

SALTASH LIBRARY HUB

SCIENCE FAIR 2022

'Lots to do, lots to see and lots to listen to'-



EARTH – OUR HOME

FRIDAY 11TH – SATURDAY 19TH MARCH

- 1. THANK GOODNESS FOR GRAVITY**
- 2. THE AMAZING WORLD OF NETWORKS AND COMMUNICATIONS**
- 3. THE INVISIBLE FORCE OF MAGNETS**
- 4. A.I. – ALREADY HERE?**
- 5. REVOLUTIONS IN ENGINEERING**
- 6. PROTECTING THE PALE BLUE DOT**

Here at Saltash Library Hub we are proud to support British Science Week 2022 with our own unique Science Fair tailored for all ages of the community to enjoy, learn and be inspired by.



The national theme is 'Growth' so we have designed the Science Fair to cover six scientific themes that have been improving and affecting our growth on planet Earth in many exciting positive ways.

We have permanent walk in displays and activities to enjoy as well as organized workshops, events and keynote lectures from celebrated speakers including Professors from the Institute of Physics and from Plymouth University.

Tamar Crossings will also be lending their expertise in the engineering world of bridges. (We do have two of the finest bridges on our doorstep after all).

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From the 11th – 19th Along with the permanent displays we have interactive exhibits including:- a space time simulator, magnetic rail gun, magnetic fluids, a network and communication quiz and lots more including engineering models and actual 'Robot Wars'.



Keynote speakers –

Monday 14 March - Dr Vincent Smith MBE
(Institute of Physics & University of Bristol)

1.15pm – ‘FUN WITH MAGNETS’

A workshop for children of primary age, to explore some simple properties of magnets and magnetism. Children will learn from their own experiments that magnets can attract and repel (pull and push), and other exciting discoveries about the invisible forces of magnets.

2.15pm – ‘DARK MATTER’

This illustrated lecture is suitable for students from year 9/10 and up to A level. It deals with the effects of gravity in and between galaxies. Beginning with a brief re-cap of Newton’s inverse-square law of gravity as it applies to Earth satellites and the Solar System, then looking at astronomical data on the motion of stars and galaxies, leading to the prediction of dark matter.

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Tuesday 15 March – Dr James Buckley
(School of Biological & Marine Sciences – Faculty of Science & Engineering,
University of Plymouth)

2pm – ‘CLIMATE CHANGE: THE GOOD, THE BAD AND THE UGLY’

Climate change is having clear impacts on plants and animals here in the UK. Some organisms are struggling to adapt while others are doing really well. This presentation will explore the factors that make species likely to succeed or not and will look at how people are helping scientists monitor the responses of organisms to changing climates and how we can help organisms succeed through efforts to ‘rewild’ our landscapes.

Suitable for GCSE and A level.

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Thursday 17 March – Dr Richard Handy
(School of Biological & Marine Sciences – Faculty of Science & Engineering,
University of Plymouth)

2pm – ‘IT’S A SMALL WORLD: THE WONDERS OF NANOTECHNOLOGY’

This presentation is for all ages covering the idea of new technology and its applications in biology, medicine, engineering, electronics etc. It invites us to think about where new technology might lead, in this case to cybernetics, with nanotech merging with synthetic biology.

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Friday 18th March – Mark Tebbs
(Tamar Crossings)

11am – WORKSHOPS FOR SCHOOLS

2pm – ‘BRIDGING THE TAMAR’

When you cross a bridge do you ever ask yourself about their history or how they were constructed? For instance, what were the earliest bridges and how did Brunel manage to build a ninety-foot pier in the middle of the tidal Tamar? Join us and discover the history of bridges. We have 2 iconic bridges right on our doorstep discover how and why they were constructed with the Bridging the Tamar team. **Suitable for all ages.**

There will be table top models of the Tamar suspension bridge and the Brunel Bridge with additional models of beam, arch and girder bridges. There will even be a fish tank demonstration to show how Isambard Kingdom Brunel was able to build the central pier of the railway bridge.

ROBOT WARS

on
Saturday morning - 12th March, 11am – 1pm

Suitable for big kids of all ages!

‘Innovating for the Future’

BRITISH SCIENCE WEEK POSTER COMPETITION

Early years – Infant – Junior - Senior
The theme for 2022’s poster competition is ‘Growth’. The deadline for entering the competition is 5pm on the 15th April 2022.

Judges will be looking for

Creative in approach – innovate angle on the content or creative interpretation of the theme

Content – Clear, accurate and informative about a STEM topic
(Science, Technology, Engineering and Math)

Effective communication – presented and communicated in an engaging way

Entrants welcome from everyone including schools, youth or community groups, parents entering their children or any other organisation

Check online for details about the competition and the prizes

<https://www.britishscienceweek.org/plan-your-activities/poster-competition>