Sunday 13th October 2019



11:00am - 4:00pm

Norman Lockyer Observatory

Entry: £10 Adults - Children and Friends Free

Activity 10:00am - 11:00am History Walk around the NLO - Free NLO



Show 11:30am - 12:30pm Science Boffins including Rocket Launch

Jaw dropping scientific experiments, mind blowing demos and entertaining, interactive games

All ages

Show 12:30pm - 12:45pm Juggling - with Juggling John

All ages

Talk 1:00pm - 2:00pm Dr Adam Rutherford - Book of Humans

Talk 2:15pm - 3:15pm

We like to think of ourselves as exceptional beings, but are we really any more special than other animals? In an original and entertaining tour of life on Earth, Adam Rutherford will explore how many of the things once All ages

considered to be exclusively human are not.

Dr David Whitehouse - Apollo 11 The Inside Story

All ages



Activity: 3:30pm Jet Car Racing

Build your own iet car or race the one you have built earlier (kits available for £5 - see website) **Under 18**

Activities: 11:00am - 4:00pm

Hands on Activities

Build your own jet car to race, make your own motor, build the tallest spaghetti tower, Robots with Colin Walls, Pop Pop boating racing All ages

Space Detectives - with Jo Richardson

Virtual reality system simulating space flight

All ages

Under 11 **Cheltenham Science Group** Coding workshop - with 2 Times Do **Under 18** Story Telling with Mike O'Leary All ages **Planetarium Shows** All ages Institute of Engineering and Technology All ages Sid Valley Radio - Live Broadcasting All ages Visit to the Telescopes - Lockyer, Kensington All ages and Connaught **RSPB** All ages Ex periments All ages Sidmouth Ham Radio All ages

Parish Church

Sunday 13th October Talk 7:00pm - 8:00pm Dr Euan Nisbet - Caring for the Atmosphere

Greenhouse warming, pollution and climate change Ages 14 - Adult

Methodist Church

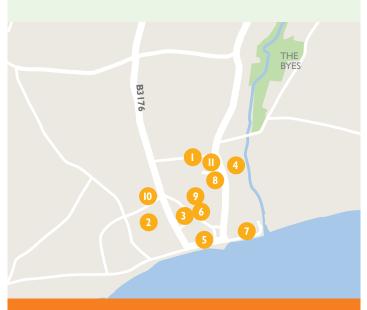
Sunday 20th October Talk 7:00pm - 8:00pm Dr Martin Hodson and Rev Margot Hodson - Caring for the Earth:

Sustainable agriculture in a rapidly changing world. Ages 14 - Adult

Roman Catholic Church

Sunday 27th October Talk 7:00pm - 8:00pm Dr Mark Windsor - Caring for the World:

Big Questions and conversations with young people Ages 14 - Adult



- 1. All Saints' Church 2. Cricket Club 3. Kennaway House 4. Masonic Hall
- 5. The Kingswood & Devoran Hotel 6. Sidmouth Parish Church 7. Lifeboat Station
- 8. Methodist Church Hall 9. Sidmouth Museum 10. Manor Pavilion 11. Old Meeting House



Welcome to the eighth Sidmouth Science Festival

with events for everyone, adults, children and families

Age **guidelines** for events are on the programme Booking through Eventbrite for some events Photos and videos may be taken for promotional purposes

Sponsored by

















For the latest information look on our website www.sidmouthsciencefestival.org/

Friday 27th September 2019 (pre festival)

Science Festival Quiz – General Knowledge and some science – form a team 7.00pm for 7.30pm start £3 Cricket Club Ages 14 - Adult

Saturday 5th October 2019

Activity 10:30am for 1:00pm Sidmouth Library

Fun Palaces: Have a go at an easy experiment with Libraries Unlimited

Ages 3 - 11

Talk 2:00pm – 3:00pm Kennaway Hatton Room

Dr Pete Etchells – Lost in a Good GameWhy people play video games and do they affect our

Ages 14 - Adult

Cycle Bridge, The Byes

Talk 3:15pm – 4:15pm

Jonathan Scott – The Vinyl Frontier

Kennaway Hatton Room

The story of the golden record sent in 1977 beyond our solar system on Voyager 1 and 2

Ages 14 - Adult

Activity 5:30pm – 8:00pm Bat Catching Research Session

behaviour?

Join ecologist **Louise Woolley** to help catch bats for identification purposes as part of the Sid Valley Bat Project

Adults only



Sunday 6th October 2019

Activity 10:00am – 4:00pm Hands on Science **Esplanade**

Have a go at lots of hands on science experiments giant balloons, bubbles, electricity, vacuum vessels and more...

All ages

Activity 10:00am – 1:00pm Emergency Service Vehicles Have a close up look! Esplanade

All ages

Talk 11:00am - 12:00pm

Sailing Club

Short 10 mins talks - what to do in an emergency

Ages 14 - Adult

Supported by Age Concern

Activity 2:00pm – 3:00pm History Walk around the NLO Norman Lockyer Observatory
All ages

Talk 1:00pm – 1:50pm Sailing Club

Dr Lewis Jones - Major Trauma - the first 4 hours How major trauma is managed in the NHS in the initial few

"golden hours". Ages 14 - Adult

Sunday 6th October 2019

Talk 2:00pm – 3:00pm Steve Austen – Science and lifeboat safety How science is improving lifeboat safety

Talk 3:00pm – 3:30pm Devon Air Ambulance continued
Sailing Club

Ages 14 - Adult

Sailing Club Ages 14 - Adult



Talk 7:00pm – 9:00pm

All Saints' Church
Professor Meric Srocosz – Caring for the Oceans
Looking at changing ocean dynamics including temperature

Looking at changing ocean dynamics including temperature, acidity, salinity, sea levels and ice melt, followed by questions and discussion

Ages 16 - Adult

SCIENTISTS IN CONGREGATIONS

Monday 7th October 2019

Talk 7:00pm – 9:00pm Norman Lockyer Observatory
Professor Ian Robson - The Supermassive
Black Hole at the Centre of our Galaxy

How we know about such phenomena and what it means for the formation and evolution of galaxies in the Universe Ages 16 - Adult



Tuesday 8th October 2019

Activity 10:00am – 12:00pm Visit to the Lyme Way Winery (to be confirmed) Lyme Bay Winery Adults olny

Booking Essential

Talk 3:00pm – 4:00pm Kennaway Cellar Bar Dr Rachael Nicholls-Lee – Wave and tidal power: combating climate change Ages 14 - Adult



Ada Lovelace Day

Talk 7:00pm – 9:00pm Kingswood and Devoran Hotel
Pint of Science – University of Exeter

Grab a pint and listen to experts talk about their subject in a relaxed atmosphere. Food available.

Adults only

Wednesday 9th October 2019

Talk 11:00am – 12:00pm

Parish Church

Sidmouth Museum

Alexandra Drysdale - The Story of Blue on Art

Where does the blue in medieval illuminated manuscripts come from? How did chemists of the nineteenth century invented synthetic blues? Come along and discover more about how the colour blue has been used in art.

Ages 16 - Adult

In conjunction with the Art Society of Sidmouth

Activity 2:00pm – 3:30pm
Town walk exploring the geology
of the Jurgesic Coast



Wednesday 9th October 2019 continued

Talk 2:00pm - 3:00pm

Parish Church

Dr Paul Matts - Skin as a barrier

Skin Disease, covering its scope and incidence (all the way from acne to serious, life-threatening conditions), its effect on the individual (from physical disability to the huge issue of stigma and ostracism)

Ages 14 - Adult

Talk 3:00pm - 4:00pm

Parish Church

Prof Anni Vanhatalo, Human Physiology at the University of Exeter Helping Kenyan athlete Eliud Kipchoge to achieve a world

Ages 14 - Adult record in the marathon





Talk 7:00pm - 9:00pm Pint of Science - Kings College London Blue Ball, Sidford

Grab a pint and listen to experts talk about their subject in a relaxed atmosphere. Food available

Adults only



Thursday 10th October 2019

Workshop 1:30pm - 4:30pm

Sidholme Music Room

Melanie Mehta - L.O.V.E. - Language of Voice for Everyone Workshop based around the structure, function and effective use of the

voice. Often we think of voice being "singing" but voice is much more than that. This session will use both a presentation and practical exercises to highlight how the voice is made up, what impacts on our voice, how to care for our voices and exercises to warm up and maintain good voice use. Adults only

In conjunction with the British Voice Association



Visit 1:00pm - 3:00pm

See what is involved in wastewater treatment? (Own transport and Booking essential)

Sidmouth Museum

Treatment works

Adults only

Activity 2:00pm - 3:30pm Deep Time Walk led by the University of Exeter All ages

Exhibition Schools art exhibition from local schools on the theme of emergency services



Thursday 10th to Saturday 12th



Kennaway House





Thursday 10th October 2019 continued

Talk 7:30pm - 9:00pm

Manor Pavilion Theatre

Professor Danielle George - Big Universe Big Data: how to handle the vastness

We have been measuring the physical world for a long time, so what's changed? The 'Internet of Things' ... What is all the hype about? In a word, its connectivity. We can now connect all sorts of everyday objects such as fridges, heart monitors and aeroplane engines. Professor George will explore how this is impacting our world today. Ages 14 - Adult





In conjunction with the Sid Vale Association

Friday 11th October 2019

Talk 2:30pm - 3:30pm

Manor Pavilion Theatre

Dame Julia Slingo - Climate Change: A defining challenge for the 21st Century

Dame Julia considers the evidence for human influences on our climate, and describes how computer simulations of weather and climate tell us about the future. The potential impacts of future climate change will be discussed, along with the implications for how we produce and use energy, as well as managing Earth's limited resources. Ages 14 - Adult







In conjunction with **Devonshire Association**

Festival Reception 6:45pm - 7:30pm **Kennaway House** With Guest Speaker Mr Philip Jenkinson, Her Majesty's Deputy Lord-Lieutenant of Devon

By invitation and for Friends of the Science Festival

Talk 7:30pm - 9:00pm Professor Mike Depledge - Re-imagining Nature and our place in it

Kennaway House

The threat to our continued survival from climate change, biodiversity loss, pollution and many other environmental stressors have led to calls for urgent action. How can we meet the exciting challenge of re-imagining Nature and our place in it, for the future? Ages 14 - Adult

Booking Essential

Sidmouth Science Festival also puts on a programme of science activities inside local schools including: Sidmouth College St John's School Sidmouth CE Primary **Newton Poppleford Primary Tipton St John CE Primary Feniton CE Primary Ottery St Mary Primary West Hill Primary** Whimple Primary **Sidbury Primary Payhembury Primary**





Saturday 12th October 2019

Parish Church

Talk 10:30am - 11:30am Dr Juha Saatsi -What do we know about the nature of light?

Ages 14 - Adult

Talk 11:40am - 12:40pm Pete Drewett - Sport Science and Successful Rugby Union Performance.

Will the team that wins the World cup in Japan on November 2nd 2019 be the best at implementing Sport Science? Ages 10 - Adult



Free Hands-on activities for all the family

Follow the dinosaur footprints to each venue and stamp your card. Collect 6 stamps, then return your card to Kennaway House before 5:00pm to be entered into the prize draw

11:00am - 5:00pm

Tesla Coils and **Electrical Show** - Alec Jefford Flashes and bangs and tricks you didn't know you could do

All ages

Old Meeting House

Environment Agency

All ages

11:00am - 5:00pm

Lifeboat Station

Sidmouth Lifeboat

Find out about the work of the Sidmouth Lifeboat

All ages

11:00am - 5:00pm Methodist Hall

Royal Society of Chemistry

All ages

Exeter Maths School - Mathematical puzzles to entertain

University of Exeter Medical School

Quekett Microscopical Club - Investigate the unseen world with microscopes

Institute of Civil Engineers - Hands on building activities for all

University of Exeter Department of Sport

Young Devon - WHAT

11:00am - 5:00pm

Masonic Hall

Geology in our lives - minerals, rocks, fossils, and dinosaurs

- The geo-hall will be packed with stands offering hands on activities, demonstrations, displays, models, fossils, minerals, rocks ...and much more All Ages

Talk 11.15am - 11.45am

Mike Green - Influence of the Milankovitch Cycles on the Earth's climate

Talk 12.00pm - 12.30pm

Malcolm Hart - Plankton, climate and life on Earth

Talk 1.30pm - 2.00pm

Kieran Satchell - Dinosaur research focusing on Allosaurus

Talk 2.15pm - 2.45pm

Colin Kilvington - Discovering Britain walks - "Tors and Tin"



11:00am - 5:00pm

Drone Racing with Hillbilly Hot Quads

Watch exciting drone racing and use the virtual reality headsets to fly the course

All ages





11:00am - 5:00pm

John the Juggler

Defying gravity – watch John do some amazing tricks

All ages

Market Square

11:00am - 5:00pm

Kennaway House

Colyton Grammar School and Petroc College

Hands on fun and hair raising demonstrations

- vou will be amazed!

Wonder Workshops, Fablab and Colin White's Sporting Balls

Experiments to amaze and find out about the science of what we kick, throw and hit in sport

Metamaterials, College of Science, Engineering and Maths, and Exeter Optics Group

Met Office

Learn more about weather forecasting

Astrophysics and Institute of Physics Explore the furthest reaches of the Universe

and then the physical world here on earth

Pinhole Camera

See how the very first cameras produced a picture

Sid Valley Radio - live broadcasting



Cellar Bar

All ages

Blue Room

All ages

Yellow Room

All ages

Hatton Room All ages

Amyatt Room

All ages

Outside All ages

Foyer

7:00pm - 8:30pm

Norman Lockyer Observatory

Granny Galactica

Musical theatre based on science by David Haynes following the story of Granny Nettle on a journey around the cosmos led by Franklin, an alien robot

Booking essential - £5 adults, free for children and students All ages

