

Xplore!

Canolfan Darganfod Gwyddoniaeth
Science Discovery Centre

Education Programme

Programme
available all year

Interactive
exhibits

www.xplorescience.co.uk
#xplorescience



Introduction to Xplore! Education Programme



Xplore! Science Centre is delighted to be able to offer exciting school visits to our fun and vibrant space in Wrexham.

Our educational activities are aimed at all ability levels and can either be delivered at your school, within our city centre location or in some cases virtually.

All educational activities have been risk assessed and meet all Welsh Government standards. Risk assessments are available on request.

Why book a trip with Xplore!?

- Support learning inside the classroom by enriching learners' personal, social and emotional development.
- Xplore! helps to develop learner skills including communication, investigation, imagination, team working, critical thinking and problem solving as well as fostering a love of STEM.

What to expect

- Activities are delivered by fully trained Science Communicators who can deliver in Welsh, English or Bilingually.



At Xplore!

- 3 themed zones; Action, Reflection, and Construction. All visits to Xplore! include exploration of our interactive STEAM exhibits.
- Dedicated area for lunch.
- Our science shop is stocked with pocket money items. Pre-made gift bags are available at a variety of price points upon request.
- Teacher pre-visit can be arranged free of charge.

In school

- Activities require 45–75 minutes depending on activity chosen.
- Most sessions can take place within the classroom while others require access to larger spaces such as a school hall or theatre. All activities require the presence of a teacher/teaching assistant.

To plan your visit to us or for further information, please contact our helpful bookings team on 01978 293400 or e-mail bookings@xplorescience.co.uk.

Foundation Phase / KS1



Body Bother



Delyth's naughty little cousin Dilwyn is sick. Can you help Delyth work out what is the matter with him? Investigate the different parts of the body, exploring what could be making Dilwyn feel so unwell.



Principality Saving School



A carousel of activities to help learners better understand how a building society works. Learners will find out about savings, budgeting and have the opportunity to role play the part of building society staff members.



Construction Kit



Investigate shapes, construct bridges and recreate famous structures. Use specially designed building blocks to design and create a wide range of buildings and structures. Construct 2D and 3D shapes, test the strength of bridges and build the tallest tower in the class.



Post Office



Become a post office apprentice in this fun workshop! Use your maths skills to send the mail so it arrives at the right address, check the weight of the parcels and find out where postcards have been sent from around the world.



Stardome



Blast off on a trip across the universe aboard our inflatable planetarium, stopping off at the Sun, the Moon, planets and stars along the way!

Only available at your school



Forces



During this interactive show, discover how to use pushes and pulls to make things move and how friction stops us slipping over.



Toybox Science



The toybox is overflowing! Learners will use their scientific knowledge to sort the toys into categories. Knowledge of gravity, forces, electricity, and magnetism are all involved in the decision making.



Early Years – Construction



Activities aimed at learners early in their school journey. Sessions encourage exploration of building, shapes and patterns.



Living in Space



Join the team to find out how many jobs are involved in getting a team of astronauts to the International Space Station. This interactive show helps learners discover what is needed to survive a 6 month space mission.















Early Years – Space



Activities aimed at learners early in their school journey. Sessions encourage exploration of space, astronauts and planets.

Key

-  Communication
-  Engineering
-  Exploration
-  Geometry
-  Imagination
-  Listening
-  Maths and Money
-  Problem solving
-  Science
-  Teamwork
-  Technology
-  Virtual delivery option



Bridge Builder



Using paper, straws, sticky tape and other items, construct a bridge to support a load. Can you identify the successful elements of your bridge?



Light and Sound



Find out about the mystery of light and sound! How does light travel? How can it be changed? Join us in playing some mad musical instruments and discover how vibrating objects produce sound.

If at your school, this show requires a dark environment.



Stardome



Blast off on a trip across the universe aboard our inflatable planetarium. It's a chance to spot constellations, galaxies, and explore our solar system.

Only available at your school



Solar Fair



Harness the power of light in this exciting K'NEX challenge to design and construct a solar powered fairground ride.



Materials Magic



Discover how materials behave in different conditions. Find out how science can be used to explain demonstrations that look like magic!



Journey to Mars



Travel to Mars and explore some of the incredible structures that cover the surface of the red planet. Learn about the tools that we are using to better understand this alien planet and think about potential life on the red planet.



Rocket Science



In this exciting show we explore what is needed to launch rockets, where we send them and what for. Discover some of new developments in space travel and what it might mean for future exploration.



Construction Kit



Investigate shapes, construct bridges and recreate famous structures. Use specially designed building blocks to design and create a wide range of buildings and structures. Construct 2D and 3D shapes, test the strength of bridges and build the tallest tower in the class.



Aquaponics



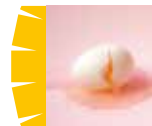
Find alternative ways of growing food with this aquaponics workshop. Learners will be challenged to build a system that uses fish and water instead of soil to grow plants that we can eat. Learn how aquaponics can be used to reduce our environmental impact.



Bodyworks



Workshop with a carousel of activities to allow learners to discover more about how the body works. They will investigate questions like; What do the internal organs do? How do we digest food? What role does the skeleton have in humans?



Egg Drop Challenge



Can you drop an egg without smashing it? In this challenge you will get to find out. Design and build something to save your egg from certain doom from a selection of materials.



Forces



Are you brave enough to sit on a seat of nails? Explore different types of forces, what they can do and how they can help us day to day in this interactive science show!



Decarbonisation



Explore environmental science with a hands on workshop focusing on the impact of carbon. Discover what exactly a carbon footprint is and how things contribute to it. Put this knowledge to the test in designing a street and calculate the carbon cost. Suitable for upper KS2.

LEGO Coding



WeDo



Roaring Lion



Explore motion sensors, gears and coding as you build a lion that responds to your movement. Perfect for KS2.

WeDo 2.0



Cooling Fan



Build and program a fan in this introduction to coding. Discover the different aspects of movement, electric motors and programming. Ideal for FP/KS1 with no previous coding experience.



Coding Challenge



Take your coding to the next level as we combine Scratch and LEGO. Take to the high seas as we investigate costumes, scenes and motors. Perfect for upper KS2.



Milo the Robot



Explore motors, movement and programming with Milo the Robot. Investigate sensors for light and movement. Perfect for lower KS2 with or without previous coding experience.

EV3



Introduction to EV3's



Learn the basics of LEGO Mindstorms EV3's, how they move, how they are controlled and how we can code them. Then challenge yourself to avoid some LEGO people. Best for upper KS2 and key stage 3.



Lunar Rover



Construct a lunar rover. Investigate coding, motors and sensors as we guide our rover across the surface of the moon. Best for upper KS2.

Transition Skills

Xplore! is committed to helping learners to make the transition from primary to secondary school science as easy and natural as possible. We offer four different sessions designed to engage learners with some of the skills they will need for secondary school science lessons.



Colour Changing Chemicals



A hands on introduction to chemistry making and testing pH indicator. Workshop showcases use of equipment, following instructions and safety considerations.



Wheels in Motion



Investigate forces in action by designing and building a LEGO car to travel over a variety of surfaces. Stay in budget and adapt the design to meet new challenges as the workshop progresses.



Spiral of Life



Prepare for biology practicals in this hands on workshop doing a DNA extraction experiment. Discover what DNA is, where it comes from and how it impacts our characteristics.



Fire Safety



Explore the safety aspects of laboratory work in this fun fire based workshop. Discover how fires start, see its effect on chemicals and make a fire extinguisher using household ingredients.



Cells



This workshop focuses on real life applications and contexts of cellular biology, including disease identification, DNA fingerprinting, and the role of mitochondrial DNA in identifying human remains.



International Trade Game



The numeracy skills required for a career in the financial sector are introduced in hands-on activities simulating world trading. Which learners will create the most resources and which will earn the most money?



Aquaponics



Find alternative ways of growing food with this aquaponics workshop. Learners will be challenged to build a system that uses fish and water instead of soil to grow plants that we can eat. Learn how aquaponics can be used to reduce our environmental impact. Perfect for lower KS3.



Rocket Science KS3



In this exciting show we explore what is needed to launch rockets, where we send them and what for. Discover some new developments in space travel and what it might mean for future exploration.



Rockets



Who will fly the highest? Apply knowledge of energy and forces in this hands on workshop. Design, build and launch a rocket to test your ideas. Pairs well with forces show. Ideal for KS3.

Only available at your school



Mission EV3



Learners put their numeracy and programming skills to the test and navigate a rock strewn landscape using a robotic LEGO Mindstorms rover.



Forces KS3



This lively show brings the subject of forces to life through a series of volunteer-led experiments. Investigate a range of topics including Newton's laws, gravity, friction and pressure.



Atoms to Astrophysics



Using intriguing equipment not usually available to schools, learners deepen their understanding of physics; magnets and fields, electrons and charge and how we observe our universe.



Crumblebots



This workshop introduces learners to the concept of driverless vehicle technology. The main activity is for learners to work in pairs to program a crumblebot to behave similar to a driverless vehicle by following a path using a light sensor on the bottom of the robot.



Aqueducts KS3



Working in small groups, learners take on the role of an engineer and design a route for a canal, similar to the 11 miles at Llangollen. Concepts of pulley systems, use of arches and other structural concepts are introduced through hands-on activities.



Structures



The structures workshop is designed to test learners problem solving skills, by challenging them to build various structures. Learners will apply knowledge gained from multiple subject areas to complete the challenges.



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