



A level Biology, Chemistry and Physics FAQs

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What's changing, and when?

When are A levels for science subjects changing?

New specifications for AS and A level Biology, Chemistry and Physics are being taught from September 2015 onwards, with the first AS examinations in summer 2016 and the first A level examinations in summer 2017.

How much change is there in the new A levels?

The subject criteria for A level Biology, Chemistry and Physics remain mostly the same, with only minor changes; this means there are limited changes to the content of the specifications. There are, however, changes to the [role of the AS qualification](#), [assessment of practical work](#), and the [assessment model](#) for external exams.

How can I get copies of the final specifications?

You'll find specifications and Sample Assessment Materials (SAMs) on each of the specification webpages. You can also order copies by following the link to our 'Fast Shop' through the subject webpages for each specification.

Why is Edexcel now offering two Biology specifications instead of just one?

Biology at A level is a mix of many different disciplines, from biochemistry, physiology and anatomy, to ecology, microbiology, and genetics. Our two Biology A level specifications give students the same core coverage of key biological knowledge, but with different additional emphases. For instance, Biology A (Salters-Nuffield) contains more ecology, while Biology B focuses more on microbiology. The two specifications also choose different examples to illustrate particular areas of biology: when covering the physiology of an organ system, Biology A (Salters-Nuffield) uses the heart as an example, whereas Biology B uses the kidney. Lastly, the Biology A course is structured to be delivered using the popular Salters-Nuffield teaching materials, although it can also be taught using a concept-based approach.

How can I let you know I'd like to teach the new Edexcel AS and A level qualifications?

You can register your intention to offer our new qualifications by completing a short form on the [specification pages](#).

The relationship between AS and A level

Will AS still exist in science subjects after 2015?

Yes – AS will still exist, but it will now be a stand-alone qualification that will not contribute to the final A level grade. For students who take the full A level, their A level grade depends solely on their performance in the A level papers at the end of the course.

Can students take AS exams and then go on to A level?

Students can take public AS examinations, as they do now, and proceed to A level. However, their A level grade does not include results for any AS examinations sat.

How does the standard of the new AS level compare to the current specifications?

The intention is that the standard of AS remains broadly the same – halfway between that of GCSE and that of A level. There are some differences between new AS papers and those from the previous specifications: for example, the new AS papers include questions on mathematical skills. However, the new AS cover much the same content and the two written papers are of a similar length and number of marks to the current AS papers.

How does the standard of the new A level compare to the current specifications?

Ofqual has indicated that the new A level should be comparable in standard to the current A level. The revised A level still covers similar subject criteria; although there are now requirements to assess mathematical and practical skills within written papers. Please note: in the new specifications, students sit papers of 'A level standard' which will combine questions of the standard of current AS and A2 examinations in the same paper.

Is AS co-teachable with A level?

We've designed our AS and A level specifications to be fully co-teachable. This means that the AS specification contains the material that would usually be delivered in the first year of the A level course.

Do we have to teach the A level with the AS material first?

You can teach the topics in the order you prefer; however, some topics will rely on prior knowledge gained from other topics. You can either teach the AS material, then the remainder of the A level, or you can combine similar areas of content across both years into larger blocks of teaching to create a more 'linear' approach.

Do all students have to take public AS examinations?

No – students who are taking the full A level course do not have to sit public AS exams.

My students are going to take the full A level, and I'd like them to sit AS as a 'mock' halfway through the course. Is this possible?

Yes, your students can sit the public AS exams. However, it's important to note that any grades students achieve in the public AS examinations will need to be declared as part of the UCAS process. Students are also able to sit the AS paper as a mock examination (perhaps at the start of Year 13), using [our Mocks Analysis service](#).

What's Mocks Analysis?

Mocks Analysis is part of our [ResultsPlus service](#), which gives you feedback on student performance in Edexcel question papers. With the Mocks Analysis service, you can use a past paper as a mock exam, upload your students' marks to ResultsPlus and receive the same level of analysis, as though your students had sat the paper in the live examination series.

If students do sit the public AS exams, can we wait until results and then cash-in the grades for some students at this point?

No – the new AS is a linear qualification, so candidates sitting AS will be entered for the qualification, and will sit both papers and be issued with an AS grade based on their results. This is the case as the AS qualification no longer consists of 'modules'. This rule will be the same across all Awarding Bodies, not just Edexcel.

What is the latest date for making AS entries?

The JCQ deadline for entries for summer examination series each year will be 21st February. You can, of course, make late entries, but these may incur a late-entry fee.

If a student has an AS grade and an A level grade, can both results count towards UCAS points?

No – the courses will discount against each other, so UCAS offers based entirely on points would have to use either the AS points or the A level points.

Question papers

Will there only be one set of sample question papers?

Each subject web page has a set of Sample Assessment Materials, which have been accredited for AS and A level. An additional set of specimen papers will be provided, through the web pages, in autumn 2015.

What changes will I see in question papers?

In our Sample Assessment Materials, you'll still see a range of question types, from multiple choice to longer open-response questions. New additions to the A level papers include questions that cover aspects of practical work and those that will assess the use of mathematical skills within each science (10% in biology, 20% in chemistry and 40% in physics).

Some of your question papers assess specific topics, while others assess all topics. Why is this?

As you can see from the assessment objectives common to all Awarding Bodies, we need to find opportunities for candidates to show the knowledge they have learned in the course, as well as opportunities to demonstrate how well they can apply that knowledge. Our topic-based papers (at AS and Paper 1 and Paper 2 at A level) will allow candidates to show depth of knowledge and understanding. The topic split also gives candidates a focus for revision. However, it is also a vital skill that candidates can draw together different topics – and this is the strength of Paper 3 at A level. We've also made sure that Paper 3 uses practical work to help draw together ideas and concepts, so that Paper 3 isn't just about theory.

Do you have multiple-choice questions in your assessments?

Yes – we believe that using multiple-choice questions ensures that we can assess a broader range of content across each question paper, to make it a fairer, more balanced test of students' knowledge. We've avoided using multiple-choice questions, worth only 1 mark, that take students several steps to work out an answer. We also don't want too many multiple-choice questions, as A level should also test the ability of students to write their own answers. So, we've used up to 10% of multiple-choice questions in our exam papers.

Why is there so much assessment at A level?

The subject criteria for A level, developed by Ofqual after consultation, stipulate a minimum of 6 hours of assessment for A level, spread over a maximum of three question papers. In common with most other Awarding Bodies, we've chosen not to increase above 6 hours of assessment time.

Where can we find clear examples of the maths skills that will be assessed in AS?

Appendix 6 in the specifications gives guidance on the maths skills that can be assessed, as well as giving some examples of where these skills can be addressed when teaching the subject.

Will there still be an A* grade and will it be awarded at AS and A level?

Our understanding is that, as is currently the case, A* will be available for A level, but not for AS. As the current rules for awarding A* will not work with the new A level, the new specification will need new criteria for the award of A* (which is likely to be similar to the rules used for GCSE).

Assessing practical work

How is practical work assessed in the new specifications?

'Hands-on' practical skills will be assessed by teachers and reported separately to the A level grade as a measure of practical competency. This assessment will be based on core practicals which we recommend you complete throughout the course. In addition, there will be assessment of some practical skills in written exam papers – so that the new A levels are 100% externally assessed. Further details on how the measure will be monitored, please look at the questions below.

For the latest information, please visit the subject pages for each specification.

Is this system just in place for Edexcel A levels?

This system is part of the new subject criteria and is the same across specifications for all awarding bodies.

Your specification contains 'core practicals' – what are they?

All A level specifications will now contain a minimum of 12 of core practicals, which you must complete whilst teaching the course. These core practicals are designed to cover the skills and techniques, mandatory for A level students, that appear in Appendix 5c of the subject criteria and our draft specifications.

Will students have to complete all the core practicals?

The core practicals are part of the specification content, so students will be asked questions about these practical activities as part of their written examinations. In addition to this, completion of a minimum of 12 core practical activities will be required in order to pass the teacher-assessed practical competency.

Why have the Edexcel specifications got more than minimum number of 12 core practicals?

Universities and teachers have told us that practical work should be at the heart of the new specifications. When we wrote our specifications, we simply added key practical activities throughout the specification, at places that we felt would help with teaching and learning of key concepts. We also wanted to make sure that the core practicals gave plenty of opportunities for your students to build their confidence as scientists and allow them to demonstrate how they've developed practical competency.

Also, as students may be away for some practical sessions, having more than 12 core practicals means that even if a student misses one or two practical sessions, they will still meet the minimum requirement for 12 pieces of practical work without additional measures having to be put in place.

What if I want to change one of the core practicals?

We've mapped the core practicals to the skills that they cover, so you can change to an alternative practical if you wish to – as long as students develop competency in all the skills and techniques specified.

How is practical competency graded?

The grade – 'Pass' or 'Not Classified' – will be reported alongside the A level grade, but does not affect the A level grade. Teachers make the judgement whether a student has passed, using a series of competency statements.

Is the practical competency measure simply achieved by doing all the core practicals?

Awarding Bodies have been working with Ofqual to finalise arrangements for the practical competency, which will involve teachers applying the CPAC criteria to students' practical work. You'll find more information about the evidence required to validate decisions, and the monitoring visits to centres [on our website](#).

Will the practical competency form part of UCAS offers?

That will be a decision for universities to make, but professional bodies involved in science education (Society of Biology, Royal Society of Chemistry, Institute of Physics) are strongly recommending that universities should ask for a 'pass' in the practical competency, as well as an A level grade.

What will the written questions testing practical skills look like?

Examples of what questions testing practical skills could look like can be found in the Sample Assessment Materials. Another good place to look for questions of a similar type will be Paper 3B (AS) and Paper 6B (A2) of our current International A level specifications.

What sorts of practical skills can you test in written papers?

A wide variety of skills can be assessed in written papers; these are all listed in Appendix 5a of the specifications. These could include (but are not limited to): graph plotting, data analysis, commenting on method/data collected and calculating errors.

Will students need to learn the methods and results for all the core practicals?

There is a limit on the number of marks on a question paper that are awarded for simple recall. So, although we could ask for recall of a method for a core practical, questions are more likely to ask students to show their skills in the context of core practical, or other practical, scenarios.

We want to do more practicals – where can we find suggestions?

There are some additional suggested practicals mentioned in the introduction to each topic in the specifications.

Other Awarding Bodies seem to have different arrangements for practical work. Why is this?

Although Awarding Bodies have made separate arrangements for practical work, the assessment of practical work is the same across all accredited A level specifications. All specifications must cover the 12 practical techniques (Appendix 5c); all must assess the competency against the same skills (CPAC – Common Practical Assessment Criteria); and all must have the same procedure for moderation/authentication. But we can choose different core practicals – and different support packages for practical work.

What do universities think about the new A level courses, especially with regard to practicals?

Universities have been fully involved with the development of these new specifications, and our university advisory group were very positive about the revised specifications and Sample Assessment Materials. In terms of future decision on UCAS offers, this is not something we can answer, as each university will have its own policies. However, universities know what the new system for practical work will be, and – if they want to ensure that undergraduates have done a range of practical activities – they will have to ask for the practical competency measure from applicants.

Supporting you and your students with the new A levels

What support will you be offering teachers for the new specifications?

Based on what you've told us, we've explored how we can give you the support you need to plan, teach and assess our new AS and A level specifications with confidence. We've also worked with experts to design materials that will help you and your students overcome those critical barriers to success in science. You'll find all of these on the 'Teaching Support' section for each specification.

We will also run free and paid-for training events to support you in delivering the qualification and focusing on specific areas such as practical work and assessment. For more details on these, visit the 'Training and Events' section on each of the specification pages.

How can I find out the latest information on the specifications and support available?

As part of our support promise, we want to make sure you can keep up to date with the latest news our new AS and A level qualifications: all the details on our new courses are available on our website, and you can be the first to hear of any developments – simply [sign up to receive email updates from us](#).

Got a question that's not on the FAQs yet?

Just ask our expert science team, by emailing
TeachingScience@pearson.com.

