

TECHFEST OUTREACH

Catalogue of Workshops 2016 /2017

If you have any queries please do not hesitate to get in touch with the
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TECHFEST OUTREACH

Be Seen, Be Safe

New for 2016/17

Don't be in the dark about road safety. Explore the properties of materials to find out the best ways to be a leading light, out and about.

Age Range:	EY & P1-P3
Running Time:	45 minutes
CfE Links:	Health and Wellbeing, Technology
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Floor space for children to work around large boxes<input type="checkbox"/> Chairs for presenter and adults

TECHFEST OUTREACH

Bizarre Bones

What part of your body is stronger than steel and harder than granite? Find out the answer to these questions and discover many more incredible facts about the skeleton as we investigate the hardest organ in the human body: bones. We'll take a closer look and investigate the structure and function of skeletons from across the animal kingdom with lots of experiments and practical activities for the whole class.

Age Range:	P1 – P7
Running Time:	45 minutes
CfE Links:	Science, Health and Wellbeing
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Large Presenter Table<input type="checkbox"/> Space for 33 sitting students<input type="checkbox"/> Space in for participants to undertake activities in groups (seated at tables or on the floor)<input type="checkbox"/> Chairs for teachers and presenters<input type="checkbox"/> Access to running water and sink for set up

TECHFEST OUTREACH

Dissolving and Solubility

Use team work and apply the principles of scientific testing to investigate solubility. Learn about making a hypothesis and designing a fair test with hands on investigations and experiments as we consider how solubility affects our every-day lives.

Age Range:	P4 – P7
Running Time:	45 minutes
CfE Links:	Science
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Presenter Table<input type="checkbox"/> Chairs for teachers and presenters<input type="checkbox"/> Access to running water and sink during set up<ul style="list-style-type: none"><input type="checkbox"/> Space for 33 sitting students<input type="checkbox"/> Tables with space for students to conduct experiments (should be suitable to wipe clean in case of spills)

TECHFEST OUTREACH

Fab Forensics

Take on the role of a forensic scientist as we explore and discover DNA, chromatography and fingerprinting in this interactive and exciting introduction to forensic science.

Age Range:	P4 – P7
Running Time:	45 minutes
CfE Links:	Science
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Presenter Table<input type="checkbox"/> Chairs for teachers and presenters<input type="checkbox"/> Access to running water and sink during set up<ul style="list-style-type: none"><input type="checkbox"/> Space for 33 sitting students<input type="checkbox"/> Tables with space for students to conduct experiments (should be suitable to wipe clean in case of spills)<input type="checkbox"/> Power socket to plug in blender if possible (this stage can be done in advance, so not essential)

TECHFEST OUTREACH

Floating and Sinking

Experiment with buoyancy and density to work out why things float and sink. We explore the physics (forces that pull and push) with a fun and practical approach. Pupils will discover Archimedes' principle they can have their own "Eureka" moment and use it to solve a buoyancy challenge. This workshop contains an optional section about the Titanic and can be linked to science and history classwork.

Age Range:	P4 – P7
Running Time:	45 minutes
CfE Links:	Science
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Presenter Table<input type="checkbox"/> Chairs for teachers and presenters<input type="checkbox"/> Access to running water and sink during set up<ul style="list-style-type: none"><input type="checkbox"/> Space for 33 sitting students<input type="checkbox"/> Tables with space for students to conduct experiments (should be suitable to wipe clean in case of spills)

TECHFEST OUTREACH

Great Scot!

'Great Scot!' celebrates engineering in Scotland. We will look at some of the colourful characters and their inventions to find out how they influenced the world. Through fun, interactive and hands on experiments and demonstrations, we'll find out about how engineering shapes our daily lives.

Age Range:	P4 – P7
Running Time:	45 minutes
CfE Links:	Technology, Social Science
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Chairs for teachers and presenters<input type="checkbox"/> Presenter table<input type="checkbox"/> Activities can be set up on tables on floor

TECHFEST OUTREACH

K'Nex Cars

An introduction to the fascinating world of engineering design. Join TechFest to develop your construction skills and produce your own unique model car using K'Nex.

Age Range:	P4 – P7
Running Time:	1 hour
CfE Links:	Science, Maths, Technology
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Chairs for presenter and adults<input type="checkbox"/> Floor space to build and test models

TECHFEST OUTREACH

K'Nex Dinosaurs

An introduction to the fascinating world of engineering design. Kid K'Nex allows younger children to develop their construction skills and build up their creative confidence by producing their own unique model.

Age Range:	EY, P1 – P3
Running Time:	45 minutes
CfE Links:	Technology, Literacy and Arts
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Chairs for presenter and adults<input type="checkbox"/> Floor space to build and test models

TECHFEST OUTREACH

K'Nex Programming Buggies and Robots

A unique opportunity to develop engineering, problem solving and team work skills by building K'Nex programmable buggies or robots designed and programmed to take a set course.

Age Range:	P4 – P7
Running Time:	1 hour
CfE Links:	Technology, Science, Engineering
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Chairs for presenter and adults<input type="checkbox"/> Floor space to build and test models

TECHFEST OUTREACH

Magnificent Magnets

This workshop takes pupils through a series of enjoyable hands-on investigation covering aspects of magnetism such as attraction, repulsion and magnetic fields. Pupils are encouraged to make discoveries for themselves through guided experimentation and discussion.

Age Range:	P2-P4
Running Time:	45 minutes
CfE Links:	Science
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Chairs for teachers and presenters<input type="checkbox"/> Activities can be set up on tables or floor

TECHFEST OUTREACH

Maths Around the World

A fun, hands-on maths workshop designed to challenge and build confidence. A variety of puzzles, representing different countries, are set out around the room. In small teams, pupils travel around each puzzle with a customised passport logging the countries they have visited. Help and encouragement is at hand and solutions checked.

Age Range:	P2-P7
Running Time:	1 hour
CfE Links:	Mathematics, Social Studies
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Chairs for teachers and presenters<input type="checkbox"/> Activities can be set up on tables or floor

TECHFEST OUTREACH

Microbiology	
Discover the hidden world of the microbe in TechFest's introduction to microbiology. Through observation and practical investigation explore the impact of microorganisms (or germs) on health. Experiment with the roles of microorganisms in breaking down materials with yeast.	
Age Range:	P5 – P7
Running Time:	1 hour
CfE Links:	Science, Health and Wellbeing
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Chairs for presenter and adults<input type="checkbox"/> Access to boiling water during set up<input type="checkbox"/> Tables for model microbes (dependent on class – whole class should be able to stand around tables)

TECHFEST OUTREACH

Money Maths – Short Changed

New for 2016/17

Join us for a hands-on maths add-venture to learn all about money. Puzzles, games and challenges explore how we use currency. Guaranteed high interest! Takeaway resources for using back in the classroom.

Age Range:	EY & P1-P3
Running Time:	45 minutes
CfE Links:	Mathematics
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Space for class to sit for story presentation<input type="checkbox"/> Activities can be set up on tables or on the floor.

TECHFEST OUTREACH

Science Detectives

New for 2016/17

An opportunity for young super sleuths to put their investigative skills to the test. Use science to solve mysteries in this light-hearted introduction to forensic science.

Age Range:	EY & P1-P3
Running Time:	45 minutes
CfE Links:	Science
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Access to water during set up<input type="checkbox"/> Floor space for whole class to sit in circle<input type="checkbox"/> Wipe clean tables for painting<input type="checkbox"/> Chairs for presenters and adults

TECHFEST OUTREACH

Science of Flight

Pupils will develop their technology skills in make-and-take flight activities. Learn about the science of flight and the concepts of thrust and drag, lift and gravity as we lift up, up and away in this interactive workshop.

Age Range:	P4 – P7
Running Time:	1 hour
CfE Links:	Technology, Science, Engineering
Workshop Requirements:	<ul style="list-style-type: none"><input type="checkbox"/> Floor space for whole class to sit together<input type="checkbox"/> Tables for making planes (minimum 4 tables, depending on class size)<input type="checkbox"/> Chairs for presenter and adults