

Transition-Year Students!

Recreate some ancient chemistry experiments and win
€500 for your School

The Competition

In 1743 posters advertising a series of about 50 'Curious Experiments' appeared in public places around Dublin. The experiments to be performed were intriguing and mysterious. Some of them also sound just a little bit dangerous. What chemical process might explain the following: 'Two cold Fluids coming together instantly flame with Violence'? Is there anybody who wouldn't like to see an experiment in which 'Two cold Fluids coming together produce Stars of liquid Fire'?

Marsh's Library in Dublin has the only surviving copy of this ancient poster, and we are setting a challenge for Transition-Year Students. Can you work out what chemicals might have been involved in these 'Curious Experiments', and do you have what it takes to recreate them? If so, your class could win €500 for your school. Marsh's Library will award the prize to the best and most entertaining recreation of the Curious Experiments posted on YouTube.

Some of the 'Curious Experiments' are easy to figure out, but others will require a bit of thought.

In order to enter the competition your class must:

- A. Secure the agreement of your teacher that you can conduct the necessary research and experiments in your school laboratory. Your teacher must contact us by email at keeper@marshlibrary.ie to tell us that you wish to enter the competition
- B. Recreate **at least** five of the experiments listed on the 'Curious Experiments' poster
- C. Observe standard laboratory safety procedures during the experiments
- D. Post video clips of your experiments on YouTube

The **closing date** for receipt of the details of your experiments is **5pm on Tuesday 30 April 2013**. Before this closing date your teacher should e-mail Marsh's Library with the details of your Transition-Year group (names of the students), the details of the experiments you recreated (including the chemicals used and the ways in which the experiments were performed), and links to your YouTube clips. Our email address is keeper@marshlibrary.ie

We will announce the winners on Friday 31 May 2013. The winning group will be invited to Marsh's Library to receive their prize.

If you have any queries about how to get started with the 'Curious Experiments' contact us at keeper@marshlibrary.ie

The Background

In October 1743 posters advertising a series of 'curious Experiments' designed 'For The Amusement and Entertainment of Ladies, as well as Gentlemen' appeared in public places around Dublin. More than fifty experiments were to be performed by a certain Boyle Godfrey before paying audiences.

Today, the sole copy of this A3-sized sheet, poorly-printed on cheap paper, survives in Marsh's Library in Dublin. There is an unmistakable element of showmanship to the 'curious Experiments' and one can easily imagine that Boyle Godfrey, or one of his associates, may well have uttered the immortal lines 'roll up, roll up, roll up' when trying to attract paying customers to these afternoon shows.

Godfrey's descriptions of the procedures to be performed were eye-catching and sensational. Who could resist, for example, seeing 'Two cold Fluids coming together instantly flame with Violence'? Other intriguing descriptions include: 'Two cold Fluids coming together produce Stars of liquid Fire', and 'a Vulcano, or burning Mountain, imitated in Miniature'.

Boyle Godfrey was a London-born doctor and chemist who fled to Ireland sometime in 1742 owing a lot of money. He seems to have earned a living in Ireland on the fringes of both respectable science and society. He was named after the famous Irish-born scientist Robert Boyle, for whom his father had worked as a laboratory assistant in his younger days.

Today, almost 270 years after Boyle Godfrey staged these experiments, they have been brought to life by a group of six students from the Grashof Gymnasium in Essen, Germany. In their final year at school, the students were set the task of researching what these experiments might have consisted of, and how they might have been performed. Could Boyle Godfrey really have performed this range of experiments, or was it some sort of elaborate hoax or con trick?

The students' researches involved a mixture of historical detective work and scientific know-how. Amazingly, they were able to discover chemicals and processes which would account for many of the advertised 'Curious Experiments'. Some of the processes were simple. Others were more complex.

The students had hoped to recreate the experiments exactly as they might have been originally performed but this was not always possible. Modern notions of health and safety generally frown upon exposing students to poisons such as arsenic! Some experiments were too hazardous to perform in a modern laboratory but, observing standard safety protocols, the students were able to recreate eight experiments. Their favourite was the 'Vulcano, or burning Mountain, imitated in Miniature'.

The Essen students filmed their adventures in the history of science. They are available on YouTube by searching for 'Curious Experiments 1743'. Alternatively, you can use a smartphone to scan the QR code below.



Well, what are you waiting for? Now that you've seen what's possible, get into that laboratory and have some fun!

Visit Marsh's Library

Marsh's Library is open to the public and particularly welcomes school groups. Our current exhibition 'Marvels of Science: Books that changed the World' runs until June 2013. It presents more than seventy rare and important texts of the Scientific Revolution. The earliest item on display is a 14th century astronomical treatise *as Gaeilge* and the latest is the flimsy poster for the 'Curious Experiments' from 1743. This is a unique opportunity to see original books by Galileo, William Harvey, Robert Boyle, and Isaac Newton (among others) in a beautiful building in central Dublin which has remained unchanged for more than three centuries.

Admission to the library and exhibition is free for school groups. To book a visit, simply email keeper@marshlibrary.ie