

My World, My Future

Where can STEM take me?

Get inspired with science, technology, engineering and maths (STEM)!

Have a look at some of our top recommended podcasts, fun days out, activities, competitions, magazines, social media channels, books, TV and films. Discover how scientists and engineers use technology and creativity to transform the way we live and see what sparks your imagination...

The content listed here is aimed at **secondary school students.** Head to the final page to find our dedicated section for **primary aged students.**

Got an idea to add to our list? Share it with us at **careersactivities@engineeringuk.com**

Podcasts

(11 to 16 year olds)

Have a listen at home or on the go to one of these free podcasts:

- IET: Undercover Engineers
- Oxford Sparks: Big Questions
- BBC World Service: 13 Minutes to the Moon
- BBC Radio 1's Life Hacks: How to Save the Planet
- NASA's Curious Universe

🏱 Days out

(11 to 16 year olds)

Take your family and friends out to explore what's on offer near you:

- Find a STEM festival near you: www.sciencefestivals.uk/festival
- Find a Science Centre near you: <u>www.sciencecentres.org.uk/centres</u>
- Experience STEM in action (Birmingham):

Competitions

(11 to 16 year olds)

It's your turn to put your ideas into practice and try out new skills! Check out these competitions and challenges, including chances to win exciting prizes:

- The Big Bang Competition
- BIEA International STEM Youth Innovation
 Competition
- British Science Week Poster Competition
- <u>CREST Awards</u>
- <u>Virtual Faraday Challenge</u>
- ICE CityZen Pollution Control Challenge



(13 to 16 year olds

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Follow your favourite STEM influencers and be the first to find out about exciting events in your local area:

• Code First Girls - @CodeFirstGirls	90
• Curiosity Rover - @MarsCurisoity	
• Nuffield Foundation - @NuffieldFound	\bigcirc
 Royal Institution - @RI_Science 	
Science Museum - @ScienceMuseum	90

- Stemettes @Stemettes
- The Big Bang @BigBangUKSTEM 🛛 🔊 💿 🕢
- This is Engineering @ThisIsEng

STEM Influencers:

- Dr Shini Somara @drshinisomara
 Sam McKaylin @sammcKaylin
 Megan McCubbin @meganmccubbinwild
 Ayo Sokale @ayoSokale
 Floriane Fidegnon @florianefid
 Mhairi McCann @mhairimccann_
 Professor Brian Cox @profbriancox
 Shawn Brown @shawnmakes
 Mark Rober @markrober
 Cognito @Cognito
 King of Bandom @TKOR (youtubo)
- King of Random @TKOR (youtube)

Tips and advice on what to do when you leave school:

- Apprenticeships @Apprenticeships
 Not Going to Uni @NotGoingtoUni
- UCAS @UCAS_online



Apps and activities

(11 to 16 year old

Grow your STEM skills at home and have a go at these fun, hands-on and online activities and games with family and friends:

- Play the Infinity Game and explore physics careers that might be for you: <u>infinitygame.futurefirst.org.uk/</u>
- Take the Meet the future you quiz to match your interests to engineering jobs: <u>www.mtfy.org.uk</u>
- Learn how to create games, animations and much more: projects.raspberrypi.org/en/codeclub
- Have a go at these interactive games: www.siemens.co.uk/gamesarcade
- Take the Engineering Habits quiz to find out how your skills relate to engineering: <u>stemresources.raeng.org.uk/engineering-habits-</u> <u>quiz</u>
- Take on the Launchball and create your own levels to play and share with friends: <u>learning.</u> <u>sciencemuseumgroup.org.uk/resources/</u>

Dates for the diary

(all ages

Find out more about how you can get involved in activities to celebrate and explore STEM:

- <u>National Apprenticeship Week</u> (February)
- <u>British Science Week</u> (March)
- International Women in Engineering Day (23 June)
- <u>National Coding Week</u> (September)
- <u>Tomorrow's Engineers Week</u> (November)
- <u>National Green Careers Week</u> (November)
- <u>National Engineering Day</u> (November)

🖳 Magazines

Get a regular top-up of inspiration and find out what's happening in the world, through these science, technology and engineering magazines:

- How it Works
- The Week: Science and Nature
- Ingenia

Description Book list

(11 to 16 year old

Read about important discoveries and famous scientists and engineers, and enjoy sharing what you learn with others:

- *Engineers Making a Difference* by Dr Shini Somara
- *The Boy who Harnessed the Wind* by William Kamkwamba and Bryan Mealer
- *Reaching for the Moon:* The autobiography of NASA mathematician Katherine Johnson
- *How was that Built?* By Roma Agrawal and Katie Hickey
- Women in Science: 50 Fearless Pioneers who Changed the World by Rachel Ignotofsky
- Unlocking the Universe by Stephen and Lucy Hawking
- How Science Works: The Facts Visually Explained DK Publishing
- UCL Engineering list of books for curious minds and budding engineers



TV and film

Sit down with family and friends and expand your mind with one of these fascinating films or TV episodes:

Films

- Hidden Figures
- The 11th Hour
- Dream Big: Engineering Our World

TV

- BBC Professor Brian Cox investigating space and time
- BBC Sir David Attenborough exploring the natural world
- My5 The Gadget Show hear about amazing tech innovations

YouTube

- Kids Invent Stuff
- Medical Mavericks
- Science Britannic

Careers info (11 to 16 year olds)

There are many other ways to find out about the different jobs and careers available in science, technology, engineering and maths, and the different routes into these jobs.

- Explore different careers: www.bbc.co.uk/bitesize/careers
- Careers with engineering: <u>www.neonfutures.org.uk/green</u> <u>www.thisisengineering.org</u>
- Careers with tech: www.techskills.org/careers
- Careers with physics: www.iop.org/careers-physics
- Careers with maths: <u>www.mathscareers.org.uk/11-16</u>
- Careers with biology: <u>www.rsb.org.uk/make-a-difference</u>
- Careers with chemistry: <u>www.edu.rsc.org/future-in-chemistry</u>
- Post-16 options and subject guides: <u>www.ucas.com</u>
- Work experience: <u>www.youthemployment.org.uk/</u> <u>workexperience</u>

Primary school students

With parents/carers

If you're aged 7 to 11, you might like to have a look at some of these books, magazines, podcasts, competitions, activities, and days out, with people at home.

(7 to 11 year olds)

- Tumble by Tumble Media
- Fun Kids Science Weekly
- Techno Mum
- Brains On!

🕎 Days out

(7 to 11 year olds)

- Find a STEM festival near you: <u>www.sciencefestivals.uk/festival</u>
- Find a Science Centre near you: <u>www.sciencecentres.org.uk/centres</u>
- 3-day science festival in Durham: www.dur.ac.uk/celebrate.science

Home activities

(7 to 11 year olds)

- Activities and games for children The IET
- <u>Do Try This at Home</u> fun experiments for kids and grown-ups The Institute of Physics
- <u>Educational activities</u> to try at home -The Institution of Mechanical Engineers
- Visit <u>the Wonderlab+</u> fun games, quizzes, videos and activities to try at home - Science Museum

Competitions & challenges

(7 to 11 year olds)

• CREST Awards

- Youth STEMM Award (YSA), Junior
- Virtual Faraday Challenge The IET

📳 Magazines

(7 to 11 year olds)

- <u>Whizz Pop Ban</u>g
- <u>National Geographic Kids</u>
- <u>Aquila</u>

🗌 Social media

(7 to 11 year olds)

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- Kids Against Plastic @KidsVPlastic
- Nat Geo Kids UK @NatGeoKidsUK
- Kids Invent Stuff @KidsInventStuff

门 Books

(7 to 11 year olds)

- Engineers Making a Difference by Dr Shini Somara
- UCL Engineering list of books for curious minds and budding engineers
- Hello Ruby, Adventures in Coding by Linda Liakus
- Izzy Gizmo and the Invention Convention by Pip Jones
- Kay's Anatomy by Adam Kay
- *The Adventures of Scout* (a book series) by Nicholas Parker, Jon Lakin, Matthew Baron and Ann Baratashvili
- What's the Weather by Fraser and Judith Ralston
- Women in Science: 50 Fearless Pioneers who Changed the World by Rachel Ignotofsky
- STEM Green Science at Home by Susan Martineau

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