

## Chemistry KS3 Classes

Following the success of my IGCSE classes, I am setting up live, interactive, online small group classes for KS3 Chemistry beginning in September 2021. I have specifically designed the KS3 Chemistry course to work effectively online, provide foundations for further study and engage students. 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. The divergence from a more traditional curriculum has in part been motivated by the need to teach topics that work without access to practical work in a lab, although there will be demonstrations within lessons and links to practical work to try at home. In part though, the divergence has been driven by the opportunity to teach some more cutting-edge Chemistry that shows the relevance, and indeed importance, of Chemistry to everyday life. I am excited about the opportunity that these topics provide to show how Chemistry can help to explain the world around us and how it has changed the way we live. You can find further details about the content of the course in the “outline of the teaching order” on page 3.

The course is fully comprehensive, providing all teaching resources needed, including follow up work and regular formative assessment. You may need to provide some basic equipment and ingredients for some of the recommended follow up practicals – shopping lists will be provided!

*“Kate is without doubt the best Science teacher / tutor I have come across... Kate combines subject mastery with teaching brilliance. She is a rare find.” (IGCSE group class parent)*

### Why choose me?



I am a former Head of Chemistry with nearly fifteen years of teaching experience, two of which have been as an Independent Online Chemistry Educator working with many home educated students. I taught the IGCSE Chemistry course for six years at one of the UK's top independent schools, so know the specification and exam style inside out. As an Edexcel examiner I have access to all the past exam papers, which enables me to put together fantastic sets of resources. I believe in the importance of life-long learning and am a bit of a collector of degrees with five from the University of Cambridge. The highlights include a PhD in Chemistry, a PGCE and Masters in Education. My educational expertise means that I am a very reflective teacher who excels in simplifying concepts and building understanding. I am adept at stretching students outside the specification, answering their questions and preparing them in a way that will set them up for further study in scientific disciplines should they choose this route. As well as being able to inspire the high fliers, it is worth mentioning that for many of my teaching years I took the lower IGCSE sets because I am patient and excel in nurturing students to achieve their best. I believe in the importance of strong relationships with home, as learning is a team effort. As a parent myself, I see each child as an individual and will do my best to help your child thrive.

## Class details

- The classes will be engaging and academically rigorous. I aim to foster an enthusiasm in Chemistry, whilst putting foundations in place that will set students up for later success in IGCSE Chemistry and help to ease the transition to its study.
- Classes will be very interactive, as Chemistry is a subject where students must build their own understanding. Students will be given questions to answer individually during each lesson and will be encouraged to discuss their answers.
- All classes will be one hour in length and take place in term time only, beginning in September.
- Classes will take place via Zoom using an online whiteboard. We also use Kahoot for quizzes and Classkick to enable me to see individual work. Links are provided during classes when needed.
- Copies of the notes made on the whiteboard will be available after each session.
- The sessions will be videoed, enabling replay at a later date or catch up if the session is missed.
- Follow up work will be provided for each class. This will typically take the form of worksheets or practical work. Much of this work will be self-marked where appropriate using mark schemes provided. Students will be encouraged to discuss their findings from practical work in the next class.
- All resources will be provided electronically via Google Classroom, organised by topic, to enable easy review at a later date.
- A half termly formative assessment will be set and marked by me with individual feedback, highlighting areas for improvement. This will often be based around a practical activity.
- There will be weekly drop-in Help Sessions, enabling students to access individual help when needed.
- Classes will cost £12.50 per session, payable half termly in advance. Whilst there are no discounts for missed classes, all resources are available including the class recordings to enable catch up.
- Classes will require a minimum of 4 students to run and will have a maximum of 10 students.



## Outline of teaching order

Half Term	Content
1	<b>Introduction to Chemistry</b> <i>Hazard and risk; Apparatus; measuring; tables; graphs; states of matter; state changes; pressure; investigations</i>
2	<b>Elements, compounds and mixtures</b> <i>The Periodic Table; chemical and physical change; word equations; naming compounds; atoms and molecules; history of the atom; dissolving and solutions</i>
3	<b>Water and solutions</b> <i>Separating mixtures; the water cycle, water purification; hard and soft water; acids and alkalis; neutralisation and indicators; acid rain; concentration</i>
4	<b>Earth Science</b> <i>Structure of the earth, volcanoes and earthquakes; rock types and the rock cycle; fossils; fossil fuels and alternatives; atmospheric Chemistry – evolution and pollutants; The carbon cycle, global warming, carbon capture and storage.</i>
5	<b>Everyday Chemistry</b> <i>Cooking; materials; keeping food fresh; fats and oils; cosmetics and medicines; colour</i>
6	<b>Materials</b> <i>Materials and their sources, properties and extraction; improving materials – alloys, ceramics, composites; polymers and plastics; materials for a modern world; smart materials</i>

Please note I may tweak exact topics / teaching order in response to the individual class.