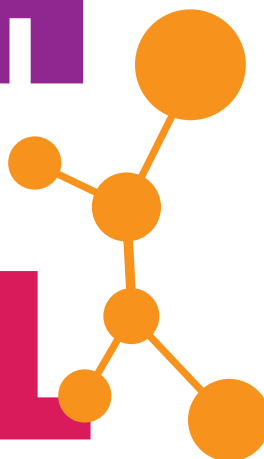


NORWICH SCIENCE FESTIVAL



Organised and hosted by

the
forum

**LEARNING
PROGRAMME
16-20 OCTOBER 2017
- SECONDARY**



Learning Programme sponsored by

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WELCOME!

When it comes to getting young learners excited about and engaged with science, the Norwich Science Festival (NSF) Learning Programme has it covered. It is back, bigger and better than ever from Monday 16 October to Friday 20 October 2017. Schools, colleges, home-educated learners and youth groups are all included in the fun and learning.

LET'S EXPLORE!

This year the theme is Exploration! We are offering learners the chance to explore our fascinating planet, blast off into the vast universe above us, dive into the deepest oceans, and examine the complex DNA which makes up every living organism. Ultimately we are opening up this amazing world to young minds.



YOUTH STEMM AWARD

We are thrilled to be working with Youth STEMM Award (YSA), who provide a focused and engaging framework for young people aged 13-18 to further their passion, knowledge and skills in STEMM (Science, Technology, Engineering, Maths and Medicine) - find out more opposite.

LEARNING EXPERIENCES FOR ALL

Whether you are looking to bring an individual home-educated learner, a class, a whole year group or a youth group, there is something for everyone. PLUS, this year we are offering Science In School outreach events for those schools who are unable to travel to Norwich.

We look forward to meeting you in October!

Sarah Power
Learning and Event Manager

Lizzie Figura-Drane
Learning Events Coordinator

If you would like to contact Sarah or Lizzie, email us at learning@theforumnorwich.co.uk.

norwichsciencefestival.co.uk
[#norwichscifest](https://twitter.com/norwichscifest)



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Special thanks to our Learning Programme sponsors, Norse Group.

A word from our sponsors:

"With its many service divisions including school meals, grounds maintenance, transport, cleaning, security, and building maintenance, Norse touches the lives of thousands of Norfolk people every day. Through its commitment to the county's education and skills development, the company is proud to support the Norwich Science Festival Learning Programme."

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YOUTH STEMM AWARD



The Youth STEMM Award is an achievement-based award for students in Years 9-13, designed to support and inspire the next generation of STEMM professionals. Participants log STEMM-related activities across four core strands on a personalised e-portfolio.

Students can work towards a Bronze, Silver or Gold level Award, inspire the next generation, engage the public, develop skills and shape their future career in the STEMM sector. The e-portfolio allows schools to capture engagement across their cohort and identify areas that need further development.



Every student attending the Explore Science Experience event will receive a Norwich Science Festival YSA Passport in which they can log their participation and record activities. This will help shape engagement with exhibitors and provide a framework to make their visit compatible with the Youth STEMM Award. Participation in some other events (marked with the YSA star) and in the public Norwich Science Festival programme (21-29 October) also counts towards the YSA, for example attending talks. Look out for the YSA logos in the main Norwich Science Festival programme (out late August).

Contact YSA to find out more, register your school for the Youth STEMM Award and help students to continue their journey into STEMM:



HQ@ysawards.co.uk



[@YouthSTEMM](https://twitter.com/YouthSTEMM)



ysawards.co.uk

"I'm excited by the potential the YSA offers to students in the UK. We live in a scientific and technological world, and encouraging young people to take an interest, and maybe a career in STEMM, has never been more important. To be part of our 21st-century democracy, it is vital we have scientifically literate citizens and the YSA gives students the chance to become just that."

Marty Jopson (BBC One Show Scientist, author and Science Communicator)

BEFORE THE FESTIVAL

STEM CLUBS TAKEOVER CHALLENGE

Calling all STEM Clubs - WE WANT YOU!

Are your students mad about science? Keen to develop their science communication skills? Passionate about inspiring new audiences?

Do they want to show the world their curiosity and research in Chemistry, Biology, Physics, Maths, and Engineering?

YES? Then we want your STEM Club to be a part of the Norwich Science Festival 2017!

Your School STEM club can apply to takeover the Youth STEMM Awards stage during the NSF Learning Programme with a performance slot of 15 minutes.

Their efforts can be detailed in their YSA e-portfolio under the 'Engaging the Public' strand.

Training will be available before they take to the stage, to help them master the art of science communication.

Apply now via email to find out more - please describe your STEM Club's interests and research, what the title/subject will be and how they might deliver a short performance.

Please note that any demos which involve fire or smoke are not allowed, unfortunately!

A stage screen will be available to run any PowerPoints or images, along with microphones - so if they have a quiet voice no need to worry! It might sound daunting, but we will be there to support you all the way, so go on - take the challenge and help them be pioneers for youth science!



To apply, and for more information on coach and ticket funding for participating school STEM Clubs, email learning@theforumnorwich.co.uk

BEFORE THE FESTIVAL

YOUNG COMMUNICATIONS TEAM

Do your students want to pursue a career in science, media or marketing? We have a great free opportunity for young people in Norfolk aged 16-21 to get involved with our Young Communications Team.

Preparations are well under way for the second year of the Norwich Science Festival which runs 21-29 October, with the learning programme 16-20 October. Your students can play an important role in ensuring that NSF 2017 is the best celebration of young people's media creativity ever. There are many different science performances, talks, activities and exhibitions lined up and students will have the chance to train and work with many experts.

THE OFFER

The team will receive support and training to enable them to carry out their roles, working closely with The Forum staff and key mentors, to carry out activities connected with the management, delivery, recording and evaluation of NSF events, such as:

- Initiating and delivering social media campaigns
- Writing and delivering copy for all media, including the NSF website and local media
- Creating and sourcing images for all media
- Recording and documenting NSF activities including making vlogs, films, and recordings for radio broadcasts
- Initiating ideas for NSF future activities
- Reviewing and evaluating NSF events and activities



TEAM MEMBER SPECIFICATIONS

All team members will:

- Have a keen interest in science and media activities
- Want to contribute to NSF activities and to gain valuable experience
- Be reliable and professional in outlook and behaviour
- Be confident in all aspects of public-facing activity
- Promote NSF and be good ambassadors for its activities and those of its partners and supporters
- Have good communication skills and be confident with appropriate social media use
- Be flexible in approach and attitude especially during the Festival period

THE PROCESS

All interested, aged 16-21, should contact learning@theforumnorwich.co.uk for a registration form. You should explain why you want to be part of the team, how you fit the team member specifications, and if you have any particular experience or interests e.g. in film making or journalism.

All applications to be received by 5pm on Friday 15 September 2017. Following the closing date, applicants will be invited for a casual group event to take place early evening on Friday 22 September where they will receive further information on roles and schedules.

SECONDARY + SIXTH FORM / COLLEGE

EXPLORE SCIENCE EXPERIENCE DAYS

KS3 YEARS 7-9

KS4 YEARS 10-11

KS5 YEARS 12-13

Monday 16 - Thursday 19 October
10am - 2.30pm
The Forum's Atrium and Gallery

A whole day dedicated to getting interactive with science! Whether it's exploring the vast universe above us, the deepest oceans, frozen landscapes, the soils of the earth, or the complex DNA in every living organism, there'll be plenty of activities to open up our amazing world to young minds.

EARTH ADVENTURE WITH HUW JAMES

TALK

Our planet is pretty special. From huge moving glaciers to active volcanoes, wide oceans to the longest mountain ranges. Being part of this planet means it's up to us to look after it.

Join adventurer Huw James as he takes you on a tour of some of the most amazing locations on our planet, and shows how he and his team create media in the field to take viewers on a journey to some of the most extreme environments on Earth.

With interactive demonstrations and HD footage from the field, maybe you'll be inspired to have an Earth adventure.



ANTURUS SCIENCE SLAMS

We can learn about the planet through exploring glaciers and volcanoes. By using camera equipment we can look in depth at volcanic dust and hot clouds of pyroclastic flow.



CELEBRATING 50 YEARS OF JIC: INSIDE THE NATURAL WORLD

Ever wanted to...

- discover how science lets us 'look' at atoms to solve puzzles, helping us understand plant disease, design new vaccines and much more?
- meet 'good' microbes that help our food grow and fight back against 'bad' microbes?
- learn how a garden weed became one of the most important plants in science?
- find out what's really in the food you eat?

It's been 50 years since the John Innes Centre moved to Norwich. In celebration of this fruitful relationship with their spiritual home, their departments are featuring in The Forum throughout the Learning Week to give you a chance to get hands-on with real science.



YOUTH STEMM AWARD TAKEOVER STAGE DR KEN FARQUHAR

Dr Ken presents science shows all over the globe. This week he is hosting our Youth STEMM Award Stage. He will be encouraging STEM Clubs to take over the stage to present their own explorations into science, and presenting a few quirky experiments of his own - including the science of juggling, magic and unusual materials.



SCIENCE SLAMS

Students will get face-to-face with a variety of scientists and organisations, and explore their important work in 15-minute Science Slam sessions. The students evidence their engagement with the 'Science Slammers' through the Youth STEMM Award Passport created specifically for the Norwich Science Festival.

£7.50 per student for the Explore Science Experience Day (£5 booking fee per group).

FUNDING AVAILABLE for places and coaches - to find out about funding and how to book please email learning@theforumnorwich.co.uk

TALLEST JELLY COMPETITION FINALE KS3 YEARS 7-9, KS4 YEARS 10-11

Competition finale: Monday 16 October
10am - 11am

The Forum's Millennium Plain

Presented by Teacher Scientist Network, Institute of Physics and Royal Society of Chemistry

Can your school build the tallest jelly tower? How will you build your wobbly construction? Will it stay upright for the finale, or be a mess of jelly on the floor!

To take part, and for information on coach and ticket funding, email learning@theforumnorwich.co.uk for more details.



SIXTH FORM

HIDDEN FIGURES: WOMEN IN SCIENCE DAY KS5 YEARS 12-13

Tuesday 17 October
Cinema City 10am – 12.30pm, followed by
The Forum's Auditorium 1.15pm- 3pm

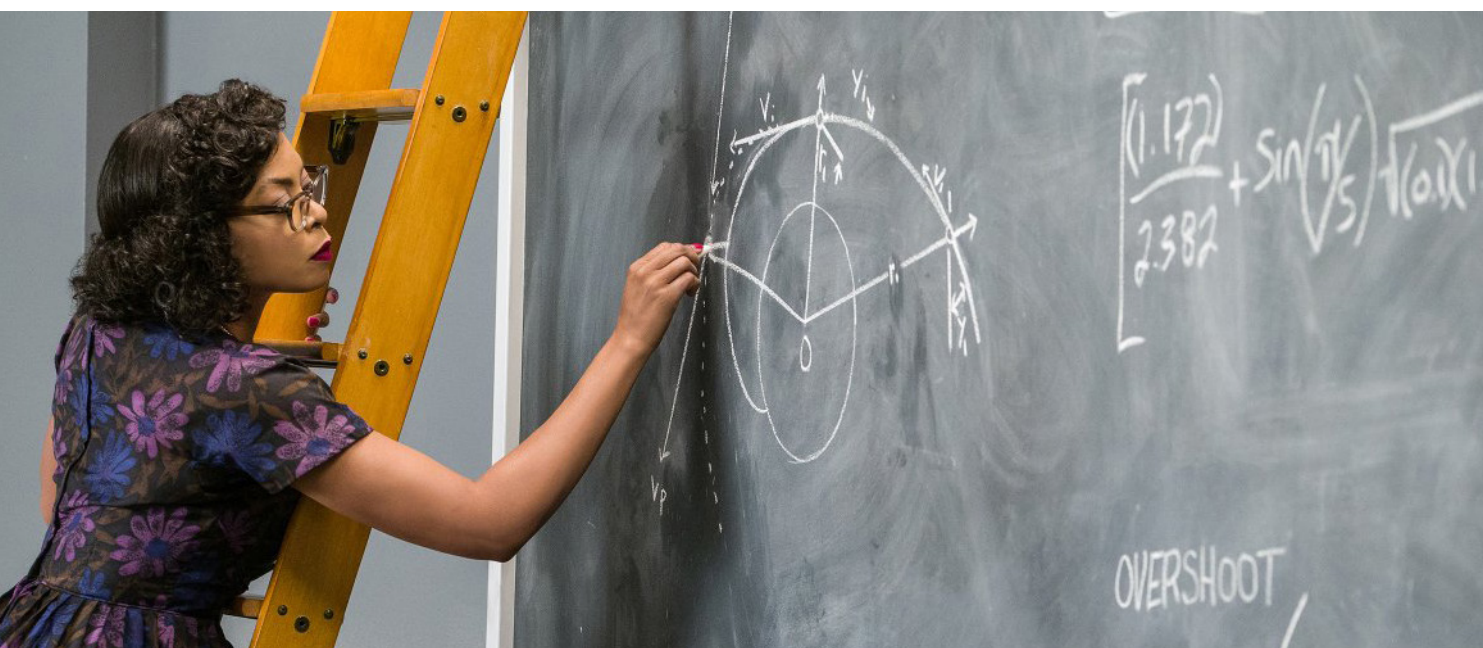
An inspiring day all about realising your potential, including a screening of the acclaimed film Hidden Figures.

Real-life 'Rocket Woman' Vinita Marwaha Madill (Space Operations Engineer, European Space Agency, and former spacesuit designer) discusses the film, and the topics it raises, with Dr Laura Bowater (Professor of Microbiology Education and Engagement, UEA).

Our Women in Science panel then looks at how to get ahead in science, featuring Vinita Marwaha Madill, Dr Laura Bowater, and Rachel Jarrold (Director of Sciences, Sir Isaac Newton Sixth Form).

HIDDEN FIGURES

Without three gifted mathematicians, America might not have put its first man into space in 1961. That they were female and black in a country where racial segregation still was the norm, only adds to the strength of their achievements. Hidden Figures tells the uplifting tale of how these women helped make history.



Director: Theodore Melfi.
Starring: Taraji P. Henson, Octavia Spencer, Janelle Monáe, Kirsten Dunst, Kevin Costner.
USA, 2016.
127mins, PG.

£10 per student (£5 booking fee per group).
Book via learning@theforumnorwich.co.uk



HOW TO BOOK + FAQs

HOW DO I BOOK PLACES

Simply choose your event then email learning@theforumnorwich.co.uk. We will send you the booking form and other information to assist an enjoyable visit.

FUNDING FOR PLACES AND COACHES

To find out if your school is eligible for funding for places and coach travel, please contact learning@theforumnorwich.co.uk.

PAYMENT

On receipt of the booking form, your places will be confirmed and an invoice sent to your finance office. We will expect payment in full prior to your visit. There is a £5 booking fee applied per group booking.

WHAT HAPPENS NEXT?

From September, you will receive all the relevant information such as: Risk Assessment, H&S information, visit lead documents, photo and filming permission forms, evaluation survey and travel guidance. Please note, by agreeing to visit the Norwich Science Festival you are also agreeing to fill in a short evaluation survey. Evaluation is an essential for us to continue to develop and deliver valuable, engaging and exciting opportunities for young learners.

GETTING TO THE NSF LEARNING VENUES

There is NO parking at the Forum for cars, minibuses or coaches. Transport management will be in place to assist your school's safe arrival and departure, and we will send you directions for your drivers which must be adhered to on the day of the visit.

MAKE LEARNING AN EXPERIENCE AT THE FORUM

Learning at The Forum supports engagement with the arts and culture, technology and skills. We aim to empower learners of all ages to grow and flourish, enriching lives to be healthy in both body and mind and promote active citizenship.

ANY OTHER QUESTIONS?

Please contact us by emailing learning@theforumnorwich.co.uk.

SPONSORS + PARTNERS

The Norwich Science Festival and Learning Programme is brought to you by The Forum.

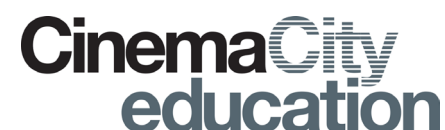
We are grateful to our Learning Programme sponsor:



The Forum received funding support for the Norwich Science Festival from:



Programme partners:



NORWICH SCIENCE FESTIVAL HIGHLIGHTS 21 – 29 OCTOBER



Look out for the NSF17 brochure out at the end of August and keep an eye on norwichsciencefestival.co.uk for the latest events!

JOIN IN THE SCIENCE CHAT!

- #NorwichSciFest
- [norwichscifest](https://twitter.com/norwichscifest)
- Norwich Science Festival
- [norwichsciencefestival](https://www.instagram.com/norwichsciencefestival)

Share your photos and experiences of both the Learning Programme and the main Norwich Science Festival using #NorwichSciFest, and follow us on our social media channels for all things science!