#### **SUMMER SCIENCE EXHIBITION 2019**

#### A guide for teachers

Here you will find a brief description of each exhibit and the key subjects covered by the research. You will also find some curriculum-linked key words to help map the topics to your schemes of work at KS4 and KS5.

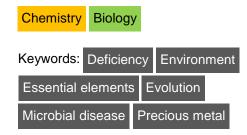
The Exhibition provides the opportunity to bring the latest research into your classroom. Think about how this research can be used in your lessons. Which exhibits will be of particular interest to your individual students? If you are visiting the exhibition encourage your students to prepare questions for the scientists in advance.

Take a look at the exhibits in more detail at royalsociety.org/summerexhibits

#### First floor – Wolfson Rooms

## In your elementUniversity of Warwick

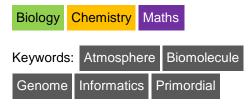
Celebrate the 150<sup>th</sup> anniversary of the periodic table with an investigation into the elements that are essential for life.



#### 2. A recipe for primordial life

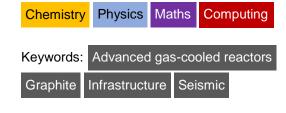
UKRI - MRC Laboratory of Molecular Biology

Dive into the primordial soup to reveal the fundamental building blocks of life.



#### 3. The great Bristol shake off University of Bristol

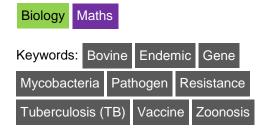
Shake, shake, shake those fake earthquake tremors to help safeguard our nuclear reactors against natural disasters.



#### 4. It's a knockout

Royal Veterinary College

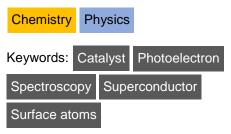
Explore how tuberculosis is becoming a disease of the past through the use of genetic technologies.



#### 5. Surface matters

Cardiff University

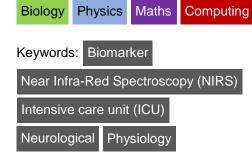
Detect how changes on the surface of materials can dramatically alter their properties.



#### First floor - Council Room

**6. Lighting the brain after birth** University College London (UCL)

Glimpse how light can be used to monitor the brain activity of babies and even save the lives of newborn infants.



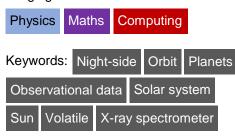


#### **SUMMER SCIENCE EXHIBITION 2019**

## 7.BepiColombo: x-ray eyes on Mercury

University of Leicester

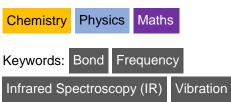
Voyage to this mysterious and uncharted planet and explore how its secrets are being revealed using x-ray imaging.



## 8. Molecular music: the sound of chemistry

Ilkley Grammar School / University of Bradford

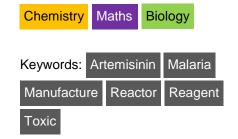
Join Ilkley Grammar School as they create musical masterpieces to show what's happening in a chemical reaction.



# Ground floor – City of London Rooms

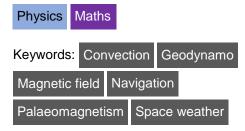
## **9. Green light for chemistry** University Of Nottingham

Find out how light can be used as a clean, green alternative to chemicals in manufacturing methods.



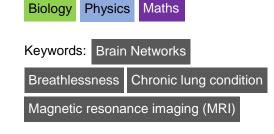
## **10.Magnetic to the core** University of Liverpool

Discover what the Earth's ancient magnetic field tells us about the hidden depths of our planet.



### **11. Breathing with your brain** University of Oxford

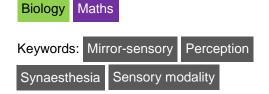
Why do we get breathless? Explore how and why the brain can influence the breathing process.



#### 12. Do you feel me?

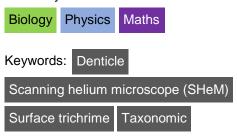
Goldsmiths, University of London

Discover how words can have a taste and sounds have a colour for people with synaesthesia, a condition that blends the senses.



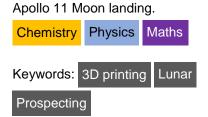
#### **13. Seeing with atoms** University of Cambridge

See how helium can be used in microscopy to open a new world of discovery.



### **14. Living on the Moon** Open University

Prepare for the next big lunar challenge, 50 years after the historic

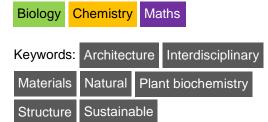


#### **SUMMER SCIENCE EXHIBITION 2019**

#### Ground floor – Wellcome Trust Lecture Hall

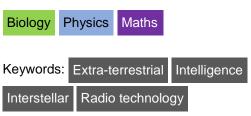
## **15. Timber towers of tomorrow** University of Cambridge

Explore the science and engineering of super tall timber, from the smallest of cells to the highest of skyscrapers.



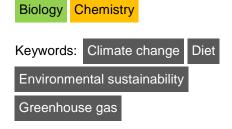
## **16. A message from afar** University of St Andrews

Join the debate on whether we should try to communicate with extraterrestrial civilisations.



## **17.Take a bite out of climate change** University of Manchester

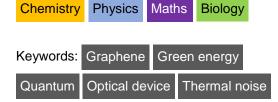
Uncover the surprising truths about what we eat in this myth-busting look at the food on our plate, and how it gets there.



#### 18. Art of isolation

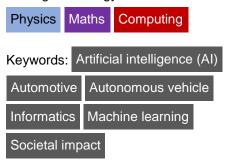
Lancaster University

Is the quietest place in the Universe really next to the M6? Investigate how the removal of 'noise' is enabling the development of brand new technology.



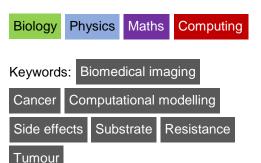
### 19.Trusted autonomous vehicles University of Leicester

Would you trust a driverless car? Put your views to the test and see what it takes to establish trust in this up and coming technology.



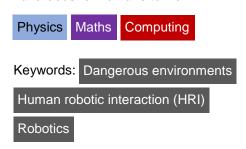
## **20.** The mathematics of cancer University College London (UCL)

In the search for a cure for cancer, see how mathematical modelling is providing valuable insight into the complex structures of tumours.



#### 21.Robots in the danger zone Heriot-Watt University

Meet the real-world robots unlocking new possibilities in areas too hazardous for humans to work.



# 22. Super biomaterials to fight superbugs

University Of Nottingham

Discover the amazing materials helping to battle the rise of superbug infections in medical devices.

