



Resources List for students in Years 1-13

2 April 2020*

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*Information correct at time of publication but may be subject to change.

Introduction

Corpus Christi College, along with contributions from various Oxford Colleges and Departments plus external contributors, have put together this Guide containing links to activities and resources that UK students (and students globally) may find useful.

This Guide is in English language and is not exhaustive: there is so much available out there, it is not possible for us to cover everything!

You will find resources for core subjects across various year groups that might be of interest and/or can support your learning. For older students thinking about applying to university, there are lots of helpful super-curricula links, plus links to various Oxford web pages and guidance about applying to Oxford.

Best wishes,

Corpus Christi College Access & Outreach Team

General Resources for Pupils – Various Subjects and Key Stages

* Other age groups may also find these resources helpful. Teachers and parent/carers should advise students/children appropriately.

Year Group*	Resource Name and Description	Link
ALL	<p><u>BBC Bitesize</u> Primary, Secondary (inc. GCSE resources) and post-16 (inc. A Level resources) learning and revision online.</p>	<p>https://www.bbc.co.uk/bitesize</p>
ALL	<p><u>Khan academy</u> Resources for students/teachers/parents covering Maths, Sciences, Arts and Humanities.</p>	<p>https://www.khanacademy.org/</p>
ALL	<p><u>Oxford Museum of Natural History – More Than A Doodle art project</u> An exciting social media project encouraging artists, crafters and creators of all ages and abilities to use the Museum’s online collection as inspiration for their own designs and creations. Check out the webpage and get creating – don’t forget to share your creations with @morethanadodo using #MoreThanADoodle</p>	<p>https://oumnh.web.ox.ac.uk/more-doodle</p>

ALL (mainly KS2-KS5)	<p><u>WJEC</u> Free digital resources provided by Wales' largest provider of qualifications and exam assessments. You will find resources in Welsh and English for various subjects from Key Stage 2 onwards. Resources can be filtered by subject and level, including Welsh Bacc and vocational subjects.</p>	<p>https://resources.wjec.co.uk/Pages/SearchResources.aspx</p>
Primary	<p><u>Oxford Museum of Natural History – The Learning Zone</u> The Learning Zone provides interactive games and tests based around the core national curriculum. Suitable for primary schools.</p>	<p>http://www.oum.ox.ac.uk/thezone/</p>
Various (mainly Secondary age pupils)	<p><u>AthroCymraeg</u> Teacher-led You Tube channel with Welsh language learning resources including maths, sciences, art, the Welsh language.</p>	<p>https://www.youtube.com/user/AthroCymraeg/featured</p>
YG 3-11	<p><u>PurposeGames</u> Educational games related to specific subjects and topics.</p>	<p>https://www.purposegames.com/</p>
YG 3-12	<p><u>Seneca Learning</u> Free online learning covering various KS2, KS3, GCSE and A Level subjects.</p>	<p>https://www.senecalearning.com/</p>

YG 6-13	<p><u>Oxplore</u> Ever wondered ‘<i>is the internet bad?</i>’, ‘<i>do we need a Royal family?</i>’ or ‘<i>could we end disease?</i>’ Then Oxplore is for you! As the ‘Home of Big Questions’ it aims to engage those from 11 to 18 years with debates and ideas that tackle complex ideas across a wide range of subjects. Oxplore aims to realise aspirations, promote broader thinking and stimulate intellectual curiosity.</p>	<p>https://explore.org/</p>
YG 9-11	<p><u>BBC Bitesize TGAU/GCSE</u> Welsh language resource hub for all TGAU subjects.</p>	<p>https://www.bbc.co.uk/bitesize/levels/z8w76sg</p>
YG 10-13	<p><u>National Geographic (online)</u> Articles and videos with factual content involving nature, science, culture, and history.</p>	<p>https://www.nationalgeographic.com/</p>
YG 10-13	<p><u>S-cool</u> Revision website for GCSE and A-Level subjects.</p>	<p>https://www.s-cool.co.uk/</p>
YG 10-13	<p><u>Spark Notes</u> Study guides - help with Shakespeare and English literature, plus history, math, biology, and more.</p>	<p>https://www.sparknotes.com/</p>

YG 10-13	<p><u>Worcester College Bookshelf project</u></p> <p>Tutors and university students share books they enjoy in a range of subjects.</p>	<p>https://www.worc.ox.ac.uk/applying/access-and-outreach/resources/bookshelf</p>
YG 12-13	<p><u>BBC4 In Our Time</u></p> <p>Interviews with Broadcaster and Author Melvyn Bragg covering a variety of topics including History, Science, Religion, Culture.</p>	<p>https://www.bbc.co.uk/programmes/b006qyk1</p>
YG 12-13	<p><u>Jesus College Oxford Seren Summer School - Academic Lectures</u></p> <p>Jesus College recorded several lectures/seminars delivered during their 2019 Summer School. The theme was 'On Earth's Future' which includes various related topics such as the economics of climate change, nutrition, critical risk assessment, and politics.</p>	<p>https://www.youtube.com/playlist?list=PLrP5or0tZE-SCZ_hkrXy_o-pjI16qlq8-</p>
YG 12-13	<p><u>Staircase 12 (Univ College, Oxford)</u></p> <p>An online hub of resources and information for students thinking about applying to top universities. You'll find plenty of ideas here for stretching yourself beyond the school syllabus.</p>	<p>https://www.univ.ox.ac.uk/applying-to-univ/staircase12/</p>

Subject Specific Resources for School Pupils – Science

* Other age groups may also find these resources helpful. Teachers and parent/carers should advise students/children appropriately.

Year Group*	Resource Name and Description	Link
ALL	<u>NASA</u> STEM activities for students of all ages, news, articles.	https://www.nasa.gov/stem
ALL	<u>Physics.org</u> ALL News/activities, puzzles, experiments and database of 4000 physics websites – designed to engage all ages with Physics.	http://www.physics.org/index.asp
ALL	<u>The Royal Society</u> A Fellowship of the world's most eminent scientists and the oldest scientific academy in continuous existence. On their You Tube channel you'll find a curated by playlist - a whole set of engaging videos and clips.	https://www.youtube.com/user/RoyalSociety/featured
ALL	<u>University of Oxford</u> Chemistry in the Garden (video). Dr Alison Foster on audio trails in Oxford's botanic garden.	https://www.youtube.com/watch?v=2EkfdtXUj3U&feature=youtu.be

ALL	<u>Wothers.com</u> Engaging series of online videos of lecture-demonstrations from Cambridge University's Chemistry.	http://www.wothers.com/
YG 1-11	Science Museum Group Free learning resources including activities, games and videos for all age groups and topics.	https://learning-resources.sciencemuseum.org.uk/
YG 1-12	<u>Science Joy Wagon</u> Access to physics zone and chemistry zone lessons are now available free of charge, currently until August 1st 2020.	http://www.sciencejoywagon.com/
YG 2-7	<u>Bill Nye the Science Guy videos</u> USA television series aired 1993-1998. Each of the 100 episodes aims to teach a specific topic in science.	https://www.youtube.com/watch?v=nDN7M0J3HXc
YG 3-11	<u>Science Kidz</u> Experiments and free games.	http://www.sciencekids.co.nz/biology.html
YG 4-11	<u>Formula One in Schools</u> Students aged 9 to 19 deploy CAD/CAM software to collaborate, design, analyse, manufacture, test, and then race miniature compressed air powered cars made from FI model block.	https://www.flinschools.co.uk/

YG 4-12	<u>Greenpower Trust</u> Science technology Maths and Engineering challenge to design, build and race an electric car – for children aged 9 upwards.	https://www.greenpower.co.uk/
YG 6-13	<u>BBC iPlayer</u> Science and Nature documentaries.	https://www.bbc.co.uk/iplayer/categories/documentaries-science-and-nature/featured
YG 7-9	<u>Salter's Institute</u> Chemistry puzzles, activities and challenges.	https://www.saltersinstitute.co.uk/chemistry-club/competition-time/
YG 7-11	<u>Science at school podcast</u> For secondary and GCSE learning and revision.	https://scienceatschool.co.uk/
YG 7-13	<u>Ask A Biologist</u> Biology activities, puzzles and games.	https://askabiologist.asu.edu/puzzles
YG 7-13	<u>iBiology</u> Biology Talks by some of the world's leading scientists.	https://www.ibiology.org/

YG 7-13	<p><u>Oxford Sparks</u> Online portal for engaging with exciting science. You'll find podcasts, short films and animations covering a variety of STEM subjects. Topics include explorations of cool and fascinating stuff including the science behind Hollywood films, teaching robots social cues, understanding volcanic eruptions, and Mechanobiology!</p>	<p>https://www.oxfordsparks.ox.ac.uk/</p>
YG 7-13	<p><u>Zooniverse</u> Introduces students of all ages to astronomy</p>	<p>https://www.zooniverse.org/projects/zookeeper/galaxy-zoo/about/education</p>
YG 9-13	<p><u>BBC online</u> BBC Chemistry documentaries BBC Science and Nature</p>	<p>https://www.bbc.co.uk/programmes/b00qbq7f https://www.bbc.co.uk/programmes/genres/factual/scienceandnature/player</p>
YG 9-13	<p><u>Chemistry World podcasts</u> Chemical stories, interviews, news and opinions.</p>	<p>https://www.chemistryworld.com/podcasts</p>
YG 9-13	<p><u>CERN</u> Resources to support Physics/engineering and computing</p>	<p>https://home.cern/resources?topic=1113</p>

YG 9-13	<u>Glenhoe Education</u> Physics resources	http://glencoe.mheducation.com/sites/0078807220
YG 9-13	<u>Isaac Physics</u> Website - physics problem solving for GCSE and A Level Physics	https://isaacphysics.org/
YG 9-13	<u>Khan Academy</u> Biology resources for GCSE and A Level Chemistry GCSE and A Level A Level Chemistry Revision podcasts	https://www.khanacademy.org/science/biology https://www.khanacademy.org/science/chemistry https://www.khanacademy.org/science/physics
YG 9-13	<u>Physics Mastery</u> Free resources for duration of COVID 19.	https://www.pearsonmylabandmastering.com/northamerica/masteringphysics/
YG 9-13	<u>Physics Zone</u> Resources, simulations and experiments.	https://www.physics-zone.com/index.html
YG 9-13	<u>Picture of the Day</u> Daily pictures from space with explanations – astronomy.	https://apod.nasa.gov/apod/astropix.html

YG 9-13	<p><u>Podbean</u> A Level Chemistry Revision podcasts</p> <p>GCSE Chemistry Revision podcasts</p> <p>Interesting Physics Podcasts</p>	<p>https://www.podbean.com/podcast-detail/u3vaq-3814b/A-Level-Chemistry-Revision-Podcast</p> <p>https://www.podbean.com/podcast-detail/qbzx-875fd/Revise---GCSE-Chemistry-Revision-Podcast</p> <p>https://www.podbean.com/podcast-detail/vagz2-33a39/Physics-World-Stories-Podcast</p>
YG 9-13	<p><u>Royal Society of Chemistry</u> Education resources including periodic table podcast.</p>	<p>https://www.rsc.org/periodic-table/podcast</p>
YG 9-13	<p><u>Spark Notes</u> Physics Guides on line organised under themes</p>	<p>https://www.sparknotes.com/physics/</p>
YG 9-13	<p><u>St John's Inspire Programme - Physics Brainteasers</u> Check out these physics teasers by St John's Physics Tutor Professor Tony Weidberg.</p>	<p>https://sjcinspire.com/2018/08/24/the-physics-of-making-a-cup-of-tea/</p>
YG 9-13	<p><u>TWDK (Things We Don't Know)</u> a UK-based science education company, which seeks to help improve the public understanding of science. Includes articles and blogs covering various subjects.</p>	<p>https://www.thingswedontknow.com/</p>

YG 9-13	<u>The Naked Scientists</u> Podcasts and science radio shows.	https://www.thenakedscientists.com/
YG 10-13	<u>British Physics Olympiad</u> Past papers and solutions to physics problem solving questions.	https://www.bpho.org.uk/
YG 10-13	<u>Good Reads: Chemistry</u> A list of popular chemistry books.	https://www.goodreads.com/shelf/show/chemistry
YG 10-13	<u>Nature</u> World's leading multidisciplinary science journal.	https://www.nature.com/
YG 10-13	<u>Royal Society of Biology</u> Offers activities and competitions for secondary schools students.	https://www.rsb.org.uk/education/teaching-resources/secondary-schools
YG 10-13	<u>RSC Analysis Resources</u> A useful collection of resources focused on chemical analysis.	https://edu.rsc.org/resources/analysis
YG 10-13	<u>The New Scientist</u> News, podcast, videos for Science.	https://institutions.newscientist.com/

YG 10-13	<p><u>The Oxford Science blog</u> Gives you the inside track on science at Oxford University: the projects, the people, and what's happening behind the scenes.</p>	<p>http://www.ox.ac.uk/news/science-blog</p>
YG 10-13	<p><u>The Oxford Scientist</u> Schools' Writing Competition is open! It is on the theme: 'A scientific discovery, invention or advance that still affects the world today.' Deadline 1st May 2020.</p>	<p>http://oxsci.org/schools/</p>
YG 10-13	<p><u>The Scientist</u> Although a subscription magazine, there are free newsletters and access to articles on the website.</p>	<p>https://www.the-scientist.com/</p>
YG 10-13	<p><u>University of Oxford</u> Chemistry podcasts</p>	<p>http://podcasts.ox.ac.uk/units/department-chemistry</p>
YG 10-13	<p><u>University of Oxford</u> Engineering useful resources to support learning.</p>	<p>https://eng.ox.ac.uk/outreach/support-during-school-closures/</p>

YG 10-13	<u>UK Biology Competition</u> Biology Olympiad KS5 Intermediate Olympiad KS	https://www.ukbiologycompetitions.org/
YG 12-13	<u>Cambridge Chemistry Challenge</u> 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.	http://www.c3i6.org/about
YG 12-13	<u>ACD Labs Chem Sketch</u> Free resource for drawing molecules.	https://www.acdlabs.com/resources/freeware/chemsketch/
YG 12-13	<u>Ask a Physicist</u> Look at questions that have been asked before and the answers they have received. Also submit your own.	https://www.physicscentral.com/experiment/askphysicist/question.cfm
YG 12-13	<u>Brilliant</u> Develop quantitative skills in Maths, Physics and computer science through questions and challenges - free trial then charges may apply.	https://brilliant.org/

YG 12-13	<u>Chemguide</u> A useful website for A level Chemistry. Provides an alternative 'teacher voice'. Mainly text.	http://www.chemguide.co.uk/
YG 12-13	<u>Chemistry World</u> RSC online news, articles and podcasts.	https://www.my-mooc.com/en/categorie/chemistry
YG 12-13	<u>Engineering</u> I want to study Engineering – questions/problem solving to support university applicants.	https://i-want-to-study-engineering.org/
YG 12-13	<u>Listen Notes</u> A Level Biology podcasts.	https://www.listennotes.com/search/?q=biology&sort_by_date=0&scope=episode&offset=0&language=Any%20language&len_min=0
YG 12-13	<u>MOOC (massive open online courses) List</u> Biology and Life Sciences courses Chemistry MOOCS Physics MOOCS	https://www.mooc-list.com/categories/sci-biology-life-sciences https://www.my-mooc.com/en/categorie/chemistry https://www.my-mooc.com/en/categorie/Physics

YG 12-13	<u>Nrich maths resources</u> For students intending to study Chemistry at university.	https://nrich.maths.org/unichem
YG 12-13	<u>Oxford Biology</u> Biology podcasts.	https://podcasts.ox.ac.uk/keywords/biology
YG 12-13	<u>PhysicsLab</u> Fun questions and answers in Physics designed to make you think about physical concepts.	http://www.physicslab.org/Compilations/NextTime.aspx
YG 12-13	<u>RSC Synthesis Explorer</u> Plan synthetic routes and study key organic chemistry reactions interactively with this resource.	http://www.synthesisexplorer.co.uk/
YG 12-13	<u>RSC Chemistry Olympiad</u> Annual Olympiad (cancelled for 2020).	https://edu.rsc.org/enrichment/uk-chemistry-olympiad
YG 12-13	<u>Self Care with Drs Sarah - Podcast</u> Self-care with Drs. Sarah is a series of conversations between women scientists about navigating and surviving science culture. The Sarahs are astrophysicists and best friends. Sarah R is a Glasstone Postdoctoral Research Fellow at the University of Oxford and Hugh Price Fellow at Jesus College, Oxford.	Podcast available via various media including Apple Podcasts, Soundcloud and Spotify. You can find out more about Sarah R here: https://www.jesus.ox.ac.uk/meet-fellows/meet-fellows-dr-sarah-rugheimer

YG 12-13	<p>University of Oxford (Hertford College) Unsung Heroes of Science Video Making Competition. Anyone in the UK aged 16-18 can enter – we want you to make a short video celebrating a scientist who deserves wider recognition.</p> <p>Deadline 24th April 2020.</p>	https://www.hertford.ox.ac.uk/unsungscience
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Oxford Research and Reading Lists

Biology		
YG 10-13	Oxford Research: Putting ticks on the map	http://www.ox.ac.uk/research/research-impact/putting-ticks-map
YG 10-13	Oxford Research: Poetry in motion- bio inspired drone technology	http://www.ox.ac.uk/research/research-impact/poetry-motion
YG 10-13	Oxford Research: Defeating Dengue with GM Mosquitoes	http://www.ox.ac.uk/research/research-impact/defeating-dengue-gm-mosquitoes
YG 10-13	Oxford Research: The loneliness of the long distance seabird	http://www.ox.ac.uk/research/research-impact/loneliness-long-distance-seabird
YG 10-13	Oxford Research: Balancing conservation and commerce in the world's forests	http://www.ox.ac.uk/research/research-impact/balancing-conservation-and-commerce-world%E2%80%99s-forests
YG 10-13	Oxford University Research- (Video)The surprising use of Silk	https://www.youtube.com/watch?v=RS-cjTkuX9w&feature=youtu.be

YG 10-13	Oxford University Research- (Video) Bringing Back the Large Blue Butterfly	https://www.youtube.com/watch?v=9k72VVSQxG4&feature=youtu.be
YG 10-13	Oxford University Research- (Video) Preserving Endangered Trees: A Chilean Case Study	https://www.youtube.com/watch?v=GzmNjMu8470&feature=youtu.be
YG 10-13	Oxford University Research (Video) Jatropha Curcas in the global race for biofuels	https://www.youtube.com/watch?v=gYljzvBvsHg&feature=youtu.be
YG 10-13	Oxford University Research (Video) Peru's Data Collectors	https://www.youtube.com/watch?v=v6XFSgXcVa4&feature=youtu.be
YG 10-13	Oxford University Research (Video) Researching the Reef: fish and coral of the Caribbean	https://www.youtube.com/watch?v=2iQaDeGSjIw&feature=youtu.be
Chemistry		
YG 12-13	Introductory Material for undergraduate students Physical Chemistry, P W Atkins, Oxford University Press (8th edn.) 2006, [7th edn. 2001]	http://www.ox.ac.uk/sites/files/oxford/media_wysiwyg/Introductory_reading_for_Chemistry.pdf
YG 12-13	Inorganic Chemistry, Shriver and Atkins, Oxford University Press (4th edn) 2006, (previous edn., 1999]	
YG 12-13	Chemistry of the Elements, Greenwood & Earnshaw, Pergamon (2nd edn.), 1997 [1st edn. 1985]	
YG 12-13	Foundations of Organic Chemistry, Hornby & Peach, Oxford Chemistry Primer, OUP, 1996	
YG 12-13	A Guide to Mechanism in Organic Chemistry, Sykes, Pearson (6th edn.), 1986	
YG 12-13	Organic Chemistry, Maitland, Jones, Norton, (3rd edn.) 2004	

YG 12-13	Mathematical Methods for Science Students, G. Stephenson, Pearson (2nd edn.) 1978, rep. 1984	
YG 12-13	Organic Chemistry, Clayden, Greeves, Warren and Wothers, OUP	
YG 12-13	Oxford Research: Turning orange into grapefruit	http://www.ox.ac.uk/research/research-impact/turning-orange-grapefruit
YG 12-13	Oxford Research: fuel cells inspired by nature (Video)	https://www.youtube.com/watch?v=W9nBcWsOmcM&feature=youtu.b
Physics		
YG 12-13	Oxford Research: Near perfect distance measurement article and video	http://www.ox.ac.uk/research/research-impact/near-perfect-distance-measurement
YG 12-13	Oxford Research: Cheaper, Smaller, Super resolution - Nano imaging	http://www.ox.ac.uk/research/research-impact/cheaper-smaller-super-resolution
YG 12-13	Oxford Research: To the Zooniverse and beyond- how researchers having been harnessing volunteers to support their work	http://www.ox.ac.uk/research/research-impact/zooniverse-and-beyond
YG 12-13	Oxford Research: Particle Accelerator Physics for the masses	http://www.ox.ac.uk/research/research-impact/particle-accelerator-physics-masses
YG 12-13	Oxford Research: A Revolution in Solar Power Technology	http://www.ox.ac.uk/research/research-impact/revolution-solar-power-technology
YG 12-13	Oxford Research: How to be certain of uncertainty in climate change and weather forecasts	http://www.ox.ac.uk/research/research-impact/how-be-certain-uncertainty-climate-and-weather-forecasts
YG 12-13	Oxford Research: How do quantum physicists affect industry? (video)	https://www.youtube.com/watch?v=0c3AwqgKwZg&feature=youtu.be
YG 12-13	Oxford University research in Quantum Computing	https://www.research.ox.ac.uk/Area/quantum

KS5 From Cambridge University Reading List for Natural Sciences:

Biology of Cells

Wolpert, Lewis *How we live and why we die: the secret lives of cells* (2010)

Alberts, et al *Essential Cell Biology* (2014, 6th Edition)

Evolution and Behaviour

Holland, Peter *The Animal Kingdom: A very short introduction* (2011)

Dawkins, Richard & Wong, Yan *The Ancestor's Tale: A Pilgrimage to the Dawn of Life* (2017)

Carroll, Sean *Endless Forms Most Beautiful* (2005)

Materials Science

Ball, Philip, *Materials Science Made to Measure: New Materials for the C21st Century* (1999)

Gordon, J.E, *New Science of Strong Materials* (1991)

Miodownik, Mark *Stuff Matters* (2014)

Physics

No specific texts are recommended, however, this series of lectures is:

<https://www.microsoft.com/en-us/research/project/tuva-richard-feynman/?from=http%3A%2F%2Fresearch.microsoft.com%2Fapps%2Ftools%2Ftuva%2Fin>

Subject Specific Resources for School Pupils – Maths and Computer Science

* Other age groups may also find these resources helpful. Teachers and parent/carers should advise students/children appropriately.

Year Group*	Resource Name and Description	Link
ALL	<u>Bletchley park learning resources</u> Maths and code breaking.	https://bletchleypark.org.uk/learn/resources/external-resources
ALL	<u>Khan academy</u> Maths resources for students/teachers/parents	https://www.khanacademy.org/
ALL	<u>Dr Frost Maths</u> On line learning resources including videos and exams questions for all ages.	https://www.drfrostmaths.com/
ALL	<u>The Maths Zone</u> Resources for students in all years	https://mathszone.co.uk/category/using-applying/
ALL	<u>Nrich Maths</u> Resources for students of all ages- mathematical problems, games and challenges.	https://nrich.maths.org/

YG 2-8	<u>Coolmath Games</u> Online games for learning and revision.	https://www.coolmathgames.com/
YG 7-9	<u>UK Mathematics Trust</u> Provides competitions focused on problem solving teamwork and mathematical enrichment.	https://www.ukmt.org.uk/
YG 8-12	<u>Tom Rocks Maths!</u> The award-winning maths outreach programme featuring puzzles, videos, podcasts and articles that show maths can be fun!	https://tomrocksmaths.com/
YG 10-11	<u>AMSP</u> A range of GCSE Maths resources for students.	https://amsp.org.uk/
YG 10-11	<u>GCSE Maths Revision podcasts</u> Available on Podbean and Listen Notes.	https://www.podbean.com/podcast-detail/9c8jd-87973/Revise---GCSE-Maths-Revision-Podcast https://www.listennotes.com/podcasts/revise-gcse-maths-revision-seneca-learning-IO7t6faBhqW/

YG 10-11	<u>Nrich Maths</u> Adventures with Complex numbers/	https://nrich.maths.org/complexadventure
YG 10-11	<u>PROMYS (Program in Mathematics for Young Scientists)</u> Summer residential for KS4 students with mathematical ability.	https://promys-europe.org/
YG 10-11	<u>UK Mathematics Trust</u> Offers Mathematical Circle residential for year 10, Summer Schools for years 10/11 and a mentoring scheme.	https://www.ukmt.org.uk/
YG 10-13	<u>BBC Maths documentaries</u> The History of Maths	https://www.bbc.co.uk/programmes/b00dxjls
YG 10-13	<u>Mr Barton's Maths</u> Resources for students and teachers GCSE and A Level.	http://www.mrbartonmaths.com/students/
YG 10-13	<u>Birmingham University</u> Popular Maths Lectures for advanced GCSE and A Level Students	https://www.birmingham.ac.uk/schools/mathematics/news-and-events/birmingham-popular-maths-lecture.aspx

YG 10-13	<u>Hannah Fry's Mysterious World of Maths</u> Documentary series in which Dr Hannah Fry explores the mystery of maths.	https://www.bbc.co.uk/programmes/b0bn9dth
YG 10-13	<u>Royal Institution</u> Masterclasses in Maths computing and engineering.	https://www.rigb.org/education/masterclasses
YG 10-13	<u>Ted Talks</u> Maths playlist	https://www.ted.com/playlists/189/math_talks_to_blow_your_mind
YG 10-13	<u>The NCETM Maths Podcast</u> A regular podcast from the National Centre for Excellence in the Teaching of Mathematics (NCETM), exploring areas of interest and debate in the teaching of maths across all school and college phases.	https://player.fm/series/the-ncetm-maths-podcast-2361943
YG 10-13	<u>Oxford Mathematics Alphabet</u> Here you will find members of the Oxford Mathematical Institute writing about engaging mathematical ideas and the latest research.	https://www.maths.ox.ac.uk/about-us/life-oxford-mathematics/oxford-mathematics-alphabet

YG 12-13	<u>Oxford Mathematics Student Lectures</u> Here you will find lectures from Oxford students covering various topics such as quantum theory, differential equations and introductory calculus.	https://www.youtube.com/playlist?list=PL4d5ZtfQonW0A4VHeiY0gSkXIQEraaacE
YG 12-13	<u>Advanced Mathematics Support Programme</u> Provides materials and events for Core Maths, AS/A2 and Further Maths also offers student and teacher events.	https://amsp.org.uk/
YG 12-13	<u>Fermat's last Theorem</u> You Tube film discussion Fermat's last theorem.	https://www.youtube.com/watch?v=qiNcEguuFSA
YG 12-13	<u>London Mathematical Society</u> Popular videos that appeal to A Level maths.	https://www.youtube.com/channel/UCvp7jsbXjx2k8sGEkdtWCAw
YG 12-13	<u>Oxford University Maths Lectures available online</u> A variety of lectures and guidance films available on University of Oxford's Mathematical Institute You Tube channel.	https://www.youtube.com/channel/UCLnGGRG__uGSPLBLzyhg8dQ/playlists

YG 12-13	<u>Oxford Maths podcasts</u> A series of talks and lectures by Oxford's Mathematicians exploring the power and beauty of their subject.	https://podcasts.ox.ac.uk/series/secrets-mathematics
YG 12-13	<u>Plus Magazine</u> Articles about maths, podcasts, reviews and puzzles.	https://plus.maths.org/content/
YG 12-13	<u>Underground Maths</u> Interesting resources for teaching Maths A Level.	https://undergroundmathematics.org/

Bridging Material for YG 12-13 / KS 5

Alcock, Lara: *How to Study for a Mathematics Degree* (2012)

Allenby, Reg: *Numbers and Proofs* (1997)

Earl, Richard: *Towards Higher Mathematics: A Companion* (2017)

Houston, Kevin: *How to Think Like a Mathematician* (2009)

Liebeck, Martin: *A Concise Introduction to Pure Mathematics* (2000)

Popular Mathematics for YG 12-13 / KS 5

Acheson, David *1089 and All That* (2002), *The Calculus Story* (2017)

Bellos, Alex *Alex's Adventures in Numberland* (2010)

Clegg, Brian *A Brief History of Infinity* (2003)

Courant, Robbins and Stewart *What is Mathematics?* (1996)

Devlin, Keith *Mathematics: The New Golden Age* (1998), *The Millennium Problems* (2004), *The Unfinished Game* (2008)

Elwes, Richard <i>MATHS 1001 (2010), Maths in 100 Key Breakthroughs (2013)</i>
Gardiner, Martin <i>The Colossal Book of Mathematics (2001)</i>
Gowers, Tim <i>Mathematics: A Very Short Introduction (2002)</i>
Hofstadter, Douglas <i>Gödel, Escher, Bach: an Eternal Golden Braid (1979)</i>
Körner, T. W. <i>The Pleasures of Counting (1996)</i>
Neale, Vicky <i>Closing the Gap: the quest to understand prime numbers (2017)</i>
Odifreddi, Piergiorgio <i>The Mathematical Century: The 30 Greatest Problems of the Last 100 Years (2004)</i>
Piper, Fred and Murphy, Sean <i>Cryptography: A Very Short Introduction (2002)</i>
Polya, George <i>How to Solve It (1945)</i>
Sewell, Michael (ed.) <i>Mathematics Masterclasses: Stretching the Imagination (1997)</i>
Singh, Simon <i>The Code Book (2000), Fermat's Last Theorem (1998)</i>
Stewart, Ian <i>Letters to a Young Mathematician (2006), 17 Equations That Changed The World (2012)</i>
Underwood, Dudley <i>Is Mathematics Inevitable? A Miscellany (2008)</i>

History and Biography for YG 12-13 / KS 5

Burton, David <i>The History of Mathematics (2007)</i>
Derbyshire, John <i>Unknown Quantity – A Real and Imaginary History of Algebra (2006)</i>
Goldstein, Rebecca <i>Incompleteness – The Proof and Paradox of Kurt Gödel (2005)</i>
Gray, Jeremy <i>Hilbert's Challenge (2000)</i>
Hellman, Hal <i>Great Feuds in Mathematics (2006)</i>
Hodgkin, Luke <i>A History of Mathematics – From Mesopotamia to Modernity (2005)</i>
Hodges, Andrew <i>Alan Turing: The Enigma (1992)</i>
Stedall, Jacqueline <i>The History of Mathematics: A Very Short Introduction (2012)</i>

Pesic, Peter <i>Abel's Proof (2004)</i>
Reid, Constance <i>Julia: A Life in Mathematics (1996)</i>
Stillwell, John <i>Mathematics and Its History (2002)</i>

Computer Science

Additional resources that are CS specific

Year Group*	Resource Name and Description	Link
YG 2-13	<p><u>Bebras</u> The Bebras Computing Challenge introduces computational thinking to students. It is organised in over 40 countries and designed to get students all over the world excited about computing.</p>	http://www.bebas.uk/
YG 3-9	<p><u>BBC Microbit</u> Computer education and coding for younger pupils getting started in computer science.</p>	https://microbit.org/
YG 11-13	<p><u>University of Oxford Department of Computer Science</u> A variety of background reading & activities related to CS can be found on the Oxford CS website. This includes books, journal articles, magazines and mathematical activities.</p>	https://www.cs.ox.ac.uk/admissions/undergraduate/why_oxford/background_reading.html

YG 12-13	<p><u>Ethics of Artificial Intelligence</u> In a new film produced by NHK World – Japan – Jesus College Oxford Principle, Sir Nigel Shadbolt, talks about the challenges that our world faces as we become increasingly engaged with and reliant on AI and the vital role that ethical debate must play in how data is collected and used by AI algorithms.</p>	<p>https://www.jesus.ox.ac.uk/about-jesus-college/news/2020/march/new-film-highlights-need-ethical-debate-ai</p> <p>(This is a link to the article, a link to the film is at end)</p>
YG 12-13	<p><u>issac computer science</u> Free online platform for A Level CS learning.</p>	<p>https://isaacomputerscience.org/</p>
YG 12-13	<p><u>Python Challenges - from Christ Church College, Oxford</u> Regularly-released challenges for students who want to learn or practise coding.</p>	<p>https://www.chch.ox.ac.uk/admissions/python-challenges-page</p>

Subject Specific Resources for School Pupils – English

* this is a guide, other age groups may find them helpful. Teachers and parent/carers should advise students/children appropriately.

Year Group*	Resource Name and Description	Link
All	<u>Book Trust 100 best books of all time</u> Organization encouraging children and families to read.	https://www.booktrust.org.uk/
All	<u>Bookriot.com</u> Podcasts and documentaries about authors.	https://bookriot.com/
All	<u>LiteraryFestivals.co.uk</u> Information about literary festivals in the UK	https://www.literaryfestivals.co.uk/
YG 2-9	<u>BBC writing Competition 500 words</u> The UK's most successful short story-writing competition for children between the ages of 5 and 13.	https://www.bbc.co.uk/programmes/articles/50pnqLfDywb9CFxjNvth510/about-500-words
YG 3-6	<u>Michael Rosen Channel</u> Michael Rosen's stories and poetry videos	https://www.youtube.com/MichaelRosenOfficial
YG 3-9	<u>Time Out online</u> 100 best children's books of all time	https://www.timeout.com/london/kids/the-100-best-childrens-books

YG 7-11	<u>The School Reading List</u> Suggested reading for children, teenagers and young adults in KS3 & 4.	https://schoolreadinglist.co.uk/category/secondary-ks3-ks4-reading-lists/
YG 7-11	<u>English and Media Centre</u> Clips featuring readings, poetry and discussion on various topic including child language acquisition and ways of writing.	https://www.englishandmedia.co.uk/video-clips/clip-listing
YG 7-13	<u>The School Reading List</u> List of various young writers competitions for ages 3-18.	https://schoolreadinglist.co.uk/competitions-for-children/childrens-writing-competitions/
YG 7-13	<u>The School Reading List</u> List of various public speaking and reading aloud competitions.	https://schoolreadinglist.co.uk/competitions-for-children/public-speaking-and-reading-aloud/
YG 7-13	<u>Cinemagic Young Filmmaker 2020</u> Film making competition for children and young people under 25.	https://cinemagic.org.uk/young-filmmaker/
YG 8-12	<u>The Poetry Society</u> Including competitions and a young poets network.	https://poetrysociety.org.uk/young-poets/

YG 10-11	<u>Wider reading for Years 9-11</u> Devised by Professor Adam Smyth at Balliol College, Oxford University.	https://www.balliol.ox.ac.uk/sites/default/files/balliol_english_reading_list_for_year_9-10_students.pdf
YG 10-13	<u>Great Writers Inspire</u> Collection of lectures, essays and ebooks.	http://writersinspire.org/
YG 10-13	<i>Englishbiz</i> : GCSE resources for students	http://www.englishbiz.co.uk/
	<i>Favourite Poem</i> : video recordings of Americans reading poems they love	http://www.favoritepoem.org/
	<i>Poet Seers</i> : collection of poetry from around the world including different spiritual traditions	https://www.poetseers.org/
	<i>Poetry Foundation</i> : collections of poems, written and spoken with a range of resources	https://www.poetryfoundation.org/
	<i>Bibliomania</i> : free online books, study guides and resources	http://www.bibliomania.com/
	<i>British library online</i> : with categories such as romantics and Victoria writers	https://www.bl.uk/learning/online-resources
	<i>Shakespeare's Globe</i> : various learning resources and plays online	https://www.shakespearesglobe.com/learn/research-and-collections/
YG 12-13	<u>The Guardian Books website</u> Reviews contemporary and older literary releases, author biographies and offering discussion boards.	https://www.theguardian.com/books

YG 12-13	<u>Early English Books Online</u> Page images of almost every work printed in the British Isles and North America, as well as works in English printed elsewhere from 1470-1700.	https://search.proquest.com/eebo/index
YG 12-13	<u>Oxford University podcasts for English</u> Over 300 podcasts recorded from 2007-present day.	http://podcasts.ox.ac.uk/open/search?openterms=english
YG 12-13	<u>The New Yorker</u> Commentary, criticism, essays, fiction, satire, cartoons, and poetry.	https://www.newyorker.com/
YG 12-13	<u>The Paris Review</u> Reviews, videos, podcasts.	https://www.theparisreview.org/
YG 12-13	<u>The London Review of Books</u> Including blogs, videos and podcasts.	https://www.lrb.co.uk/

Applying to Oxford – Useful Links

Please see some useful links below for students applying to or considering applying for undergraduate study at Oxford. This information is for guidance only and may be subject to change. You should check the University of Oxford website for the most up-to-date information and guidance on applying to Oxford.

Resource Name and Description	Link
<u>Undergraduate Admissions and Outreach home</u> The main online source of all information for ug admissions.	http://www.ox.ac.uk/admissions/undergraduate
<u>Applying to Oxford</u> For an overview of the admissions timeline, how to apply and entry requirements. You'll also find guidance for students with disabilities, International applicants, mature applicants, teachers and families.	http://www.ox.ac.uk/admissions/undergraduate/applying-to-oxford
<u>Guidance for Applicants</u> Advice about applications, admissions tests, interviews, written work and the decisions process.	http://www.ox.ac.uk/admissions/undergraduate/applying-to-oxford/guide

<p><u>Admissions Tests</u></p> <p>Guidance and advice about all Oxford admissions tests can be found on the University website. You can also check the relevant department websites for your subject.</p>	<p>http://www.ox.ac.uk/admissions/undergraduate/applying-to-oxford/guide/admissions-tests</p>
<p><u>Admissions Workshop by Jesus College, Oxford</u></p> <p>This workshop was recorded in August 2019 at the Jesus College Seren Summer School. Here you'll hear from Access Fellow, Dr Matt Williams, plus current undergraduate students, about how to prepare for three of the core elements of the Oxford admissions process: 1) writing a personal statement, 2) preparing for admissions tests and 3) guidance about Oxford interviews.</p>	<p>https://www.youtube.com/watch?v=8QyRxixoYxA&list=PLrP5or0tZE-SsnZI9YBHcpCXLufxAe8Yk&index=3&t=0s</p>

Admissions Tests - other resources

Some departments/Colleges have produced guidance films about Admissions Tests that you may find helpful.
Make sure you check the Oxford Admissions Tests web pages for sample papers and guidance for all tests!

<p><u>History Aptitude Test (HAT)</u></p> <p>This film shows first year students discussing Question 3 from the 2016 HAT paper with a History tutor. It shows some of the ways to analyse an unfamiliar piece of text.</p>	<p>https://www.youtube.com/watch?v=Q3uiC4cG4ac&feature=youtu.be</p>
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<p><u>Maths Aptitude Test (MAT)</u> Mathematical Institute's Admissions and Outreach Coordinator, Dr James Munro, shares advice and guidance on how to prepare to the MAT.</p>	<p>https://www.youtube.com/watch?v=3esQVND-_c4&feature=youtu.be</p>
<p><u>Physics Aptitude Test (PAT)</u> PAT preparation webinar.</p>	<p>https://www.youtube.com/watch?v=S6NH7SYE9qY&feature=youtu.be</p>
<p><u>Thinking Skills Assessment (TSA)</u> Jesus College Access Fellow, Dr Matt Williams, has created a series of three films offering advice and guidance on how to ace the TSA!</p>	<p>https://www.youtube.com/playlist?list=PLrP5or0tZE-SsnZI9YBHcpCXLufxAe8Yk</p>