and so are not just a succession of unconnected points) in a structured manner to show a high level of understanding and coherence. For example, giving several pieces of research evidence that compliment/reinforce/refute each other.
- You could also compare explanations/theories/therapies with each other to draw out the strengths and weaknesses of the explanation/theory/therapy being focused on.
- Using contextualised content (content that specifically addresses the question) involving issues, debates and approaches, placed at relevant points in your answer to illuminate the material being discussed and help elevate your answer to a higher mark level.
- Breaking down each element of your answer into separate paragraphs. There are marks awarded for organisation and structure, so this will help you to gain such marks.
- Only including methodological content that addresses the question. For example, don’t evaluate research studies quoted in your answer unless such evaluation addresses the question.

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# Revising A-level Sociology

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## Assessment objectives (AOs)

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When preparing for A-level Sociology exams, it is important that you are aware of the assessment objectives on which you will be marked, and that you understand how they apply to different types of questions and how to demonstrate them. These assessment objectives are the same for all sociology specifications, though the weighting given to each varies across specifications and papers, so do check your specification and also with your teacher.

### How do you know which AOs are required in a question?

Your teacher should be able to tell you which questions require which AOs to be demonstrated. Many questions, but not all, require all three. However, an easy way to tell is to look at the question stem and the command words used. These are identified for you under each AO below.

## AO1 Knowledge and understanding

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AO1 command words include 'explain', 'outline' and 'identify'. Virtually all questions in sociology exams require you to demonstrate AO1 by your use of sociological evidence. You need to learn, select and apply appropriate sociological evidence and demonstrate your understanding of how such evidence relates to the question.

## Types of sociological evidence

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### Sociological studies

Names! All sociology students know that one of the most challenging things about the subject is the number of names you need to learn. However, learning and using relevant named sociologists is vitally important.

- Tip 1: Create a 'study bank' for each topic you cover with some of the key studies you have been taught and a brief summary of what they are about and which issues they are relevant to.
- Tip 2: Try colour-coding your study bank – highlight the most important studies (or possibly those you already know) and start with them (green), then those you aim to learn, which will add range to your answers (amber). The final section could be the studies which are additional, you struggle to remember and/or you could get away without (red). Build up your revision and your confidence, focusing on the green studies first rather than trying to tackle everything at once.
- Tip 3: Map the studies in each topic and see if there are any overlaps, or any which you could apply in other areas. For example, some studies learned for the family, education, media or youth topics might work well in relation to social inequalities or crime. This obviously depends on which specification you are following and which topics you have covered. Make sure you are familiar with all your topics and how they may relate to each other. Your teacher should be

able to help you with this, or you could check the specification on your exam board's website. It is useful to identify some 'bargain' sociologists, whose ideas can be applied to several different topics and types of question.

## Sociological theories

- These are the foundations of your sociological knowledge and understanding. If you have a basic understanding of the main sociological theories, you will always have something sociological to say, whatever questions the exam throws at you.
- Make sure you are confident with the general approach to analysing social issues taken by the main theories, which include functionalists, Marxists, interactionists, feminists and postmodernists. Specific theories may vary between topics, but these five theories tend to be relevant to most topics.
- Even if all the studies go out of your head, being able to explain how the different theories would approach a particular issue should give you 'sociological resilience', and the confidence that you can always produce a sociological response.
- Theories are also a very useful source of evaluation – see more below.

## Sociological concepts

Concepts are ideas: terms developed and used by sociologists to identify or explain certain social issues. Examples of concepts you may have come across (depending on which topics you have studied) include the self-fulfilling prophecy, anti-school subcultures, beanpole families and cultural comfort zones. Like studies, concepts can often be applied across different topics (for example, the self-fulfilling prophecy could be applied in the education, youth and crime and deviance topics). Confident use of concepts shows the ability to write like a sociologist and use specialist language, which will be rewarded.

## Sociological research methods

Your knowledge and understanding in relation to research methods is assessed differently depending on the specification you follow, but the ability to explain and apply theoretical approaches to research – such as positivism and interpretivism – and to use methodological concepts such as validity, reliability to evaluate different research methods and processes is important for all sociology specifications.

- Tip: create a glossary of methodological concepts – there are a lot – to help you learn them. Make sure you can split them into those associated with a more quantitative and positivist approach, and those which relate more to qualitative data and interpretivism.

## AO2 Application

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This is assessed in different ways, depending on the question. It may be related to the way in which you have selected and applied sociological evidence to address the question asked. Always try to link back to the question regularly and stay focused. AO2 is not usually directly referred to in question stems, but it should be taken as read that any sociological evidence you use must be applied directly to the question.

All sociological specifications require the interpretation of source material in some of the questions, and these questions will focus heavily on AO2. Such questions may use directions such as 'applying material from the item...' or 'using the source...' or 'with reference to the item/ source...'.



- OCR: Section A of all three papers includes source material.
- AQA: Some questions using items/source material in each of the three papers.
- WJEC/ Eduqas: Source material is used in Papers 1 and 2.

In all three specifications, source material is used in research methods questions (Papers 1 and 3 for AQA and Paper 2 for OCR and WJEC/Eduqas). They may ask you to evaluate a piece of research, a particular method or to analyse some data, for example.

For other source-based questions you may be required to respond to written or image-based source material and use this, along with your wider sociological knowledge to address a particular question.

- Tip: Ensure you refer directly to the source material (identifying which source you are using if there is more than one). However, avoid simply quoting from or recycling the material in the source. You need to respond to it, show how you have interpreted it, and how it links to other sociological ideas you know about. For example, if a source refers to an idea or concept, or presents a particular view, try to explain this in your own words and link it to a sociological study or theory you have learned which present a similar analysis. Make sure you stay focused on the question.

## AO3 Analysis and evaluation

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This is not necessarily assessed in all questions but tends to be important in the higher tariff essay-style questions which require you to create a debate.

AO3 command words include 'evaluate', 'assess', 'discuss', 'analyse' and 'to what extent'. If you see one of these words or phrases in a question it should remind you that you need to present some evaluation in your answer.

- Tip: Take a highlighter into the exam with you and highlight command words for each question, especially any relating to evaluation, to remind you that you need to present some criticisms.

Evaluation is seen as a higher-order skill and is one which many students struggle with. It can take different forms:

### **Specific evaluation which directly criticises a previous knowledge point**

For example, presenting a weakness in the argument given.

- This type is potentially simpler – though it may involve learning specific strengths and weaknesses and can become a bit formulaic.
- An example might be questioning the relevance of a study which is dated. If you do this, ensure you develop your criticism by explaining what has changed and therefore why the study may no longer be applicable.
- You could also evaluate using examples which apparently contradict the explanation or view being put forward – be specific.

### **Theoretical evaluation which challenges the whole approach of the view presented by presenting an alternative theoretical perspective**

For example, using Marxism to challenge the functionalist view of education or crime and deviance.



- This type of evaluation is potentially more sophisticated, and should not require extra learning, providing you have a basic understanding of the alternative theoretical views on any issue (see above).
- However, the danger with theoretical evaluation is that you merely describe alternative views in a list-like way, rather than using alternative theories to directly evaluate/challenge the view in the question. Examiners often refer to this as 'juxtaposition' and it tends to attract fewer marks than more focused evaluation.
- Students are often tempted to present everything they know about all the other theories on the specific topic being assessed, and to forget the focus of the question set. Try not to fall into this trap – keep focused on the view in the question and highlight exactly why alternative theories would disagree.

## Timing

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An important issue for sociology student in exams is timing. Quite often the higher-tariff questions come towards the end of the exam paper, and students who run out of time will sometimes lose a lot of marks by missing out an entire question.

- Tip 1: Find out from your teacher (or using past papers) what the total time allowed is for each exam paper and how many marks each is worth. Then work out how long you should be spending on each section, and each question. If you qualify for extra time, then you need to factor this in. Remember that some sections require the reading of source material, so this should also be taken into account.
- Tip 2: Keep moving! A lot of the marks on higher-tariff questions are gained in the first few paragraphs, so adding in those final paragraphs may not gain you that much extra, whereas moving on to another question and attempting it will gain you more. Never to miss a question out completely – you can often pick up a few marks even with just a paragraph if you are running out of time.
- Tip 3: Make sure you don't miss out the evaluation. If you leave the evaluation/criticisms to the end of an extended essay, and then happen to run out of time, you will lose a lot of marks. Try evaluating as you go along, so that even if an essay is not completed, you will gain some marks for all the AOs.