

Orkney International Science Festival Schools' Programme Update

Thursday 1st - Wednesday 7th September 2022

Primary (and early years)

To register an interest please email Rebecca.ford@oisf.org including as much of the following information as possible for **each** activity you are interested in:

1. **Title of activity you are interested in (some contributors may be offering more than one activity, please specify which you would like).**
2. **Name of School /class(es) and number of pupils (for each activity)**
3. **Your preferred date/time (please check activity availability details carefully) – please list alternative date/time(s) in order of preference.**
4. **Teacher name and contact details (email/phone) for main contact.**

Activities will be allocated to try to make sure as many schools as possible get access to their preferred sessions. In-person activities will be limited by logistics and availability, so please register interest as soon as possible.

STEM Orkney - Ashleigh Kitchiner

STEM Orkney

STEM Ambassadors have been trained and are used to support and deliver sessions globally to enhance engagement across STEM subjects. As a STEM ambassador myself, I have been delivering sessions since 2016 and I had noticed that since moving to Orkney I have not delivered a single session to an Orcadian school. I could not see any requests on the stem.org.uk platform and didn't know who to contact to connect with schools.

What did I do? I got in touch with [SSERC](https://www.sserc.org.uk) and put a call out to all registered Ambassadors in Orkney. Many replied and since then I have around 20 enthusiastic Ambassadors across the archipelago waiting to deliver sessions in a range of subjects from physics, acoustics, biology, engineering, coding and much more.

Now it's time to bridge the gap and connect these Ambassadors with teachers and educators across Orkney. If you need an activity or support, please contact me at ash.kitchiner@gmail.com and we can put you in touch with the right Ambassador through the [STEM Learning platform](https://stem.org.uk).

Maria Bell – Mesomorphic, Silicon Craft

Format: Livestream and in person workshops

Suitable for: Teachers and primary classes

Availability: Online Introduction to Scratch: Sunday 4th 09:00, 12:30, 18:00; Monday 5th 09:00, 12:30

Virtual Cuppa: Sunday 4th, Tuesday 6th, Wednesday 7th at 15:45 for 45 mins

In Person Classroom workshops: Tuesday 6th and Wednesday 7th September

Activity description

Shetland based software development company Mesomorphic founded their Silicon Croft initiative to support the learning of digital skills across the Highlands and Islands. Divided into three phrases; Plant, Cultivate and Growth they provide a variety of learning opportunities for educators and students from primary school through to further and higher education.

Are you a primary school level educator interested in learning more about Scratch? We are running 5 virtual Introduction to Scratch sessions on 4th and 5th of September. These 90 minute sessions will familiarise you with Scratch and cover basic functionality to allow you to work through one of our Silicon Croft lesson plans. Times available are 0900 & 1230 on the 4th and 5th, with an additional session at 1800 on the 4th. Spaces are limited so book soon!

Are you involved in primary, secondary or higher education and want to learn more about our Silicon Croft and how we are supporting digital skills across the Highlands and Islands? We will be holding a 45 minute virtual cuppa session at 1545 from 4th, 6th & 7th September to tell you about our plans.

We will also be in Orkney on 6th and 7th September where we can deliver in person Scratch sessions to schools across the island.

Want to find out more or book a session? Please contact us at maria@mesomorphic.co.uk

Catherine Gemmell – Scotland Conservation Officer, Marine Conservation Society SSERC STEM Ambassador Hub

Format: Livestream Presentation

Suitable for: P6-P7

Availability: Thursday 1st September 09:30 – 10:15

Activity description

Stop the Plastic Tide

Join Catherine from the Marine Conservation Society for a virtual dive into our amazing ocean to learn about the creatures that live there, including some Orkney Sea Creature locals, and what we can all do to help celebrate, protect and recover Scotland's seas!

Ally Hughes – Project Co-ordinator, SULSA SSERC STEM Ambassador Hub

Format: Livestream Presentation

Suitable for: P6-P7

Availability: Tuesday 6th September 13:30 – 14:15

Activity description

Exploring Scientific Discoveries in Scotland

From the discovery of penicillin to the invention of the telephone, Scotland has a rich history in science exploration, and Scotland's islands play a massive role in this. Learn about newly discovered crops from Orkney, exciting archaeological discoveries about Vikings, and lighting up homes using the power of waves. Will you be the next famous Scottish scientist?

University of Glasgow Centre for Virus Research

Format: Online livestream presentation

Suitable for: P5-P7

Availability: Monday 5th September

Viral Vampires - 45 mins

Meet scientists from the University of Glasgow as they introduce your class to real life blood-sucking creatures in this interactive and engaging session. We'll discover the biting behaviour of ticks in Scotland and vampire bats in Costa Rica, and discuss the important research we are carrying out to understand and protect people from the diseases these animals can carry.

Curriculum Links

Topical Science, Body Systems & Cells, Biodiversity & Interdependence

Kevin Parker – STEM Ambassador

Format: Online livestream presentation with Q&A (possibility of in person depending on demand)

Suitable for: P1-P7

Availability: Monday 5th

Activity description

A Career in Science 30-40 mins

A career in science, especially chemistry, isn't just about being in a lab. Some people think that chemistry is all about wild looking men in white coats, filling a laboratory with smoke or smells, or even blowing it up!

Actually chemistry is about studying pretty well all of the important things around us:

Chemists make all the pills that make us better when we are ill, and the fuels that go in our cars and buses. They let us grow more food (and deal with any that's uneaten) and they understand the air we breathe and why our climate changes. They can make new things out of metal, plastics, and carbon. They invented the silicon chip that's in all our computers and mobile phones, and the lithium batteries that power them. Chemists can clean water without boiling it, and are working on ways to make and store energy from the sun.

Kevin has studied all of these things and answers questions like 'how many wind turbines do we need to replace one coal power station, and how much would that cost?' and 'if you put all the water in the world into one giant ball how big would it be?'

He worked for a large oil company when he was younger, but now has his own company that does work for all sorts of people (companies, magazines, think-tanks, universities, even a Church). He recently completed his 500th piece of client work after 25 years of freelancing. In this talk he describes some of the types of work he has done over the years and makes the point that most of the things he has done as short or interim assignments can be life-long careers for others.

Kevin has worked in Britain, France, Germany, Sweden, Russia, Ukraine, Slovenia, Poland, Romania, Greece, Turkey, Malta, Crete, Cyprus, Lebanon, Egypt, Jordan, Syria, Iraq, Iran, Bangladesh, Singapore, and America.

And, by the way, he has blown up a chemistry lab... and a car engine...and a truck engine...oh and some people fired rockets at him one time. But you wouldn't dream of asking him questions about that, would you?

Aberdeen Science Centre

Format: Livestream

Suitable for: P1-P7

Availability: Friday 2nd September 13:30-14:15

Activity description

"How to make the Perfect Poo" (45 mins)

Join Aberdeen Science Centre as we take a journey following the digestive system. Sticky, fun, and educational! Suitable for all primary pupils.

Loan microscopes

Aberdeen Science Centre have provided us with a class set of eight USB microscopes which schools can borrow during the festival.

Look at fabrics or beasties or onion cells ... or indeed explore many everyday objects from a different perspective.

Project onto a smart board, use android phones, chromebooks, or a laptop.

Drop us an e-mail saying when you would like to use them; if possible, we will deliver them the day before so we can help you get them going.

SCN 3-13a - Using a microscope, I have developed my understanding of the structure and variety of cells and their function

TechFest

Format: Digital Workshop

Suitable for: P4 – P7

Availability: You will be sent a link to register to receive the resource pack

Activity description

Discovering My Energy Future

Sponsored by OPITO

Look around you. Are the lights on? Is your computer running? Or the TV playing? All of these things require energy! We use energy every day to power our world. At the moment, most of the energy we use comes from fossil fuels, but there is also a lot of work being done on the development of renewable energy sources.

Sign up for this free, digital workshop packed full of information, videos and fun activities that can be run in the classroom or at home. In this digital workshop, you'll learn about different energy sources, and the trade-offs associated with each. Which energy source will you choose to power your future?

- Running Time: optional – at your own pace
- CfE Links: Science, Technology, Engineering, Renewable Energy

Whale and Dolphin Conservation

Format: Online pre-recorded workshop

Suitable for: P1-P3; P4-P7

Availability: Throughout festival. You will be sent a link to access workshop recording.

Activity description

How Saving Whales can Save the World!

(P1-3 45 mins; P4-7 1 hour)

Join Whale and Dolphin Conservation to discover all about whales and dolphins, the threats they face such as litter, and how saving whales can save the world!

Orkney Native Wildlife Project

Sadly, due to unforeseen circumstances, we are now unable to offer this activity.