

Chemistry Resources for Schools

Resources for students

Key stage	Resource
	Additional Reading
KS5	Staircase 12 see subject specific materials recommended by current undergraduates
KS5	<p>Introductory Material for undergraduate students</p> <p>Physical Chemistry, P W Atkins, Oxford University Press (8th edn.) 2006, [7th edn. 2001]</p> <p>Inorganic Chemistry, Shriver and Atkins, Oxford University Press (4th edn) 2006, (previous edn., 1999]</p> <p>Chemistry of the Elements, Greenwood & Earnshaw, Pergamon (2nd edn.), 1997 [1st edn. 1985]</p> <p>Foundations of Organic Chemistry, Hornby & Peach, Oxford Chemistry Primer, OUP, 1996</p> <p>A Guide to Mechanism in Organic Chemistry, Sykes, Pearson (6th edn.), 1986</p> <p>Organic Chemistry, Maitland, Jones, Norton, (3rd edn.) 2004</p> <p>Mathematical Methods for Science Students, G. Stephenson, Pearson (2nd edn.) 1978, rep. 1984</p> <p>Organic Chemistry, Clayden, Greeves, Warren and Wothers, OUP</p>
KS4-5	Addy Pross - What is life. How Chemistry became Biology.
KS4-5	Good Reads: Chemistry A list of popular chemistry books.
	Websites
KS1-5	STEM a range of cross curricular science activities for students of all ages that can be carried out at home.
ALL	Science Museum - learning resources and games
ALL	Educational Chemistry games
KS2-4	Planet 42 Chemistry games.

KS2-3	Teaching Ideas –free Science resources
ALL	The Chemistry Zone resources for students in all years currently free until August.
ALL	Free Chemistry games/ challenges/experiments for children of all ages.
ALL	OUP Education Platform - An online platform from Oxford University Press, providing expert advice and resources to support learning at home and at school.
KS3-5	JCS online resources for home learning- extended free trial for duration of virus.
KS3-5	Century Tech home learning resources free for duration of virus.
KS2-5	Oxplore.org - Oxford University website full of questions to promote thinking and discussion on a wide range of topics- create an account to access them all
KS3	KS3 Bitesize Chemistry.
KS4	GCSE Bitesize Chemistry.
KS4	Spark Notes revision resources – Chemistry.
KS4-5	Khan Academy Chemistry GCSE and A Level.
KS4-5	S-Cool Chemistry GCSE and A Level revision.
KS4-5	Female Scientists - 6 films about female scientists at different stages of their careers
KS3-5	Interactive Periodic Table - Science - An interactive periodic table offering information on each of the elements, as well as historic and alchemic alternatives
KS3-5	Salter's Institute puzzles activities and challenges.
KS4-5	Phet simulations simulations of chemistry experiments.
KS4-5	Things we don't know - Chemistry explains the questions that scientists are trying to answer.
KS5	Questions and challenges set by Oxford tutors - plus Additional questions.
KS4-5	Isaac Chemistry - Chemistry - Online platform aimed at engaging GCSE and A-level students with Chemistry.

Yr12	In2Science - placements for Year 12 students at companies or universities
KS5	The New Scientist news, articles, videos and podcast
KS5	Chemguide A useful website for A level Chemistry. Provides an alternative 'teacher voice', mainly text.
KS4-5	RSC Analysis Resources A useful collection of resources focused on chemical analysis.
KS5	RSC Synthesis Explorer synthetic routes and study key organic chemistry reactions interactively with this resource.
KS5	ACD ChemSketch free resource for drawing molecules.
KS5	Nrich maths resources for students intending to study Chemistry at university.
KS5	Gresham College Public Lectures in science
KS5	Oxford Sparks and online portal for engaging with scientific developments at Oxford University
KS5	The Oxford Science blog
KS4-5	Using a switchable rotaxane organocatalyst with two different active sites
	Radio/Podcasts/Videos/MOOCs
KS4-5	BBC Four in Our Time Chemistry podcasts.
KS4-5	The Infinite Monkey Cage - comedy science podcast
KS4-5	The Naked Scientist Award winning radio show and podcasts
KS4-5	Podcasts focusing on interesting areas of Chemistry.
KS4-5	Podbean A Level Chemistry Revision podcasts. GCSE Chemistry Revision podcasts.
KS4-5	Listen Notes GCSE and A Level Chemistry Revision podcasts
KS4-5	Chemistry World podcasts.
KS4-5	Royal Society of Chemistry periodic table podcast there are podcasts on every element in the periodic table.
KS4-5	Oxford University Chemistry podcasts.
KS4-5	Ted Talks- Chemistry
KS3-5	BBC Chemistry documentaries.

	BBC Science and Nature
KS3-5	Click View video material for remote learning- charges may apply.
KS4-5	SSERC - Chemistry YouTube channel - A number of useful chemistry videos provided by the Scottish Schools Education Research Centre.
ALL	Royal Society YouTube Channel curated by playlist, a whole set of engaging videos and clips.
ALL	Wothers.com Engaging series of online videos of lecture-demonstrations from Cambridge University's Chemistry.
KS5	Oxford Research turning an orange into a grapefruit.
KS5	Oxford Research fuel cells inspired by nature.(Video)
KS5	Chemistry in the garden (Video).
KS4-5	Memrise.com - free course on fundamentals of Chemistry
KS5	Free Chemistry MOOCS
	Magazines and Journals
KS5	Royal Society of Chemistry - Education in Chemistry
KS5	Chemistry World.
KS5	Royal Society of Chemistry.
KS5	The Scientist: Chemistry Although a subscription magazine, there are free newsletters and access to articles on the website.
KS5	Science Daily - Inorganic Chemistry News Science Daily - Organic Chemistry News
	Competitions
ALL	Various including CREST Awards, Greenpower challenge and Chemistry Festivals.
KS3-5	The Big Bang Science Project - STEM competitions
KS3-5	Oxford University Academic Competitions
KS5	Chemistry Olympiad. - Although the 2020 Chemistry Olympiad has been cancelled, you can still test yourself by having a go at some of the past papers.
Yr 12	Cambridge Chemistry Challenge. An excellent annual competition for students in Year 12 (and a great way to extend able Year 11). Past papers, mark schemes and commentaries available.

Resources for teachers

Resource	Notes
The Royal Society of Chemistry	Home learning resources for KS5.
CLEAPSS YouTube Channel	A large number of clips detailing practical work developed to support teachers. CLEAPSS suggest these can be used as demonstrations. For those with CLEAPSS membership (£), there is a guidance document (GL339) which provides descriptions and hyperlinks for specific clips.
The British Science Association	STEM competitions- CREST and Youth Challenge British Science week Mass participation projects and more.
TES Chemistry	Resources for teachers, lesson plans and ideas for activities.
The Royal Society of Chemistry Lectures	masterclasses/CPD
Resourceaholic	Resources for teaching secondary school chemistry quiz.
Revision Buddies	Chemistry revision app- small charge applies
Chemistry in a box KS3	
Chemistry in Action	Video materials of study days.
Science At School	European Journal for science teachers
Scottish Schools Education Research Centre - Chemistry resources	A range of resources for chemistry, recommended by the SSERC.
Scottish Schools Education Research Centre - Chemistry YouTube channel	A number of useful chemistry videos provided by the SSERC.