

# 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

(12-16 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

🟱 Days out

(12-16 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: www.sciencecentres.org.uk/centres
- Experience STEM in action (Birmingham): www.thebigbang.org.uk

## Competitions

(12-16 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
- <u>BIEA International STEM Youth Innovation</u> <u>Competition</u>
- British Science Week Poster Competition
- <u>CREST Awards</u>
- Virtual Faraday Challenge
- Youth STEMM Award



## 🔔 Apps and activities

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

- Take the Meet the Future You quiz to match your interests to exciting engineering jobs: www.mtfy.org.uk
- Learn how to create games, animations and much more: https://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: https://stemresources.raeng.org.uk/ engineering-habits-quiz

## **Dates for** the diary

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

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

## Social media

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

- Born to Engineer @BorntoEngineer 0
- Code First Girls @CodeFirstGirls 50
- 0 • Curiosity Rover - @MarsCurisoity
- Nuffield Foundation @NuffieldFound  $\bigcirc$
- Royal Institution @RI\_Science
- Science Museum @ScienceMuseum
- Stemettes @Stemettes
- The Big Bang @BigBangUKSTEM
- This is Engineering @ThisIsEng

#### **STEM Influencers:**

- Avo Sokale @AvoSokale • Floriane Fidegnon - @FlorianeFid • Mhairi McCann - @MhairiMcCann\_
- Professor Brian Cox @ProfBrianCox
- Shawn Brown @ShawnMakes
- Mark Rober @MarkRober
- Cognito @Cognito
- ASAP Science @asapSCIENCE
- King of Random @TKOR (youtube)

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

- Apprenticeships @Apprenticeships  $\bigcirc$
- Not Going to Uni @NotGoingtoUni
- UCAS @UCAS\_online



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## 门 Book list

(12-16 year-old

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

- *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 (12-16 year-olds

#### 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 🛛 (12-16 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: www.mathscareers.org.uk/11-16
- 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 7-11, you might like to have a look at some of these books, magazines, podcasts, competitions, activities, and days out, with people at home.

## **Podcasts**

## (7-11 year-olds)

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

## **Days out**

### (7-11 year-olds)

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

## Home activities (7-11 year-olds)

- Activities and games for children The IET
- Do Try This at Home fun experiments for kids and grown-ups - The Institute of Physics
- Educational activities to try at home -The Institution of Mechanical Engineers

## Competitions & challenges

(7-11 year-olds)

- CREST Awards
- Youth STEMM Award (YSA), Junior
- <u>Virtual Faraday Challenge The IET</u>



#### Magazines

#### (7-11 year-olds)

- Whizz Pop Bang
- National Geographic Kids
- Aquila

Social media

#### (7-11 year-olds)

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- Kids Against Plastic @KidsVPlastic
- **9 6** 0 • Nat Geo Kids UK - @NatGeoKidsUK
- Kids Invent Stuff @KidsInventStuff

## 🗋 Books

#### (7-11 year-olds)

- 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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