

## SCIENCE FESTIVAL: AERIAL BALLOONOGRAPHY WORKSHOP

### Arcola Energy Educational Services

Arcola Energy's science and technology workshops, run by expert practitioners, explore renewable energies hydrogen and fuel cells and the possibilities that they offer for a low-carbon future. Over 5000 people have participated to date. Workshops can be delivered in a range of formats including:

Schools Hydrogen Workshops - See Other Brochures

**Science Festival - See Below**

Science Event – See Other Brochures

### Science Festival

The Science Festival puts the technology of the future into the hands of young people. Generally delivered to pupils from KS2 (Years 4-6), the workshop is designed to inspire the next generation of renewable energy engineers to use practical maths and science skills in thinking about how hydrogen can be used in technology of the future.



Arcola Energy delivers Hydrogen Ballooning workshops at Science Festivals to young people giving them hands-on experience of hydrogen and fuel cells.

- Each workshop is 2 hours in length and can be delivered to 30-40 students.
- The 2 hours is structured into fast paced and fun sections, from learning about computer programming to using maths to calculate volume.
- In the last section of the workshop, the balloon is sent into the air to take aerial photographs of participants.

In November 2011 and 2012, Arcola Energy travelled to United Arab Emirates to deliver science and technology workshops as part of the Abu Dhabi Science Festival. Over the course of the 10 day festival, Arcola delivered 75 workshops to over 1,500 children.



## What We Need

- A table for our equipment
- Enough tables for groups of 4
- Projector and screen/smart board.
- Calculators and pens/pencils.

## Workshop Design

Custom-designed kits and 1.5W hydrogen fuel cells supplied by Arcola Energy are used in the workshops.



Workshops and education kits have been designed with extensive input from teachers, education authorities and education consultants to deliver specific curriculum requirements. Success in achieving this has been confirmed by teacher feedback.



## Learning Outcomes

- Hydrogen fuel cells: exploring the role that hydrogen could play within a low carbon society
- Electrolysis as a method for generating hydrogen
- Renewable energies vs. carbon-based fuels
- Practical mathematics skills
- Problem-solving skills

## Arcola Energy and Partners

Arcola Energy is the UK partner to Horizon Fuel Cell, supplier of the fuel cells at the heart of the kits. Arcola is supported in developing and delivering the challenge by some of the world's leading hydrogen businesses. Arcola is expanding the challenge nationwide and creating challenge partnerships around the world, working with hydrogen champions in regions across the UK. Arcola Energy offers a wide range of opportunities for pupils to learn in a creative environment. Whether your school is looking for workshops, performances or bespoke projects, we have a team of expert practitioners able to deliver work in your school.

## Other Fuel Cell Products

Introducing the HYDROGEN DEVELOPER KIT powered by Horizon's 1.5W, 12W or 30W fuel cells. These ranges of kits allow inventors, researchers, commercial product inventors and hobbyists to build fuel cell systems for whatever applications they require.

