

KS3 Chemistry Pre-Recorded Course

Overview

My key aims in the KS3 Chemistry course are to build engagement and enthusiasm for Chemistry, as well as academically rigorous foundations to help with the transition to IGCSE. I regularly include live demonstrations in my lessons to help give that sense of wonder that hooks students into a love of Science. I also include short video clips to illustrate more fiery practicals that I can't do from my home! Much of the recommended follow up work involves kitchen Chemistry experiments that can be easily carried out at home.

Many of my learners join me at KS3 with the aim of continuing on to take IGCSE Chemistry. While it is not essential to study KS3 Chemistry in order to study IGCSE, it helps to put good foundations in place that will make the transition to IGCSE learning less challenging. The KS3 course that I teach is very much a pre-IGCSE course, which does aim to stretch and challenge and push beyond the confines of a traditional KS3 course, where appropriate. Students should also be studying KS3 Maths alongside Chemistry, as there is a significant mathematical component to the subject (20% of the marks at IGCSE), so it is important that we include practice of appropriate mathematical skills within the KS3 course, in order to build the necessary skills.

In terms of age, I have Year 6 equivalent students taking KS3 Chemistry through to those in Year 9. For younger students it is worth bearing in mind where this course will lead to in terms of progression to IGCSE learning, as I would not generally recommend starting IGCSE Chemistry before Year 9 equivalent level. However, I am now offering an extended 2-year IGCSE course aiming at the November sitting (E.g. starting September 2022 aiming at November 2024) to cater for my slightly younger students, who will benefit from extra maturity and more chance to develop their Maths skills. So there is some flexibility in this for more advanced students who are ready for the extra challenge that IGCSE Chemistry brings.

KS3 Chemistry courses in schools are often heavily practically based. In designing this course, I have thought carefully about which aspects of typical KS3 courses are most important to teach in terms of smooth progression to IGCSE Chemistry, but also which topics lend themselves to online teaching, without being able to have a practical focus to classes. Without the limitations of a school curriculum or working to an exam, there has been the freedom to create an innovative course that also embeds the key skills needed for later success at IGCSE. It is a course where the development of skills is as important as the coverage of content. To support this, there are no topic tests, so we really can focus on the joy of learning (before things get rather more serious at IGCSE).

I have also sought to ensure that we cover relevant environmental issues within the course. The IGCSE Chemistry course often does not go into as much detail on these, in comparison to other GCSE specifications, so the KS3 course provides an opportunity to explore this in more detail. I believe that understanding some of the big issues that students will need to contribute to over the coming years, should be a key feature of any Science education. Aspects covered include climate change, carbon footprint and life cycle assessment, pollution and acid rain, waste water treatment and water purification.

What is included in the course

- 36 lessons teaching the course content through interactive videos, which are designed to take around an hour when paused for activities.
- 5 additional topic summary tasks, to encourage review and understanding of each topic.
- Workbook style notes for each lesson with detailed topic notes and activities to complete during the video lesson.
- Optional follow up work for each lesson, which is often practically based, or otherwise aimed at extending learning through links to other resources. Where there are specific answers, mark schemes are provided.
- Regular self-marking quizzes.

The course is aimed to be taken over an academic year, but can be taken over longer. Course access is for a year and a half in the first instance (to allow for over-run on an anticipated one year course) – but if you need to extend it e.g. to two years then just drop me an email and I can do that for you. These lessons can be done at any time, so give flexibility in learning.

Why choose a CanDoChem course?

My vision at CanDoChem is to enable all students to access a top-quality Chemistry education, that will engage and enthuse them and help them to realise their potential. Chemistry is a conceptually challenging subject, where specialist teaching makes all the difference in terms of both helping students to flourish and really understand the subject. I am equally passionate about both teaching and Chemistry, and the progress of every student genuinely matters to me. My courses are taught and resourced in such a way to ensure that students with SEND are set up for success and the excellent teaching practices benefit all learners.

I am a former Head of Chemistry with fifteen years of teaching experience. I spent the first twelve years teaching in UK schools and for the last three years I have been an independent online Chemistry educator, working with many home educated students. I teach all of the courses offered by CanDoChem and have written / produced the accompanying resources. I also teach IGCSE and A Level Chemistry, so right from KS3, I ensure that good foundations are put in place to allow smooth transitions to learning at a higher level.

I have a PhD in Chemistry from the University of Cambridge, so am (mostly) able to answer the challenging questions that my students like to throw at me! I also have a PGCE and a Masters in Education, from Cambridge. My educational expertise means that I am a very reflective teacher, who excels in simplifying concepts and building understanding in a step wise manner, which helps all students.

Trying out a lesson

If you would like to try a lesson to check that the course will suit your needs, then you can access the first lesson on my course site here:

<https://courses.candochem.com/courses/ks3-chemistry>

Signing up for the course and costs

The total cost of the course is £100. You can purchase it via my online course site:

<https://courses.candochem.com/courses/ks3-chemistry>



Suggested KS3 Course Schedule

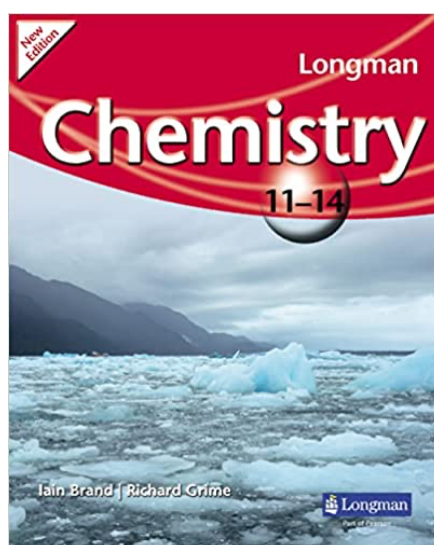
Half Term	Lesson Number	Title
1	1	Hazard and Risk
	2	Apparatus and Units
	3	Measuring and Recording Data
	4	Tables and Graphs
	5	Investigations I
	6	Investigations II
	7	<i>Topic 1 Summary Task</i>
	8	States of Matter I
2	9	States of Matter II
	10	Melting and Boiling points
	11	Chemical and Physical Changes
	12	<i>Topic 2 Summary Task</i>
	13	Word Equations
	14	The Periodic Table
	15	Element Symbols and Compounds
3	16	Naming and Formulae
	17	Dissolving
	18	Solubility Curves
	19	Separating Mixtures I
	20	Separating Mixtures II
4	21	<i>Topic 3 Summary Task</i>
	22	Acids and Alkalis
	23	Acids, Bases and Neutralisation
	24	Reactions of Acids and Bases
	25	Acid Reactions
5	26	<i>Topic 4 Summary Task</i>
	27	Metals and Alloys I
	28	Metals and Alloys II
	29	Metal Reactivity
	30	Displacement Reactions
	31	<i>Topic 5 Summary Task</i>
	32	Cooking Chemistry
6	33	Food Additives and Packaging
	34	Colour Chemistry



35	Water Chemistry
36	Waste Water Treatment
37	Earth Science
38	Rocks
39	Atmospheric Chemistry
40	Carbon Chemistry
41	Structure of the Atom

Text Book Recommendation

It is absolutely not essential to buy a text book for KS3 Chemistry. Everything that you need is included within the course notes and I do not follow the teaching order of any particular book. I do however, give text book pages where relevant, as a reference within the course for students who might like to read around the topic. If you do want a copy of this text book it is: *Longman Chemistry 11-14 – Ian Brand and Richard Grime*





Terms and Conditions

- The video course includes 1 week cooling off period after the start of the course, during which time I will provide a full refund if you do not wish to continue with the course. After that time, courses are non-refundable.
- While course access is for a year and a half as the default, I am happy to extend this to two years if needed.
- Access to resources including notes and videos should not be shared with anyone outside your household.
- Any suggested practical work should be supervised by a responsible adult, and is carried out at your own risk.



CanDoChem Privacy Policy

My contact details

Name: Kate Nickson, CanDoChem Ltd.

E-mail: candochem@gmail.com

The type of personal information I collect

I currently collect and process the following information:

- Name, email addresses and phone numbers for parent(s) / guardian(s)
- Names and ages of students
- Email addresses of students (when supplied)
- Student SEND / relevant medical information
- Any other relevant background information about students provided
- Copies of student work
- Student achievement data e.g. topic test scores, mock results

How I get the personal information and why I have it

Most of the personal information I process is provided to me directly by you for one of the following reasons:

- To allow me to make contact with you to keep you updated on student progress.
- To enable me to teach your child effectively, with knowledge of anything that is likely to impact on how they learn, or specific difficulties that they may face.
- To enable students to log onto Google Classroom and my course site to access learning resources.
- From student work in classes / tuitions on the online whiteboard to enable me to help them practice application of knowledge to answer questions, build understanding, as well as assessing where further work may be needed.
- From student work submitted on Google Classroom in order for me to assess their attainment and provide feedback.

I use the information that you have given me in order to:

- Provide access to teaching resources.
- Plan effective teaching strategies.
- Assess student understanding and provide feedback on current attainment and targets to work on in order to improve understanding.
- Liaise with parents / guardians.

I may share this information with exam centres if needed for Access Arrangement applications or for references / predicted grades for school / college / UCAS applications. I will only do this if you have specifically asked me to do so and will never share any information that I hold without your knowledge and permission.

Under the UK General Data Protection Regulation (UK GDPR), the lawful bases I rely on for processing this information are:

(a) Your consent. You are able to remove your consent at any time. You can do this by contacting candochem@gmail.com

(b) I have a contractual obligation.

(c) I have a legitimate interest.

How I store your personal information

Your information is securely stored.

I keep all information provided, including copies of student work and progress data until exam results are published. Within 1 month of this, giving me time to check that the information is no longer needed e.g. for any students wishing to do resits, I will then dispose of your information by deleting any copies of data held on my computer system e.g. mark books and contact details. I also delete the Google Classroom folders, copies of whiteboards and Classkick rosters, which store copies of student work. If students are not working towards an exam, then I will delete all data, as listed above, within 1 month of them ceasing tuition.

Your data protection rights

Under data protection law, you have rights including:

Your right of access - You have the right to ask me for copies of your personal information.

Your right to rectification - You have the right to ask me to rectify personal information you think is inaccurate. You also have the right to ask me to complete information you think is incomplete.

Your right to erasure - You have the right to ask me to erase your personal information in certain circumstances.

Your right to restriction of processing - You have the right to ask me to restrict the processing of your personal information in certain circumstances.

Your right to object to processing - You have the the right to object to the processing of your personal information in certain circumstances.

Your right to data portability - You have the right to ask that I transfer the personal information you gave us to another organisation, or to you, in certain circumstances.

You are not required to pay any charge for exercising your rights. If you make a request, I have one month to respond to you.

Please contact me at candochem@gmail.com if you wish to make a request.

How to complain

If you have any concerns about my use of your personal information, you can make a complaint to me at candochem@gmail.com.

You can also complain to the ICO if you are unhappy with how I have used your data.

The ICO's address:

Information Commissioner's Office
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF

Helpline number: 0303 123 1113

ICO website: <https://www.ico.org.uk>