

Engineering Science Resources for Schools and Young People.

Please explore these resources if you are interested in learning more about Engineering Science.

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We will do our best to ensure that this resource is updated frequently, but if you find that a link no longer works, please email us at outreach@eng.ox.ac.uk and we will look to address it.

Resource	Information
Primary School Students	
F1 In schools	Primary School programme
Explore	<p>Explore some of the big questions that make you think about Engineering, such as:</p> <ul style="list-style-type: none"> • Are explosions always destructive? • Will time travel ever be possible? • Is a robot a person?
Resources from the Discovery Diaries	Arts-based activities are used to engage primary school students in STEM
Science Museum Group	This site brings together resources from museums, including activities, games and videos.
The Science of Stories	Uses a selection of ancient classical myths to ignite curiosity, develop science capital, and deepen understanding of key scientific concepts.
Secondary School Students	
	Arkwright Engineering Scholarships
Brilliant.org	Build quantitative skills in math, science, and computer science with fun and challenging interactive explorations.
EDT Programmes	A website full of useful resources to learn all about a variety of STEM Subjects.

I want to study Engineering	A website full of useful resources to assist you in making a successful application to study Engineering.
Isaacphysics.org	A collection of useful Physics resources.
James Dyson Foundation	Engineering challenges and teaching resources.
jstor.org	A website full of useful resources to assist you in making a successful application to study Engineering.
	Live Status of the National Grid
	National Science Foundation Engineering Resources
Physics Lab	Unique physics questions that are similar to the kind of thing that might be asked at interview.
Shell - cleaner energy and sustainability	Information and resources.
Springboard Video	The Physics of Wind Turbines.
Springboard Video	Logic in Mathematics.
Startalk Radio	Podcasts about space.
The New Scientist	Engineering articles.
Tomorrow's Engineers	A website full of useful resources to learn all about Engineering and potential Engineering careers.
What if?	Answers to absurd scientific questions.
Sixth Form / Advanced Year 11 students	
	BBC Radio 4 - Behind the Stats
	BBC Radio 4 In Our time
	BBC Radio 4 Inside Science
	BBC Radio 4 The Life Scientific
	BBC Science in Action
BBC Sounds	Radio programme with an engineering focus.
	Born To Engineer Podcast
	British Physics Olympiad

Cambridge Streaming Media Service	Media items provided by the university of Cambridge for prospective Engineering students.
	Chemical Engineering Resources
EDT Programmes	A website full of useful resources to learn all about a variety of STEM Subjects.
	Engineering Matters Podcasts
Engineering.com	A website full of useful resources to assist you in making a successful application to study Engineering.
I want to study Engineering	A website full of useful resources to assist you in making a successful application to study Engineering.
Isaacphysics.org	A collection of useful Physics resources.
National Science Foundation	Video and other resources.
	Oxford University School Science Writing Competition
Physics Lab	Unique physics questions that are similar to what you might be asked at university interviews.
Resources from CERN	European Organisation for Nuclear Research.
Resources from NASA	National Aeronautics and Space Administration.
	Resources from the Royal Academy of Engineering
Shell - cleaner energy and sustainability	Information and resources.
	The Engineering Student Experience Podcast
The Infinite Monkey Cage	Scientific Podcasts with Professor Brian Cox.
The Naked Scientist	Award-winning science podcasts and science radio shows.
The New Scientist	Engineering articles.
Tomorrow's Engineers	A website full of useful resources to learn all about engineering and potential engineering careers.

Key Stage 5

jstor.org	A website full of useful resources to assist you in making a successful application to study Engineering.
rich.maths.org	A website full of useful resources to get ahead in Maths. Useful for prospective Engineering students.
Articles and Journals	
	Chemical Engineering Articles
	Electrical Engineering and Electronics
Engineering Magazine	Research and reports on the latest manufacturing techniques, information technology, product development and management strategies.
European Journal of Computational Mechanics	publishes research studies related to numerical methods as well as their application to simulations of problems related to engineering in materials, structures, fluids, and solids.
Ingenia	Aerospace Engineering.
	Institute of Mechanical Engineers Magazine
JESTECH	The main themes or subjects that this journal includes are Electrical Engineering, Computer Science Engineering, Electronics Engineering, Civil and Mechanical Engineering, Material and Metallurgical Engineering.
Journal for Engineering Education	aims to promote knowledge and scholarly research in the field of engineering education.
Oxford Research: To the Zooniverse and beyond	How researchers having been harnessing volunteers to support their work.
	Oxford Science Blog
Oxford University Research	Delivering Drugs Better.
Oxford University Research	Driverless Cars.
	Particle Magazine
Project Drawdown	Articles on various methods of tackling climate change.
	The Chemical Engineer
	The New Scientist Magazine

The Oxford Scientist	A student run science magazine for Oxford University. Browse news, articles and more.
	The Young Scientists Journal
University of Oxford - Data Scientists to the Rescue	A unique project involving University of Oxford Information Engineers.
Massive Open Online Courses	
	Coursera Engineering MOOCS
	Harvard Engineering MOOCS
	Yale Biomedical Engineering MOOCs
Videos and Podcasts	
99% invisible podcasts	Infrastructure category.
Crash Course in Engineering	Short videos on different topics.
Flashforward	Podcasts on the Future.
Reading Suggestions	from Engineering undergraduates at Oxford University.
Books	
	Engineering: A Very Short Introduction – David Blockley
	Flying Buttresses, Entropy and O-Rings’ – James L. Adams
	Professor Povey’s Perplexing Problems – Thomas Povey
	The New Science of Strong Materials – JE Gordon
	The Theoretical Minimum - Susskind
	Think - Simon Blackburn
Useful for Multiple age Groups	
Oxpire	<p>Explore some of the big questions that make you think about Engineering, such as;</p> <ul style="list-style-type: none"> • Are explosions always destructive? • Will time travel ever be possible? • Is a robot a person?
Green Power Trust	Young people around the world are given a unique challenge: to design, build and race an electric car.

James Dyson Foundation	Engineering challenges and teaching resources.
	Live Status of the National Grid
	The Royal Society - YouTube Channel
What if?	Answers to absurd scientific questions.
	You Tube- Real Engineering
	YouTube - Air Pollution from Vehicles
	YouTube - An introduction to Chemical Engineering
	YouTube - Bio-medically Engineered Bubbles
	YouTube - Can an Arch Stand Up?
	YouTube - Lecture Communicating Climate Change
	YouTube - Lecture Nuclear Magnetic Resonance
	YouTube - Lecture Probabilistic Robots
	YouTube - Lecture What's so Super about Superconductors?
	YouTube - Oxford Quantum Materials Channel
	YouTube - Oxford Research: Fuel Cells Inspired by Nature
	YouTube - Oxford Research: The Global Race for Biofuels
	YouTube - Oxford Research: The Surprising Use of Silk
Women in Science	
	Engineer Girl Blog
	Twenty Days - Amy Johnson - Audio diaries of Amy Johnson, the first woman to fly solo from England to Australia.
	Women in Engineering at Oxford University
	Women In STEM

Resources for Teachers

Resource	Notes
Bloodhound Land Speed Record	Projects and activities connected to breaking the land speed record

E-Trust Programmes	A nationwide educational charity engaging young people through STE(A)M focused experience days, projects and placements.
EUK Education	STEM materials and support for Teachers
James Dyson Foundation	Various challenges for students of different ages and learning resources
Oxford Sparks	Engineering Teaching Resources
Science Experiments for Kids	Fun and educational science experiments
STEM Crew	STEM Crew provides free teaching resources covering real world science, technology, engineering and maths for key stage 3 and 4.