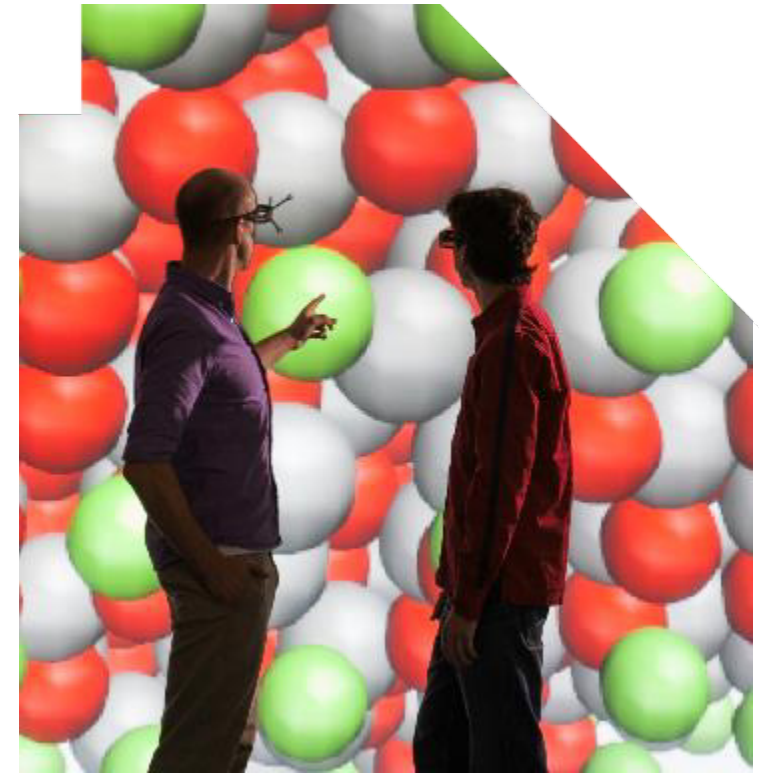


# Daresbury Open Week 2023

## Free KS4 Computer Science event 11th July 2023

As part of the Sci-Tech Daresbury Open Week, we are dedicating two full days delivering activities for school children from upper primary school through to upper secondary school.

- Monday 10 July: Key Stage 2 & Key Stage 5
- Tuesday 11 July: Key Stage 3, Key Stage 4 & Key Stage 5



These exciting days of talks, tours and interactive workshops will fire your students' imagination and inspire them about cutting edge science and technology, as well as STEM career opportunities.

# KS4 Option 1

## **Tour: Immerse Data Visualisation Suite**

The Hartree Centre at Sci-Tech Daresbury is home to some of the most advanced computing, data and AI technologies in the UK. Our computer scientists work with industry and the research community to address real life challenges and help UK industry to revolutionise processes whilst also supporting academic researchers with the tools they need to push the boundaries of pioneering UK and international science. Your pupils will visit our hi-tech Immerse Data Visualisation Suite, where we will use a huge 4K curved screen to showcase some of the amazing work that we do onsite, and how this impacts and improves our daily lives

## **Workshop: Ada Lovelace Workshop**

In this computing and electronics workshop, students are led through simple code and circuit design before being set the challenge to repair the Ada Lovelace, an imagined spaceship to Mars that has damaged critical hardware and software systems following a solar flare. Pupils will be assigned one of the damaged systems to design and implement hardware and software replacements using Arduinos and TinkerCAD. Can pupil creativity, ingenuity and enthusiasm successfully land the Ada Lovelace on the surface of Mars and usher in a new era for all humanity?





# KS4 Option 2

## Tour: Supercomputers and robots

The Hartree Centre at Sci-Tech Daresbury is home to some of the most advanced computing, data and AI technologies in the UK. During this activity within our data visualisation suite, pupils will take a tour through our virtual Supercomputer Machine Room. Our guides will explain the powerful computing capabilities of these machines and allow pupils to peer into the inner workings of this facility. We will then showcase some inspiring computer data visualisations to explain why we build these incredibly expensive high-performance computers before introducing pupils to our AI robot – Pepper.

## Workshop: Smart tech for smart lives

Smart devices are starting to play a large part in our lives, from Amazon's Alexa or Nests Home Automation devices to large-scale city-wide automation. In the next decade, the things we do will be increasingly shaped by smart technologies. On site we use technology such as sensors for everything from monitoring our equipment and our energy usage, right through to building the world's largest particle detectors. We will demonstrate why sensors are so important in our day to day lives. This workshop on smart tech will enable your pupils to learn how simple, cheap and already widely available technology can be harnessed to undertake tasks that will make our lives simpler, safer and more convenient in the future.





# Wonder Marquee

The Daresbury Open Week Wonder Marquee will be a celebration of the Science and Technology being delivered both locally in the North West of England, Nationwide and Internationally. Many exhibitors (including local Universities, Science Discovery Centres, National Sci-Tech companies and National Laboratories) will be on hand to engage pupils in a variety of hands on activities and demonstrations, to showcase the excitement that comes from working within Science, Technology, Engineering and Maths.





# KS4 Inspiring Talk

**Pete Lomas, Raspberry Pi Founder and hardware designer**

## **From Cardboard to Space**

Raspberry Pi has developed an affordable, accessible computer that is already providing today's children with unparalleled opportunities for learning to program. Digital computing and the Internet, with all the current emphasis on touch-screen visual cues and icons has for many become abstract and remote. With the advent of the Raspberry Pi we now have a credit-card sized computer we can hold in our hands and play with, reminding us of our capacity to tinker with technology and be creative.

During this inspirational talk, Pete, will take pupils on a journey from his humble beginnings in a terraced house in Salford to becoming the Founder and Trustee of Raspberry Pi. Pete will reflect on his own experiences to highlight the need for young people to learn about real computing and discuss the mission to inspire the next generation of engineers through digital making. Along this journey he will illustrate some of the projects he has been involved in, from games, big science and those that are truly "out of this world".



# KS4 arrival options

| Time          | Arrival Option 1                   | Arrival Option 2                   | Arrival Option 3                   | Arrival Option 4                   |
|---------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 08:45 - 09:30 | Allocated Coach Drop off Time Slot |                                    |                                    |                                    |
| 09:30 - 10:15 | Inspiring Science Talk             | Allocated Coach Drop off Time Slot |                                    |                                    |
| 10:15 - 11:00 | Science Fair                       | Inspiring Science Talk             | Allocated Coach Drop off Time Slot |                                    |
| 11:00 - 11:45 | Tour and short break               | Science Fair                       | Lunch (please bring your own)      | Allocated Coach Drop off Time Slot |
| 11:45 - 12:30 | Workshop                           | Lunch (please bring your own)      | Inspiring Science Talk             | Lunch (please bring your own)      |
| 12:30 - 13:15 | Lunch (please bring your own)      | Tour                               | Science Fair                       | Inspiring Science Talk             |
| 13:15 - 14:00 | Allocated Coach Pick up Time Slot  | Workshop                           | Tour and short break               | Science Fair                       |
| 14:00 - 14:45 |                                    | Allocated Coach Pick up Time Slot  | Workshop                           | Tour and short break               |
| 14:45 - 15:30 |                                    |                                    | Allocated Coach Pick up Time Slot  | Workshop                           |
| 15:30 – 16:15 |                                    |                                    |                                    | Allocated Coach Pick up Time Slot  |

# Registering your Interest

Registration for expressing an interest in attending is now open with registrations closing at **11pm on Wednesday 22 March 2023**.

All schools will be contacted via email by **Wednesday 29 March 2023** to confirm whether or not they have been successful in gaining a place.

We will put all schools who have not gained a place on a waiting list to be contacted should places become available.

If you want your pupils to find out how science and technology is changing the world, then please register your school's interest via the link below.

Register now : <https://www.smartsurvey.co.uk/s/UXEJQ1/>



Science and  
Technology  
Facilities Council





# Important information

1. Due to the vast amount of effort required for delivery, this is a special event delivered just once every four years
2. This event will involve over 100 staff including scientists, engineers and support staff based at Sci-Tech Daresbury and our partner organisations
3. This event will use public funds to enable schools to attend this event free of charge (in addition corporate sponsorship will be used to subsidise coach transport costs)
4. Head Teachers from successful schools will be required to give a written guarantee of attendance on behalf of their school and failure to attend will result in a charge for the coach transport
5. Schools will be required to liaise with coach transport companies booked by the Daresbury Laboratory Public Engagement Team to finalise their arrangements to and from the event
6. A separate registration form will need to be completed for each class that you would like to apply to bring, therefore schools wanting to register more than one class will need to complete multiple registration forms
7. Pupils, teachers and other accompanying adults will need to bring a packed lunch
8. Due to the volume of schools on site, we request that all pupils wear school uniform to be easily identifiable during activities that involve multiple schools participating together
9. A full information pack will be sent out to schools who successfully gain a place prior to the event



# How places will be allocated

There will be 600 pupil places available for KS3 & KS4 pupils enabling 20 schools to participate. School places will be allocated by a series of blind ballots with the following weightings:

- 50% of KS3 & KS4 places will be ring fenced for schools located within the 40% most deprived areas of England and Wales (as measured using the English and Welsh Indices of Multiple Deprivation – IMD).
- Allocated school places will reflect the different localities of schools who register for the event. 5 school places will be reserved for hyper-local schools within Halton and Warrington; 7 school places will be reserved for local schools from Cheshire West and Chester, Halton, Knowsley, Liverpool, Salford, St Helens, Trafford, Warrington, Wigan, or Wirral; and 8 school places will be available to schools from any location
- Schools will only be placed into the blind ballot for workshop/tour choices that they have already pre-selected
- Schools will only be placed into the blind ballot for arrival time options that they have already pre-selected

# Ask Wendy

UKRI believes that everyone has a right to be treated with dignity and respect, and to be provided with equal opportunities to flourish and succeed in an environment which enables them to do so. We also recognise and seek to maximise the benefits achieved by diversity of thought and experience within inclusive groups, organisations and the wider community.

We work hard to provide young people with opportunities that will open their eyes and minds to science and technology. We love what we do here and want to share that passion with as many young people, from as many different backgrounds, as possible. If you are thinking about registering your school, but have questions, just ask. It could be about physical accessibility, suitability for young people with SEND requirements, links to the curriculum, getting to Daresbury...whatever your question, big or small, get in touch.

If you have any questions that we have not answered, please contact Wendy Cotterill [by email](#) or call 01925 603408.



Register now at:

<https://www.smartsurvey.co.uk/s/UXEJQ1/>