

BOURNE GRAMMAR SCHOOL CHEMISTRY DEPARTMENT

"A LEVEL SURVIVAL GUIDE"

2020/21

THE COURSE: WHAT YOU NEED TO KNOW

1. The Course

We follow **OCR Chemistry A** (course code: H432).

More information on the course can be found at: www.ocr.org.uk

2. Teaching

For AS, you will have two teachers. You will be with one teacher for **4 periods per fortnight** and they will teach the "Inorganic Chemistry" topics (Specification sections 2.1, 2.2 and 3.1). You will then have a second teacher for **5 periods per fortnight** and they will teach you the "Organic and Physical Chemistry" topics (Specification sections 3.2, 4.1 and 4.2). Each side is split into smaller topics, varying from 5 to 15 lessons of content. At the end of each topic, you will sit a short assessment to recap the material and test your understanding of it. You will carry out practical tasks (PAGs) in both sides of Chemistry as part of your lessons (more on this in "Practical Endorsement" below).

3. Assessment

You will be entered for the final exams at the end of Y13 (May/June 2022). There are three exams - as outlined in the table below. The Unified Chemistry exam will contain topics from **both teachers**. All three papers contain multiple choice questions..

Exam	Time	Marks	Percentage	Content
Periodic Table, Elements & Physical Chemistry	2hr 15min	100	37	Inorganic Chemistry
Synthesis and Analytical Techniques	2hr 15min	100	37	Organic Chemistry
Unified Chemistry	1hr 30min	70	26	All content
Practical Endorsement	Pass/Fail – teacher assessed over two years			Required Practical Tasks (PAGs)

4. Practical Skills Endorsement

Your practical ability in Chemistry is assessed through the “Practical Skills Endorsement” (PAGs). This is assessed by carrying out a series of relevant and useful techniques in the lab’ in lesson time. These are not under exam conditions, so your teacher will be able to help you perfect the various techniques – many of which are used in industry and at university today. You will complete **7 tasks** (known as PAGs) in Y12, with **another 7** in Y13. At the end of A2, the PSE is awarded as a **pass/fail** endorsement alongside your final exam grade. Universities will be looking at the PSE for students who wish to go on to study science or medicine.

Key Facts about the Practical Skills Endorsement

- You **must** attend the designated practical tasks (your teacher will give you notice of these) – failure to do so will mean additional catch-up time, or *possibly* failing to meet the standard required
- The PSE **does not** affect your final grade – this is based entirely on the final exams
- Tasks are not carried out in exam conditions and they are not marked on the “correct answer” – your teacher will assess your ability and your understanding

5. Assessing Practical Skills: Exams and Lab’ Books

Your understanding of chemical techniques will be tested in the exams. Your teacher will go through plenty of examples over the course and these questions will be designed to test your understanding of how each practical skill you learn works and how it can be adapted or applied to new situations.

Over the two years, you will keep a “Lab’ Book” with notes, tables, graphs and questions like those you will see in the exams. Some tasks do not have marked questions, but require you to research or design an experiment. Lab’ Books are provided and when not in use, will be kept in school.

TRANSITION: WILL I MAKE IT?

1. The Entry Criteria

As well as the school’s entry criteria, you will need a **grade 7** in Chemistry (triple award) or **grade 7:7** in Science (double award) as well as a **grade 7** in Maths.

2. What If I Did Double Award?

A Level is designed to follow on from Double Award, so you should be okay. However, you will find that those who did Triple Award have a slight head start on some topics. Invest time in revising Quantitative Chemistry and Crude Oil from GCSE and it may also help you to have a look at the topics Analysis, Organic Chemistry and Energetics.

DO I NEED CHEMISTRY?

If you want to study medicine, engineering, veterinary science, dentistry, natural sciences, marine biology, biology or similar subjects at degree level, many universities will require a high grade in A Level Chemistry. Consider your future career plans carefully when making your choices.

A LEVEL: IS IT REALLY SO DIFFERENT?

Yes.

It really is! At GCSE, you will have been provided with a lot of revision activities, revision time in lessons and so on. At A Level, a lot of this is simply not possible due to the huge amount of content we have to fit in. Below are some helpful hints on how to organise your workload (which will be **much** larger!) and how you can get ahead and stay ahead.

1. Notes

You will have to make notes. Unlike GCSE, you may not be told “Write this down...” – you are expected to use your initiative. Whilst most notes will still be made on the board, be aware that your teacher will often talk-through problems or concepts and you should always be on your toes and ready to jot down anything that seems important!

2. Exercise Books

Exercise books are provided. You will get **three** of them in Chemistry:

- **Blue A4 book:** for class notes in Inorganic Chemistry
- **Red A4 book:** for class notes in Organic & Physical Chemistry
- **Yellow A4 book:** for neat revision notes made throughout the year

The **yellow book** system is an important way of consolidating as you go. Those who do best are often those who work through their notes during the year, rather than leaving this to the last minute as study leave looms!

3. Textbooks

You will be provided with a textbook to use at home and in lessons. You must bring it to lessons and should use it when writing up your notes. You will have to return the book at the end of the course, so please do not write in it.

If you wish to buy an additional textbook from another publisher, several are available. **However**, we spend a *lot* of time selecting the *best* textbook and other publisher's books do contain different wording or examples which may just add confusion. Use any additional textbook or revision guide with care!

4. Organisation

At GCSE you can “get away” with a certain amount of disorganisation, because the content is delivered at a slower pace and is less challenging than A Level. From now on, organisation will be key to your success!

You will need to keep on top of your notes, homework and revision. More content will be delivered in each lesson and missing a lesson or leaving your revision notes for a week will mean a lot of time spent on catching up!

To help you make the transition to A Level, your teacher will conduct spot-checks on organisation throughout the year. This may involve any or all of the following:

- Collecting and marking yellow books, homework and Lab' Books
- Random checks of red/blue books in lessons to ensure notes are being made properly
- Equipment checks in lessons, including textbooks, calculators etc.

OKAY, NOW I'M READY: WHAT TO DO NEXT

1. Specification

The Specification is your best friend and a greatly undervalued help in passing A Level Chemistry. The very first thing you should do (in fact, you should do it **now** before you read any further) is **print it off** and keep it with your notes.

Your teacher will set this as a task for you to do in the first few lessons and you should keep a copy in your **yellow book** revision notes. It may also help you to bring it to lessons and keep track of where you are. If you are doing that, you can't go wrong – the Specification is a list of everything you will need to know for the exams!

<http://www.ocr.org.uk/Images/171720-specification-accredited-a-level-gce-chemistry-a-h432.pdf>

2. Equipment

Exercise books and textbooks are provided. You will need to bring (to each lesson):

- Pens (ideally a few colours – at *least* blue, red and green), pencil, eraser, sharpener and ruler
- Scientific calculator (we recommend the **Casio fx 85gt plus**)
- Highlighter pen

3. Revise GCSE Chemistry and GCSE Maths

If you would like to get ahead and make your first few weeks at A Level as easy as possible, you should go and revise the following GCSE Chemistry topics:

- Fundamental Ideas and Quantitative Chemistry - Inorganic first topics
- Crude Oil and Organic Chemistry (TA only) - Organic first topics

You should also practice some maths skills, such as:

- Weighted averages
- Rearranging equations
- Algebra

AFTER CLASS: WHAT SHOULD I DO OUTSIDE THE LESSONS?

There are lots of different things you can do to help your progress at A Level. Here are a few ideas.

1. Study Periods

The clue is in the name! Use these timetabled periods wisely, they are a precious resource. Plan ahead, bring your yellow book, textbook, iPad/phone and your headphones. Get your head down and get some work done, ignoring distractions and procrastination! These silent study periods are a great way to keep on top of your workload!

2. Study Groups

The most successful A Level students help each other along. Set up a group and ask each other questions, share tips and pass on useful resources you find. Meet up to get some revision done in an informal and enjoyable atmosphere.

3. Go Online – Useful Revision Sites

There are lots, though some should be treated with care (like all internet sources). Beware that some of these may still refer to the previous specification. Here are a few we like:

ChemGuide	www.chemguide.co.uk
Doc Brown	www.docbrown.info
RSC ChemNet	www.chemnet.rsc.org

4. Ask Questions

Lessons are **not** lectures. If you don't understand something, ask. If you want to know more about something, ask. If you ask questions, you will reinforce your understanding. If you sit there and keep silent, you will miss out.

5. Answer Questions

Teachers ask questions to help you broaden your understanding, test you and find out what you do and don't know. Sitting silently *implies* full understanding. Try to answer *at least* one question every lesson. And don't worry about being wrong – you will often be right anyway, but if you are wrong then you can learn from your mistake!

6. ASK FOR HELP!!

Your teacher is there to help you. However, **you have to approach them** and ask for that help.

HINT: Being polite and organised with your request will make teachers a lot more willing to give up *their time* to help you out!

7. Enjoy Yourself

You are about to start learning the real Chemistry that controls the world around you. Everything from the coffee you drink in a morning, the petrol in your car, the speaker in your headphones, the ink on the textbook pages, the paracetamol you take for the headache you've got (from revising too much, of course!), the adrenaline that makes your heart beat faster when something in the lab' goes "bang" – all of this is down to Chemistry.

You will learn how to make simple (and some more complex) molecules, how to control chemical reactions, how to measure the correct dose of a drug, why your deodorant or hairspray no longer contains CFCs and why drinking alcohol causes a hangover – no matter what you do to prevent it!

GREAT EXPECTATIONS: GETTING ALONG AT A LEVEL

1. Missed Lessons

Missing a lesson at A Level means missing out on lots of content. For a planned absence, carefully consider the impact this will have on your studies. If you really can't avoid missing a lesson, see your teacher as soon as possible. If you have missed a lesson for *any* reason, here are the Dos and Don'ts of catching up:

DO go to see your teacher in person (emailing it in looks bad, unless you're physically unable to be in school)

DO be polite – remember your teacher has already taught the lesson and it is **your responsibility** to catch up

DO act quickly – go to see your teachers **as soon as you are back in school** (do not leave it until the next lesson)

DON'T ask for a copy of the notes – most A Level lessons will involve notes discussed and then written on the board. Copy notes from a classmate before you seek any clarification or help from your teacher.

DON'T just ignore it – one missed lesson could be a disaster at exam time and throw you off for the rest of a topic

If you happen to miss a compulsory **Practical Skills Lesson**, you will have to complete some additional catch-up work in order to pass the skills covered in that task. PAGs take priority over trips, visits, lectures etc. that you may be attending outside school. If you are organised, this shouldn't be a problem for you!

2. Homework

It happens. Do it, do it well and do it **on time**. You should have had plenty of chance to practice this by now!

3. Punctuality

Your teachers write your UCAS references. Comments on punctuality will be included. Being a Sixth Former allows you some additional freedoms and privileges – wandering in late to lessons is **not** one of them!

4. Safety

You finally get to use the good chemicals! With that comes the need to work safely in the lab'. Irresponsible, reckless or dangerous behavior in the lab' can lead to serious injury. Your teacher will discuss safety with you at the start of the year and before each practical. Any students endangering themselves or others will fail the "Safe Working" aspect of the PSE, resulting in them not being endorsed. It could also result in you being removed from further practical work.

AND FINALLY...

Key Points This Year

Timescale	Task
October 2020	First Practical Skills Tasks (or PAGs) to be completed
Easter Term 2021	Provisional UCAS Exams (a Y12 Mock exam)
June 2021	Final UCAS Exams – used to determine UCAS Predicted Grade
January 2022	Y13 Mock Exams
May/June 2022	Final Exams

Good Luck

We hope you find this booklet helpful. You have got your copy of the Specification and we are here to help and guide you through your A Levels. Enjoy your time studying Chemistry at Bourne Grammar.

Mr Marsden (Subject Leader: Chemistry)

Mrs Woolf (Subject Leader: Science)

Mr Mitchell

Miss Smallshaw

Mr Harris