

YESC Portfolio of Projects 2017/18

Project theme and title	Description	CfE level	Link to industry sector
Energy			
Heather's Hut £275 per kit	An exploration of renewable energy including wind, solar and hydro power.	Second	Renewable Energy
Hydrocarbons in Action circa £260 per kit	Investigating oil and gas exploration and production with a resource kit which includes an ROV model.	Second	Oil and Gas
Ten Green Bottles Free to download	A downloadable resource to investigate the properties of Carbon Dioxide and introduce chemical engineering .	Second	Chemical Engineering
Carbon Capture and Storage Free kit to selected schools	Investigating properties of Carbon Dioxide and challenges of capturing and storing by assuming the roles of Chemist, Geologist, Transport Engineer and Marine biologist before creating a model CCS facility.	Third/fourth	Energy
ICT & digital technologies			
Pi in the Sky £220 per kit	An interdisciplinary project using the innovative technology of Raspberry Pi computers, clubs to create a weather station and programme the Pi to record data, using equipment provided in a resource kit.	Second, third/fourth	IT, Digital
Tweety Pi £220 per kit	An introduction to programming using Scratch to programme a Raspberry Pi to record visitors to a bird table in the school grounds.	Second	IT, Digital
Lighting up the Curriculum for Excellence £250 per kit	An introduction to electronics by learning to solder then creating range of simple light circuits using equipment in a resource kit.	Second	Electronics
Rampaging Chariots One free kit to new schools or £100 per kit	A robotics kit developed by Leonardo and promoted by YESC; clubs design and create a radio controlled sporting robot	Third/fourth, Senior phase	Robotics

	and are invited to the Scottish Robotics Games.		
Circuit Training Free to download	A downloadable resource of simple electronic projects.	Second	Electrical engineering
Engineering			
Greenpower Challenge Approx. £1500-£3,300	YESC manages this programme in Scotland to support clubs to design and construct an electric car ; Goblin for Primary and F24 for Secondary. Schools are then invited to race their cars at regional and national competitions.	Second, third/fourth, senior phase	Automotive and mechanical engineering
I'm an Engineer, I can Help Here! £200 per kit	A suite of materials to introduce different engineering disciplines through a series of hands-on STEM challenges responding to a flooding emergency.	Second	Various Engineering Disciplines
Go Forth Again! Free to download	Go Forth! is a civil engineering challenge to design and build a suspension bridge , commemorating the new Queensferry Crossing over the Forth.	Second, third/fourth, senior phase	Civil engineering
Food & Drink			
Science on the Menu £270 per kit	Investigating food science , and technology challenges associated with a chocolate factory, through a range of experiments included in a resource kit, culminating in the Great Scottish Dessert Challenge to make ice cream in a bag.	Second	Food and Drink
Life Science			
Investigating Forensics Free to download	A downloadable resource for clubs to learn about forensic science by running setting up a Crime Scene Investigation.	Second	Forensic Chemistry
Gene Scene Free to download	A downloadable resource to learn about the fascinating world of Genetics .	Third/fourth	Genetics

Cross sectoral STEM activities			
Mysterious Maths Free to download	A selection of fun challenges exploring the mystery of maths. The three activities; Tiling, Counters and Folding, allow pupils to discover and experience maths hands-on, to literally get a 'feel' for maths.	Second	
Little Lighthouse £150 per kit	An interdisciplinary project for Little Engineers using lighthouses as a context to introduce various STEM topics including electricity and circuits, weather and digital coding.	First	
Sensational Science Free to download	Investigating the science of sight, hearing, smell, taste and touch through a range of activities in a downloadable resource.	Second	
Science Clubbing Free on request	Themed physics, chemistry and biology activities – Teacher's Notes available on request.	Second, third	
Science of a Night Out Free to download	STEM Investigations around the themes of getting ready for a night out to bowling, karaoke and ice skating, including the physics of high heels and what put's the pop in popcorn.	Second, third	
STEM in a Shoebox Free to download	A downloadable resource of simple technology challenges including a coin sorter and smartphone projector, all using a shoe box!	Second, third/fourth, senior phase	General STEM
Pizza Box Challenges Free to download	A downloadable resource of simple electronic and technology challenges using a pizza box.	Second	General STEM
Tried and Tested Technology Challenges Free to download	A downloadable resource of simple technology challenges.	Second	General STEM

Under development for 2017/18			
Water (title TBC) New for 2017/18! Limited free kits	Following the success of Construct a Crane, we are delighted to be working with Anglian Water Business on a water themed engineering challenge.	Second, third/fourth, senior phase	Engineering
Big Wind Challenge New for 2017/18! Limited free kits	A new offshore wind challenge in partnership with The Crown Estate.	Second, third/fourth, senior phase	Engineering
Life (title TBC) New for 2017/18! Kit cost TBC	A new interdisciplinary project using the theme of 'life' to support STEM learning in P1.	P1 (early)	General STEM

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