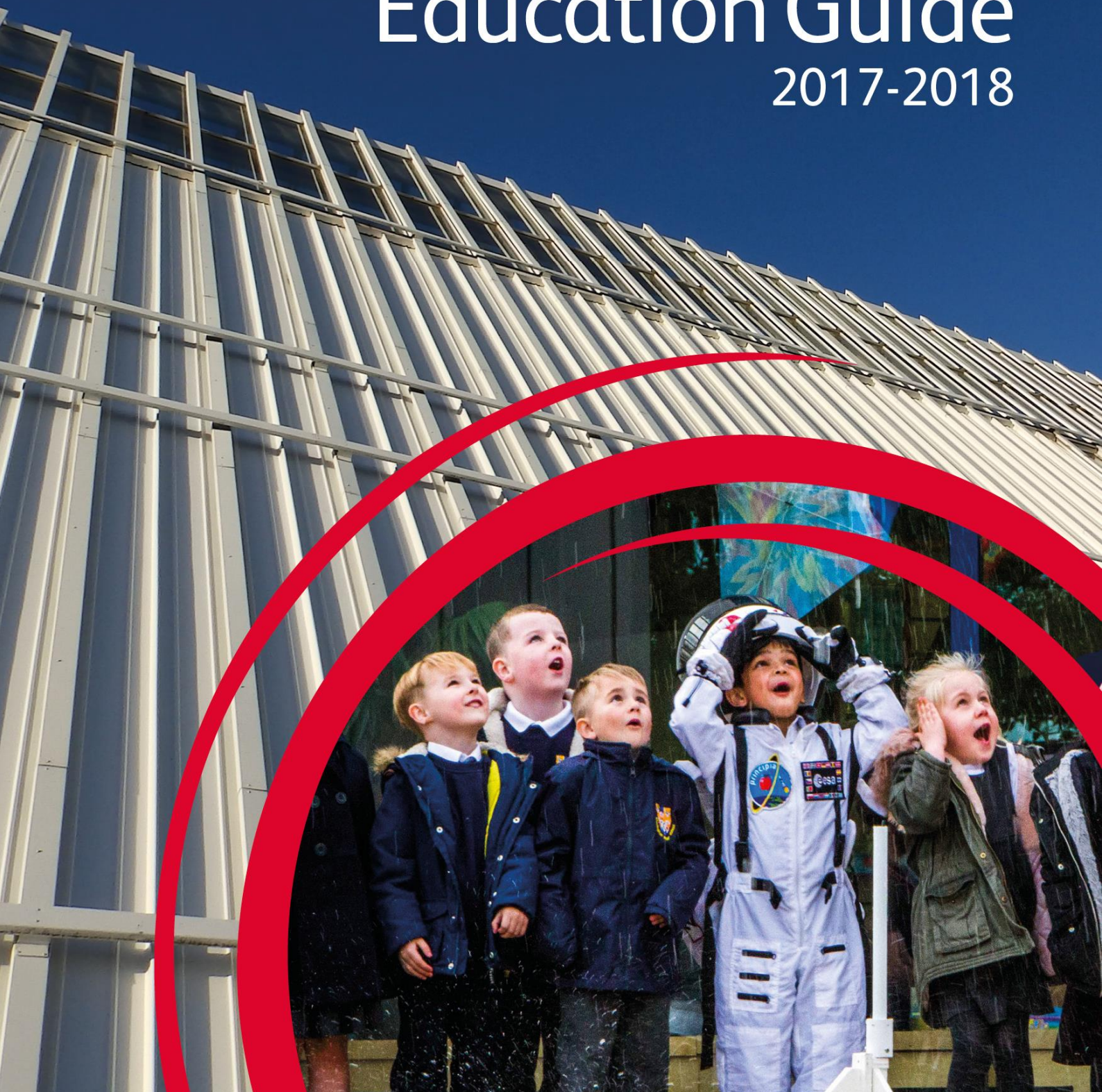




www.dundeesciencecentre.org.uk/learning

Education Guide

2017-2018



Welcome!

As an independent charity and educational hub for lifelong science learning and engagement, Dundee Science Centre welcomes 10,000 school visitors each year. Our STEM Learning Team has designed a unique Learning Programme to support educators across Tayside and North East Scotland. For 2017-2018, we are excited to introduce some fantastic new projects and opportunities.

Bring a class to Dundee Science Centre

Inspire your learners with a trip to Dundee Science Centre to engage with STEM in a different setting and support learning with our curriculum-linked activities.

Medical Marvels

Dundee Science Centre's £2 million redevelopment launches in 2018 and sees the introduction of the amazing new hands-on Medical Marvels exhibition. This explores the pioneering work in world-leading medical research and technology that takes place in Tayside.

This will be complemented with our new exciting range of Medical Science workshops for learners from First Level to Senior Phase. We are now looking for teachers to give feedback on our new school workshops and teacher Professional Learning sessions, to make them as useful as possible for you and your pupils! See back cover for details.

Teacher Professional Learning with the Science Learning Institute

Dundee Science Centre's Science Learning Institute (SLI) is a hub for teachers, scientists and other educators to come together to share knowledge, form new partnerships and deliver inspiring learning experiences. The 2018 development will see the SLI further enhanced with a new learning zone and 80-seat seminar room, and an expanded programme of Professional Learning courses for educators.

The scientist who took the workshop was very animated, interesting and brilliant with the children ...

It was great to have someone with that level of expertise in science teach them.

Teacher, Meigle Primary School

Dundee Science Festival 2017

FREE outreach

  #DSciFest

This year, Dundee Science Festival is coming to Dundee schools! The festival runs from Saturday 28 October to Sunday 12 November, celebrating STEM discovery, innovation and research. As part of the festival, we are offering to come to Dundee school assemblies to deliver FREE shows on the themes of space exploration or medical technologies. Slots will be allocated on a first-come, first-served basis, so get in touch early to find out more!

The Dundee Science Festival schools programme runs parallel with Abertay University's Dundee Primary Schools Science Week (30 October – 03 November).

www.dundeesciencecentre.org.uk/learning



Visit Dundee Science Centre

What's included in a class visit?

Group visits for Nursery, Primary and Secondary Schools can last up to three hours and include a workshop, time for a packed lunch and time to explore the exhibition. This leaflet features a number of our curriculum-linked workshops. For updates throughout the year, see www.dundeesciencecentre.org.uk/learning

How much does it cost?

Admission costs £4 per pupil, with teachers and carers admitted free of charge. Lunch bags can be prepared, if required, at a cost of £3 per pupil. During class visits, pupils can also explore our gift shop with its fantastic range of science-themed products. Alternatively, goodie bags can be ordered at the time of booking, starting from £3. All prices correct at time of printing.

Funding

The Scottish Government provides some travel subsidies for schools in areas high on the Scottish Index of Multiple Deprivation (SIMD) or in rural areas. Dundee City Council provides funding to cover admission costs for a fixed number of pupils from each Dundee school. The Edina Trust also funds admissions for Fife, Angus and Perth & Kinross schools high on the SIMD. We are extremely grateful for this support which makes Dundee Science Centre accessible to a growing number of pupils each year. Other funding may be available for STEM activities and we are happy to advise on sourcing and your application.

To find out more details on the full list of workshops we offer, or to book a visit, please see our website or get in touch:

www.dundeesciencecentre.org.uk/learning

learning@dundeesciencecentre.org.uk

01382 868609

Fantastic learning experience pitched perfectly for P4/5. Complemented our science learning in school well.

Teacher, Duloch Primary School

Before your visit

All teachers are encouraged to come for a free familiarisation visit ahead of their school trip, to see what is available and plan their pupils' learning. Please book in advance to qualify for free entry.

During your visit

Our team will welcome you and explain what to expect during your visit. Pupils are required to be supervised throughout the visit by a responsible adult.

After your visit

We really value your opinions, so every teacher is asked to return a feedback form, and please tweet any photos @DundeeSTEMLearn. Our website also has a range of free classroom resources which can be used to complement your visit.



Workshops

Early Level

Healthy Body Bits

With the help of our giant ragdoll, Stuffee, we find out about our major organs and what they do.

Little Noises

Different games and activities – some noisy, some quiet – encourage all to think about what sound is and why it is important to us.

Little Stargazers

What can you see in the sky tonight? Your little stargazers learn about the night sky and enjoy star myth storytime.

First Level

Healthy Body Bits

With the help of Stuffee – a giant ragdoll with removable organs – learners will explore our major organs, what they do and how to keep them healthy.

Sounds Like Fun!

What is sound, and how do we use it? Learners make a lot of noise in this introduction to the science of sound.

Exploring Our Solar System

Learn about the Earth's place in our Solar System and find out what else is out there, highlighting the scale of the planets.

Destination Space (First Level)

Learn all about living in space and Tim Peake's mission to the International Space Station.

Second Level

Healthy Body Bits

With the help of our giant ragdoll, Stuffee, and other exciting hands-on activities, learners explore body systems and how to keep them healthy.
Suitable for P4 and P5.

Forensic Fingerprints



This hands-on workshop will have learners trying out different Forensic Science techniques while inspecting their own fingerprints.

Sounds Like Science!

Different demos show how sound travels, while learners discover how animals such as dolphins, moles and elephants use sound to their advantage.

Rocketry Force

After an introduction to Rocket Science (which also challenges common misconceptions about gravity) learners will engineer and launch paper rockets to put their new knowledge to the test.

Exploring Our Solar System

Join us for a tour through the Solar System, highlighting the scale of the planets, and discussing current observations and explorations beyond the Earth.

Third/Fourth Levels

Beyond the Visible: the Electromagnetic Spectrum



Investigate the properties and real-world uses of visible and invisible EM radiation. Learners explore Physics with practicals including using an IR camera, UV fluorescent materials, lasers and spectroscopes.

**New workshops
launching
Easter 2018**

**including Medical Science
to complement the
new exhibition,
and old favourites
like 'Circuits' and
'I am Unique'**

Robolab

Learn about robots, programming and teamwork, by programming LEGO Mindstorms NXT 2.0 rovers through various challenges.

Outreach

If you cannot visit Dundee Science Centre, we can **come to you!**

Most of our workshops can be run at your school, including some additional options, such as:

How to be a Scientist (First Level)

Learners get to be scientists, using their senses and observational skills to investigate some simple Chemistry experiments.

How to Make the Perfect Poo (First or Second Level)

Learners guide a typical breakfast through the stages of the human digestive system. This hands-on activity is messy and memorable.

Destination Space (Second Level)

Space travel is a risky business. Learn the science behind the dangers of space travel and experiment with the engineering solutions that keep astronauts safe and healthy.

Lights, Camera, Reaction! (Second Level)

This Chemistry demo-show delves into the spectacular science of ordinary and extraordinary chemical reactions!

Prices for schools in any local authority are based on distance and workshop choice, and we can tailor sessions to accommodate multiple classes in a day. We are delighted to announce that, in 2017-2018, funding will be available from Dundee City Council to help towards the cost of an outreach visit for Dundee schools. For a full list of workshop choices, please see our website.

Medical MARVELS

New for 2018

Dundee Science Centre's £2 million redevelopment will open in 2018, following a successful fundraising campaign. It will feature a brand new exhibition, new learning spaces, and new Learning Programmes for schools and teachers.

New exhibition

The Medical Marvels permanent exhibition will showcase Tayside's pioneering work in world-leading medical research and technology – delivering an interactive visitor experience featuring state-of-the-art technologies and medical advancements. Visitors will discover how we can see inside the body and explore how disease can be diagnosed and treated through minimally-invasive techniques, all developed right here in Tayside – *local science with global impact!*

School workshops

To complement the exhibition, new curriculum-linked workshops are being introduced with a Medical Science theme. Workshops will be available from First Level to Senior Phase, with topics including:

- DNA gel electrophoresis
- Dissections
- Surgery & Pathology
- Medical imaging
- Blood & the immune system

Teacher professional learning

A wide range of training courses for educators is being launched through the Science Learning Institute, with many places fully funded. These twilight sessions for Early Years to Senior Phase educators will offer learning opportunities, resources and confidence for STEM teaching.

Primary teachers & Secondary Biology teachers

If you are interested to hear more, we are looking for teachers to give feedback on our new school workshops and teacher Professional Learning sessions. Help steer our new Learning Programmes to make them as useful as possible for you and your pupils! To sign up for more information, or just to hear more, please get in touch at learning@dundeesciencecentre.org.uk or on 01382 868609.



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