

The Big Bang Fair

North West
2017

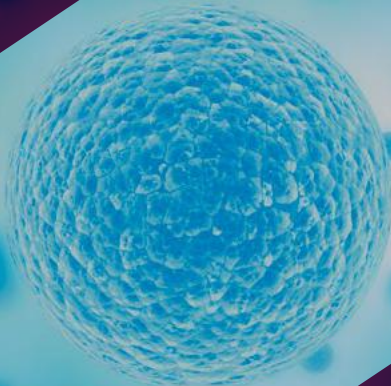


#BBNW
@TBB_NorthWest

**BROUGHT
TO YOU BY**



all about
STEM



'Turning molecules into medicines'

AstraZeneca is a global pharmaceutical business with three big sites in the region that produce medicines for patients around the world.

At AstraZeneca we believe that by pushing the boundaries of science we will be able to deliver life-changing medicines to help patients wherever they are in the world.

We call it 'turning molecules into medicines'. What this means is that our scientists work with colleagues around the world to look at molecules that might be the next important medicine that will treat cancer, heart disease or respiratory problems for example.

When they find a likely molecule it is passed to others who work on producing enough of the compound to use for experiments before, if it is successful and safe, it is eventually tested on humans.

This can all take a long time - traditionally up to 12 years from finding a molecule to approval to use as a medicine. But, wherever possible, the scientists look for ways to shorten the time safely to allow important medicines to get to the patients quickly.

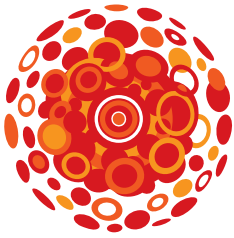
Recently the scientists at Macclesfield and around the world managed to develop a molecule through to approval for use in patients in just two years. Probably one of the fastest approvals ever!

But it's not all about chemistry. One team is developing a digital application that will assess how a person with asthma, uses their inhaler. When an inhaler is fitted with a gyroscope, its orientation can be fed back to an app, which can tell a user whether their technique is correct. If it isn't, the app can play training videos to help.

All of this work means AstraZeneca employs scientists from many disciplines - biologists, chemists, physicists, engineers and mathematicians to name a few. Some join after their degree at university and some come into the business as apprentices and then work and study at the same time.

In the North West AstraZeneca has three big sites. Macclesfield is the largest and concentrates on making medicines and developing new molecules. It also has a large IT team the second biggest in AstraZeneca. At Liverpool we produce an inoculation for flu that is given to children across the UK. Finally at Alderley Park we have many other teams including finance and legal to name just two.

So why are we supporting The Big Bang North West? The Big Bang North West is all about inspiring young people from all backgrounds to study science, technology, engineering and maths to go on to pursue careers in engineering and science. We can't stress enough how important this is. The people at The Big Bang North West could well be just the ones we are looking for to join us in our quest to make new medicines for patients.



The Big Bang Fair

North West



Welcome

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The Big Bang is a UK-wide programme led by EngineeringUK to bring science and engineering to life for young people. The Big Bang celebrates and raises the profile of young people's achievements in science and engineering and encourages more young people to take part in science, technology, engineering and maths initiatives with support from their parents and teachers.

The Big Bang North West is part of The Big Bang Near Me, a programme of events which take place across the UK to enable young people to discover close to home the exciting and rewarding science and engineering careers that their science and maths subjects can lead to. It is delivered by **All About STEM**.

The Big Bang's flagship event, The Big Bang UK Young Scientists & Engineers Fair will take place at The NEC, Birmingham, 14-17 March 2018.



Tweet your photos

Remember to tweet your photos of the day to **@TBB_NorthWest** and include **#BBNW**

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The Big Bang Fair

North West

Venue Map

AREAS WILL BE COLOUR CO-ORDINATED WITH BALLOONS!

- 1 Operating Theatre Live
- 2 Medical Mavericks
- 3 Medical Mavericks
- 4 Reaseheath College
- 5 Daresbury Laboratory (STFC)
- 6 University of Liverpool Health & Life Sciences
- 7 University of Liverpool Health & Life Sciences

- 8 North West Ambulance Service
- 9 Innovation Agency
- 10 Liverpool School of Tropical Medicine
- 11 Health Education England North West Zone

- 12 code club
- 13 amaze
- 14 Baltic Creative
- 15 Agent Marketing
- 16 Educate Awards
- 17 FACT
- 18 CNC Robotics
- 19 Atkins Global
- 20 Priestley College
- 21 Liverpool City Region Apprenticeship Hub
- 22 Supergen Bio Energy Hub
- 23 Scott Tyco

- 24 Health Education England North West Zone
- 25 Health Education England North West Zone
- 26 Health Education England North West Zone
- 27 Riverside College
- 28 Liverpool Hope University
- 29 Liverpool Institute of Performing Arts (LIPA)
- 30 City of Liverpool College
- 31 Edge Hill University

- 32 Science2U
- 33 Little Sandbox
- 34 Greater Merseyside Learning Providers Federation

- 35 Unilever

- 36 University of Liverpool – Engineering 4 All
- 37 Wirral Met College
- 38 LJMU - Chemistry for All
- 39 LJMU - Engineering & Formula Student Car
- 40 Farm Urban
- 41 Chester Zoo
- 42 Eureka! The National Children's Museum

- NS Noisy Toys – Science Busking Buggy

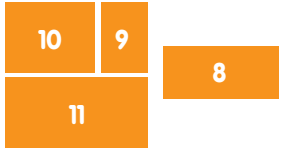
- 43 Institute of Engineering & Technology
- 44 Institute of Mechanical Engineers
- 45 Institute of Civil Engineers
- 46 Nuclear Institute
- 47 Catalyst Science Discovery Centre & Techniquest Glyndŵr
- 48 Liverpool Girl Geeks
- 49 Museum of Science & Industry
- 50 Bureau Veritas
- 51 amec foster wheeler
- 52 Alstom

- 53 Tatton Park
- 54 Canal & Rivers Trust
- 55 United Utilities
- 56 Blackpool & The Fylde College
- 57 North West Training Council

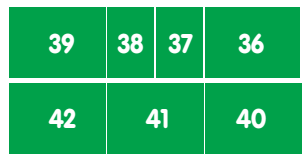
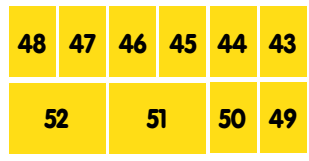
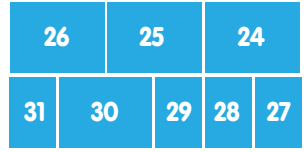
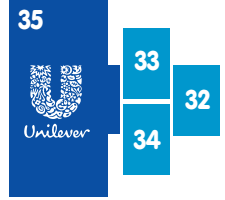
- 58 ScottishPower Show Stage Arena

- 59 AstraZeneca

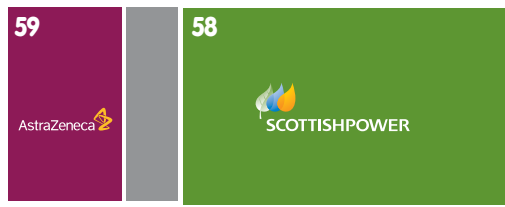
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- 64 Jaguar Land Rover
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EXIT



ENTRANCE



General information

Opening and closing times

Morning Session Visitors

Registration opens at 8:45am in the Atrium of the Exhibition Centre Liverpool. The main exhibition spaces will be open from 9:15am until 11:45am. Event volunteers will usher groups to the Exit, for midday.

Afternoon Session Visitors

Registration opens at 12:00pm in the Atrium of the Exhibition Centre Liverpool. The main exhibition spaces will be open from 12:30pm until 3:00pm. Event volunteers will usher groups to the Exit, for 3:00pm.

Competitors

Registration opens at 8:00am in the Atrium of the Exhibition Centre Liverpool. There will be a celebration and awards ceremony on the ScottishPower Show Stage from 3:00pm.

Refreshments

A range of snacks, drinks and refreshments are available for purchase at the cash catering outlets on site. These can be found in the exhibition hall itself and in the Atrium near the registration desk.

Volunteers

There will be Big Bang volunteers present all day who are happy to direct you around the event and help with any questions that you might have. They are easy to identify as they're wearing orange t-shirts and an ID wristband. Just say hello!

Info points

There will be two Info points near the entrance and exit of the exhibition space, which will be staffed by volunteers all day.

Getting the most out of your visit

There is a lot to see and a lot of ground to cover during your visit so please use the site map, which has a list of what activities and exhibitors are where, to help plan your day. Keep an eye on the TV screens and an ear out for PA announcements about timings of the live shows taking place on the ScottishPower Show Stage in the centre of the exhibition space.

Disabled access

The Exhibition Centre Liverpool is fully accessible. If you require any additional assistance or provisions, please contact the nearest member of the core event team and they will be happy to assist as best they can.

What to do in an emergency

In the event of an emergency, the security team will manage the evacuation of the building.

Fire alarms

If the alarm sounds continuously, please make your way out safely and calmly via the sign-posted fire exit routes. Assembly points will be made clear via signposting and instructions from venue staff, event staff and volunteers.

Medical assistance

St John Ambulance will be providing first aid services at the event. Please let the nearest Big Bang volunteer or event staff member know, without delay, if an accident occurs. Please also make any Big Bang volunteers aware of any 'near misses' that you witness.

Lost property

Unfortunately we are unable to accept responsibility for any property brought on site so please take good care of your belongings. Inform the Info point volunteers of any lost property. If you see anything suspicious, please report it to the nearest volunteer or event staff. If you realise you've lost something after the event, please email bigbang@allaboutstem.co.uk as soon as possible.

Lost children

Please inform the nearest volunteer or event staff member, providing the name and a description of the child and when and where they were last known to be with the group. The core event team will then act to reunite you with the young person in question.

If you see a child who looks lost, or distressed please inform the nearest volunteer.

Sponsors

Led by



EngineeringUK is an independent organisation that promotes the vital contribution of engineers, engineering and technology in our society. EngineeringUK partners business and industry, Government and the wider science and engineering community. Through The Big Bang Fair and The Big Bang Near Me Fairs that happen around the country throughout the year, we're inspiring the next generation – from all backgrounds – to become engineers or scientists.

Headline Sponsor



The Big Bang North West is all about inspiring young people from all backgrounds to study science, technology, engineering and maths to go on to pursue careers in engineering and science. We can't stress enough how important this is. The people at The Big Bang North West could well be just the ones we are looking for to join us in our quest to make new medicines for patients.

At AstraZeneca science is a serious thing for us as we try to discover and produce new medicines. That makes our people feel good about playing a part in helping people deal with their health problems.

Perhaps that's why they enjoy coming to work – we'd like to think so.

Organised by



All About STEM do amazing things to promote Science, Technology, Engineering and Maths with schools, businesses, the community and beyond! Described as the 'hidden wiring in the system', All About STEM create relationships between education, business and industry, matchmaking opportunities with need and cutting through the noise to ensure that people have access to information and events to inspire and engage!

www.allaboutstem.co.uk

Platinum Plus Sponsor



Unilever is one of the world's leading fast-moving consumer goods companies. Over 2 billion times a day, someone, somewhere uses a Unilever product. All of this started in Port Sunlight and we are proud to represent the long-standing heritage at The Big Bang North West. Our aim is to inspire the next generation of students to pursue a STEM career by showcasing the science behind the everyday.

Don't forget to ask us about our Bright Future Programme! It's an exciting opportunity for students and teachers to visit us and see how we create products to help people look good, feel good and get more out of life. At Unilever, our R&D teams work on breakthroughs that will build a brighter future and make sustainability commonplace.

Sponsors

Platinum Sponsor



Shaping Futures are delighted to be acting as Platinum Sponsor of The Big Bang North West event. We are a newly established government funded network consisting of 12 providers of Higher Education based across the Liverpool City Region (LCR). Our role is to develop activities which support 14-19 year olds from 25 nationally determined 'gap' wards across the LCR into Higher Education. Each of our partners support schools and colleges in accessing interactive and dynamic STEM related activities!

We are very much looking forward to supporting this event and 'Big Bang @' events in collaboration with All About STEM in the new academic year. Please visit our HE zone which will feature a host of hands-on and interactive exhibits led by staff from each of your local universities and colleges.

Shaping Futures is also part of the National Collaborative Outreach Programme, which has networks across the North West of England:

www.hefce.ac.uk/sas/ncop

Platinum Sponsor



UK construction contractors, Carillion and Kier, are working in partnership on the M6 Smart Motorway Programme in the North West.

This Civil Engineering project is supporting The Big Bang North West 2017 to help promote the sector and inspire the next generation to join the construction industry. Construction offers a wide range of well-paid STEM related careers, visit the stand and...

- Catch a film in our cinemabox
- Check out a construction site through VR goggles!
- Bag yourself a thermoplastic emoji
- Learn about the science behind corrosion
- Have a go at being a Digger Driver!!

Platinum Sponsor



Air Products is a world-leading Industrial Gases company founded in 1940 in Detroit, Michigan and established in the UK since 1957. Our engineering excellence covers large process plants through to niche innovations. Our products touch everything from food and beverage, health and personal care to energy, transportation and semi-conductors. Inspiring and supporting students to help prepare them for their career is an important part of what we do in our company and across our communities.

Silver Sponsor



Alstom is delighted to be supporting The Big Bang North West this year so soon after we have opened our new Transport Technology Centre in Widnes. The centre will bring new, exciting jobs to the area as we modernise some of the fastest trains on the UK railways, the Virgin Pendolino fleet, and plan for the continuing growth of the railways. We will also be opening a transport training academy at the site to train apprentices and graduates, and upskill other workers for the needs of the modern Digital Railway. Come and talk to some of our apprentices if you are interested in a career in a fast-growing, exciting industry."

www.alstom.com/uk

Show stage sponsor...

ScottishPower is part of the Iberdrola Group, a global energy company and world leader in wind energy.

Here at ScottishPower we are focused on playing our part in creating a cleaner, more affordable and more secure energy supply for the UK. We're at the forefront of innovation and involved in major engineering challenges from wind farms and hydro-electric power to offshore wind and gas power stations.

It's vital that we continue to invest in attracting, nurturing and retaining the talented people who will shape our future success and continue the ground-breaking progress we're making, being part of The Big Bang North West helps us do that.



SHOW STAGE SCHEDULE

Our Show Stage this year is sponsored once again by the fabulous ScottishPower! Throughout the day we have a packed timetable of exciting and engaging shows from fantastic presenters for you to enjoy.



The Human Guinea Pig

09:35 and 14:20

Come and meet Tom Warrender, The Human Guinea Pig, at The Big Bang North West and see some of the amazing medical procedures he has been through, just for the fun of it! Tom will also be looking for volunteers to become mini guinea pigs as he runs a series of demos live on stage!

Marty Jopson Science Bloke

11:05 and 12:50

In this brilliant scientific tour of household science, Dr Marty Jopson addresses conundrums such as: What really makes cakes rise? Why do soap bubbles burst and how you get the quartz out of a clock using a hammer?

Marty will also be channelling Indiana Jones with his latest prop and whipping up a million volts too!

Museum of Science and Industry

10:15 and 13:35

In this energetic, fun and investigative science show, you will learn how to think scientifically and harness the energy of explosions. We need your scientific enquiry skills to discover the fuel source of an accidental historical explosion. On our journey to discover the difference between fire and explosions, we'll make a dust flame-thrower, stun you with steam and even pop cow trumps!

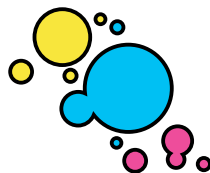
Also supported by...



INNOVATION AGENCY
Academic Health Science Network
for the North West Coast



The Hub
Apprenticeships Work



Canal &
River Trust





MUSEUM OF
SCIENCE 
INDUSTRY





The Big Bang @ School

Like what you see here? Bring a taste of The Big Bang to your school!

The Big Bang @ School programme helps teachers organise Big Bang Fairs in their schools to:

- Enhance and enrich the STEM curriculum
- Improve student motivation and attainment
- Raise the profile of your school

A Big Bang @ School Fair can be as big or as small as you like. You could invite local businesses to take part, involve STEM ambassadors or bring in activity providers. We can connect you with free STEM outreach activities or give you some pointers on how to start small and keep it in-house. The important thing is that pupils have fun finding out where their STEM studies can take them.

For more information about organising a Big Bang @ School Fair, visit www.thebigbangfair.co.uk/nearme



The Big Bang

UK Young Scientists & Engineers

Competition



The Big Bang UK Young Scientists & Engineers Competition aims to recognise and reward young people's achievements in all areas of science, technology, engineering and maths (STEM), and provide them with the opportunity to build their skills and confidence in project-based work.

It's open to all UK residents in full-time education or training (year groups 7-13 in England/Wales, 8-14 in Northern Ireland and P1-S6 in Scotland).

Heats take place at **regional Big Bang Fairs** and projects can also be entered **online** from 24 April to 30 October 2017.

Want a second chance?

Get a place in the finals through the regional Fairs, why not have a second go by entering online? You can also improve your project between the regional and the online heats.

Winners from the regional Fairs and online heats will showcase their projects to thousands of visitors at the national finals at **The Big Bang Fair, 14-17 March 2018 in Birmingham.**



Find out more about the competition and how to enter online: www.thebigbangfair.co.uk/competition

Tell us about your experience on Facebook or Twitter!

 /bigbangfair

 @bigbangfair

Inspiration Awards

The Big Bang

UK Young Scientists & Engineers

Competition

NW Young Scientist of the Year – Sponsored by AstraZeneca

At AstraZeneca, we believe that by pushing the boundaries of science, we will be able to deliver life-changing medicines to help patients wherever they are in the world. We have sites here in the North West, in Liverpool and Macclesfield and we employ scientists from all disciplines to join us in our quest to make new medicines. We can't stress the importance of studying STEM subjects.

We at AstraZeneca, are awarding this prize to recognise overall achievement across all fields of science.



NW Young Engineer of the Year – Sponsored by Air Products

Air Products core purpose is making the world more productive, energy efficient and sustainable. Our products and applications help customers improve energy efficiency, reduce environmental impact and address social needs. Science, Technology, Engineering and Mathematics are at the heart of our innovative solutions that help us achieve this. We are proud to be sponsoring the NW Young Engineer of the Year.

NW STEM Club of the Year – Sponsored by Shaping Futures

Shaping Futures is a collaborative partnership between Higher Education Institutions and Further Education Colleges located within the Liverpool City Region. Our role is to develop activities which support 14-19 year olds from 25 nationally determined 'gap' wards into Higher Education.

We understand the importance of pupils being able to work together on real life projects and activities and we want to recognize those teachers and pupils who have put time and effort into extracurricular activities to further their knowledge and skills.

This award recognises overall achievement for a STEM Club who have gone above and beyond to support each other in their learning.

Unilever Award for Communication

It's not good enough to come up with the best idea that's going to save the world if you can't explain it to anyone else. Being a leading scientist, engineer or mathematician means being able to communicate your ideas to a team of people. We also need good science and engineering communicators to show the public what fantastic advances we're making in STEM.

Sellafield Award for Innovation

Sellafield Ltd is safely delivering decommissioning of the UK's nuclear legacy as well as fuel recycling and the management of low, high and intermediate level nuclear waste activities on behalf of the Nuclear Decommissioning Authority. This award recognises an innovative solution to a problem and originality in thinking in any area of STEM.



Knowsley Safari Award for Protecting the Environment

We are strongly committed to the principles of conservation and sustainability. As both a zoological park and a visitor attraction we recognize that our own operations and actions of our guests have an impact on the environment. This award recognises students thought carefully about the environment within their project.

Carillion Kier Joint Venture Award for Team Work

This prize is presented to the group which demonstrated the bringing together of knowledge, expertise and skills from a wide network, with a desire to achieve excellence in their project through team work and putting safety first.

amaze Award for Digital Excellence

The prize for digital excellence recognises the best use of digital technologies to solve a problem or fulfil a need.

ScottishPower Bright Spark Award

A love for learning and an enquiring mind are attitudes that underpin all research in STEM. This award recognises the sparks that are needed to be successful in STEM – inspiration, enthusiasm an enquiring mind, communication and desire to take their work forward.

Educate Award for Most Dedicated Teacher

This is a brand new award for 2017. The Big Bang Competition would not be possible without the support of our amazing teachers. We would love to give them all an award but there can only be one winner!

This award goes to a teacher who goes above and beyond in supporting their school and students with their Big Bang North West project work.

Alstom Award for Experimentation

If at first you don't succeed...

Experimentation is a key part of any STEM project. It represents the ability to keep trying and to carefully think through results and refine experimental techniques. It also recognises the need to record and communicate results of experiments, as experiments need to be repeatable so others can refute or confirm results.

Liverpool City Region Apprenticeship Hub Award for Endeavour

STEM is not just about the spark of inspiration, it's not just for lone geniuses. For every apple that falls on someone's head there can be hours of work to do. For every idea that turns into the breakthrough, there could be millions that lead to a dead end. STEM careers need people with the right attitude; people who set themselves goals, who work hard and are willing to learn, who don't give up but keep on getting up and trying again when it maybe doesn't work out quite right first time.



Careers

We want everyone who comes to a Big Bang Fair to understand how important scientists and engineers really are... they literally shape the world around us!

The number of exciting career possibilities that exist within science, technology, engineering and maths (STEM) are endless and the best news is, there's a route for everyone.

Could you see yourself rebuilding disaster-struck communities, creating dazzling special effects for film, inventing apps that transform our lives or making sure there's enough food for everyone in the world? Or perhaps you'd like to go down in history for designing iconic buildings, making awe-inspiring advancements in technology, discovering planets or identifying crucial genetic codes?

Find out from real-life scientists and engineers about the incredible jobs they do and see how you could use your school subjects to set you off on a journey landing your dream job!



For further information, visit:

www.thebigbangfair.co.uk/careers

www.tomorrowsengineers.org.uk

www.futuremorph.com

www.mathscareers.org.uk

www.rsb.org.uk/make-a-difference

www.rsc.org/careers/future

www.physics.org/careers

www.thetechpartnership.com/techfuture/techfuture-careers

Whose Crew Are You?

From the Sports Crew to the Food Crew – take the short online careers quiz to find out which of the 12 crews you're in!

www.thebigbangfair.co.uk/whosecrewareyou





A new collaborative outreach programme for Liverpool City Region

Shaping Futures is a new collaborative outreach programme which will be delivered to schools from across the Liverpool City Region. We will provide workshops, campus visits and other aspiration building activities, as well as IAG to eligible students from Year 9 to Year 13. Please contact the member of staff responsible for your area to discuss further opportunities:

Liverpool: **Sarah Hanson** / sarah.hanson@liverpool.ac.uk

Wirral: **Kevin Hornblower** / kevin.hornblower@liverpool.ac.uk

Halton/St Helens: **Amber Coleman** / amber.coleman@liverpool.ac.uk

Knowsley: **Chris Bayes** / chris.bayes@liverpool.ac.uk

Student Projects

Beech House School

Project titles:

What is the best dog food?

Alex Roebuck
Harrison Berry

Do plants need plant hormones to grow?

Maria Grangei

Which is the bouncier ball and on which surface?

Raees Mohammed
Freddy Cowie
Matthew Hankinson
Daneyal Bajwa
Ali Salman
Daniel Rigg

What's the best washing up liquid?

Anisha Mahmood

Which beauty product is the best for the body?

Humna Munir
Hanaya Ahmed
Declan Anthony

Which is better high end beauty products or low end beauty products?

Ella Raw
Abbie Slater
Ruby Peters-Ali

The Mosslands School

Project title:

Soap - promotion of hand washing

Matthew Noyce
Daniel Charlton
Joshua Irvine
Jack Boswell

Rainford High Technology College

Project title:

Soap and Suds Toys

Evan Cunningham
Zach Cunningham
Rebecca Spencer
Katie Wilkinson

Birkenhead School

Project title:

Potentially Lethal

Edward Azurdia
Matthew O'Hare
William Reay
Daniel Walker

Mary Webb School and Science College

Project titles:

Do Duracell batteries really last longer?

Edwin Parry
Sam Vaughan
Adam Morrelle

Which sun cream offers the most protection?

Ella Paddock
Jacob Duffy
Keely Jones
Ellie Shingler

Do other peoples emotions affect your own emotions?

Elsbeth Williams
Bethan Hayward

Which stain remover is the most effective?

Megan Allen-Brown
Melody Cooke
Kate Heathorn
Tom Norris

University of Chester Church of England Academy

Project titles:

Encouraging children to wash their hands

Ben Lloyd
Jessica Finlay
Cerys Heaps
Ceren Aslan
Chloe Sefton



Queen's Park High School

Project titles:
Fireproof Paper and Cloth
Kiara Parlevliet
Angus Hutchenson
Kamila Glowacka

Investigating the best tooth whitening product
Kera-Leigh Gilmartin
Emi Mayman
Sophie McDonough
Emily McHugh

Does sugar or caffeine affect reaction time?
James Fawcett
Tyler Gordan
Adam Thomas

Chemical Rockets
Rory Jones

Scalextric cars ballast
Joshua Halewood
Joseph Smith

Upton by Chester High School

Project title:
Multi Use Drinks Bottle
Luna Von Hardenburg
Josh Beggs
Tom Ashcroft
Vy Au
Ben Collins
Georgia Griffith

Millom School

Project title:
Your Healthy School
Josh Dreghorn
Alicia Benn
Catriona Merry
Nic Pitts
Max Naronchai
Emily Swarbricks

St John Plessington Catholic College

Project titles:
Eco-Fairgrounds 1
Harry Rogers
Antonino Masuzzo
James Moore
Hannah Brand
Camron Pierce

Eco-Fairgrounds 2
Eloise Langley-Moore
Cordy Bloxham
Alyx Williams

Who Dunit?
Godwin Biju
Tommy Johnston
Noah Samrodia
Luis Davin
Cory Lucas
Natalie Niebrzegowska
Romelle Allen

Sustain-a-city
Jessica Toner
Anya Cliff

Sandbach High School and Sixth Form College

Project titles:
Triple Light Pine Floor Light
Bridget Rose

Self-assembly geographically inspired table
Natasha Longshaw

Malair-net
Eliza Virgo
Melissa Howard
Lucy Coleman

Do Clean Hands = Good Grades
Abigail Dunseith

Temporary Housing
Niamh Darbyshire
Bethany Sherborne

Does breakfast affect our school work
Keira Dennison

St Gregory's Catholic High School

Project title:
Reducing plastic waste from shampoo sachets
Donna Josh
Jessica Durrell
Charlotte Watson
Emily Bayliss
Tom Loxley

Student Projects

Liverpool Life Sciences UTC

Project title:
Designing a Cloud Chamber
David Callow
Sean Groom
Michael Groom



The Prescott School

Project title:
Hydraulic Arm
Daniel Coxhead
Ellie-Jane Shaw
Abdul Senussi
Oryn Malone

UTC Warrington

Project titles:
Geological Disposal Facility
Chris Hankey
Dylan Bamber
Dan Kirkham
Tash Blackburn

Project title:
Alternative Energy Provider
Josh Chow
Joshua Bell-King

Range High School

Project title:
How to save water in the shower
Owen Ashworth
George Mordaunt
Oscar Holloway

Nuclear New Build - 1
David Browning
Ben Smith
Daisy Gundry
Aaron Davies
Eleanor Ben-Othman

Nuclear New Build - 2
Kane Delooze
Jared Fisher
Callum Young
Nihad Mahmoud
James Hewitson
Shannon Muir
Sven Oloins

Broughton Hall High School Technology College

Project title:
Education Ideas for Malaria
Kate McCreary
Jessica McDowell
Scarlett O'Brien
Beau Walker



Alderley Edge School for Girls

Project title:
Playground clock and traffic light system
Jessica Allwright
Bianca Boren
Nina Fraser



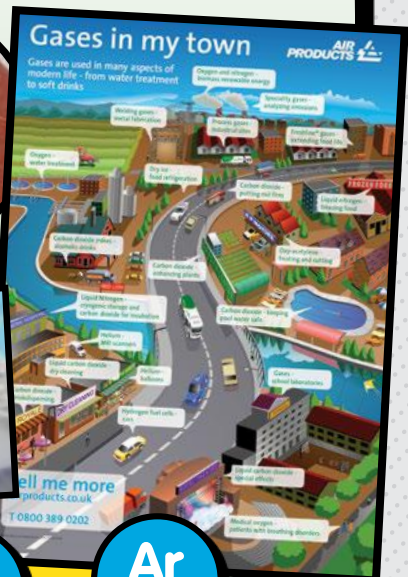
AIR PRODUCTS

PROUD TO BE PLATINUM SPONSORS OF



The Big Bang Fair

North West



He
Helium

O₂
Oxygen

N₂
Nitrogen

H₂
Hydrogen

Ar
Argon

- ★ Visit our stand to learn about the air-mazing way that our gases are used in your town – look out for the Air Products plant ★
- ★ Come and see our Liquid Nitrogen demonstrations ★
- ★ Take part in our Quiz and try out our interactive table ★
- ★ Experience being a welder with our welding simulator* ★
- ★ Learn how our gases are used in the food industry ★
- ★ Come and see our Hydrogen car! ★

* Thank you to Boxford for supporting Air Products by displaying their augmented reality welding machine

Play YOUR Part

5,000
SQM+
SHOW
FLOOR

6,000+
VISITORS

150+
SCHOOLS
ENGAGED
WITH

2018

WE NEED YOU...

WE NEED YOUR HELP TO MAKE THE BIG BANG NORTH WEST EVEN BIGGER! ARE YOU (OR IS SOMEONE YOU KNOW) PART OF A COMPANY OR ORGANISATION THAT WANTS TO INSPIRE THE NEXT GENERATION TO CHOOSE A STEM (SCIENCE, TECHNOLOGY, ENGINEERING, MATHS) CAREER?

The Big Bang North West is all about inspiring the future workforce and celebrating STEM.

We would love to invite everyone to play their part in 2018.

We need to support teachers and careers advisors in understanding the range of careers, paths and vocational jobs available in today's economy and we do that by supporting companies and organisations to showcase what they do and what they look for in their employees.

The Big Bang North West is making a positive impact on our region by: improving perceptions of STEM, increasing interest in STEM subjects at school, heightening knowledge of careers and addressing the gender imbalance.

Highlights of our sponsorship packages include:

HEADLINE

Bespoke exhibition space, first choice on awards, key branding opportunities, impact report.

PLATINUM

Premium exhibition space, support on school outreach, interview and case study, premium award options.

SHOW STAGE

Stage naming rights, visual branding on stage, social media package.

GOLD, SILVER AND BESPOKE also available.

Highlights of our exhibitor packages include:

Standard, Deluxe, Free Build and Bespoke.

AWARDS

Why not sponsor an Inspiration Award that specifically highlights the skills and subject knowledge relevant to your company.

Call us now on

0151 909 4812 or email

bigbang@allaboutstem.co.uk

for more details



**all about
STEM**

Win a science show for your school!

Primary school entry: Tell your family all about today's show! Find out if there is anybody in your family who works in STEM and draw them here:

Secondary entry: Find out if you have a family member who works in STEM and ask them what they enjoy the most about their job and write it here:

Entry details: Please email a picture of your entry with pupil name and school name to support@allaboutstem.co.uk

T&Cs apply – further details on enquiry. Science show must be held before March 1st 2018. Entries may feature on social media.

Competition closes 22nd September 2017, winners announced 29th September 2017.



carillion



KIER

Carillion Kier Joint Venture

UK construction contractors, Carillion and Kier, are working in partnership on the M6 Smart Motorway Programme in the North West.

This Civil Engineering project is supporting The Big Bang North West 2017 to help promote the sector and inspire the next generation to join the construction industry. Construction offers a wide range of well-paid STEM related careers, visit the stand and...

- Catch a film in our cinemabox
- Check out a construction site through VR goggles!
- Bag yourself a thermoplastic emoji
- Learn about the science behind corrosion
- Have a go at being a Digger Driver!



learning skills partnership
your partners in learning



FREYSSINET
SUSTAINABLE TECHNOLOGY

severn
partnership



Invest in your energy future

ScottishPower is proud to sponsor and be part of The Big Bang North West.

It's an exciting time to be part of ScottishPower right now, we are making huge investments to ensure the UK can meet its energy challenges of the future – So it's vital that we continue to invest in attracting, nurturing and retaining the talented people who will shape our future success.

We'd love you to be part of our future. Learn more about working with us at www.scottishpower.com/careers



The Hub
Apprenticeships Work

 @TheHubLCR
 @LCRApprenticeshipHub
www.apprenticeshipswork.org.uk

Liverpool City Region Apprenticeship Hub

The Hub, on behalf of the LCR Combined Authority, acts as an impartial and strategic body to increase the number, level and quality of **Apprenticeship & Traineeship** opportunities for residents within the Liverpool City Region.



Leading the work to **enhance and add value** to Learning providers, Key partners, Stakeholders and Employers



LIVERPOOL CITY REGION
COMBINED AUTHORITY





Unilever
brightFuture



PORT SUNLIGHT
HELPING TO
CREATE A
BRIGHTER
FUTURE



400
BRANDS

SALES IN
+190
COUNTRIES

OPERATIONS IN
100
COUNTRIES

150
MILLION
PURCHASES
A DAY

USED
2BN
TIMES A DAY



Unilever



The Big Bang Fair

North West

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2018

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