



# Tyler

## His Story

### An age of discovery

In 1803, when Tyler was living on the streets in London, Britain was buzzing with excitement about science. It was an age of scientific discovery, and everyone – rich and poor – was fascinated by all the new inventions, ideas and experiments.

### Discovering the elements

For a long time, people had thought that there were just four elements: *earth, fire, air and water*. But recently, scientists like Joseph Priestley had discovered that air wasn't just one simple thing – it was actually made up of lots of different elements, including oxygen.

#### Fact It's elementary

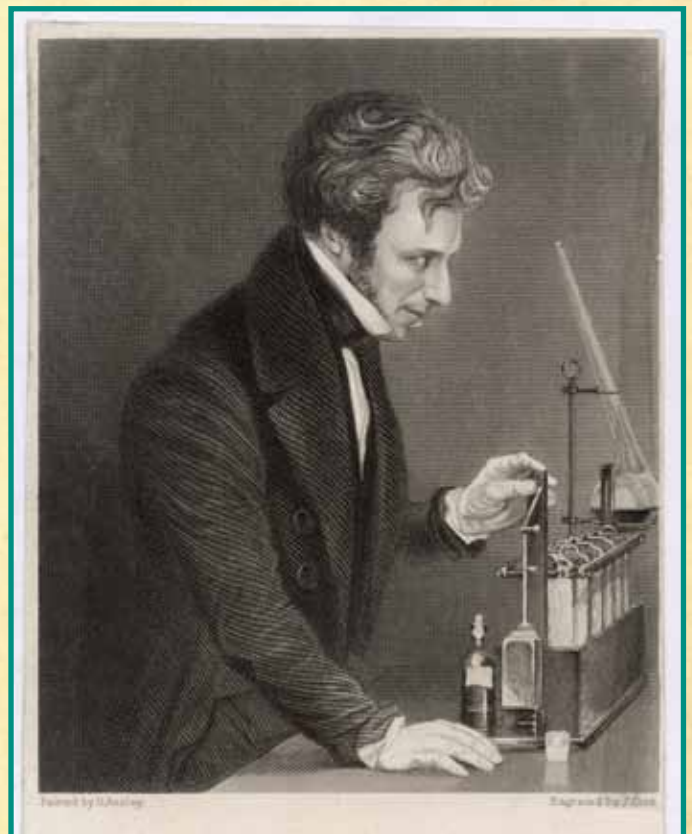
Scientists at this time gave a lot of public lectures. Many of these lectures were intended to show that the old ideas about having just four elements were wrong.



The scientist in the story, who gives the lecture at which Tyler prevents a massive explosion, is based on Joseph Priestley. Lectures like the one in the story were incredibly popular – huge crowds of people used to gather to hear about the latest scientific ideas and marvel at the scientists' amazing experiments.

#### Fact A bit of a squeeze ...

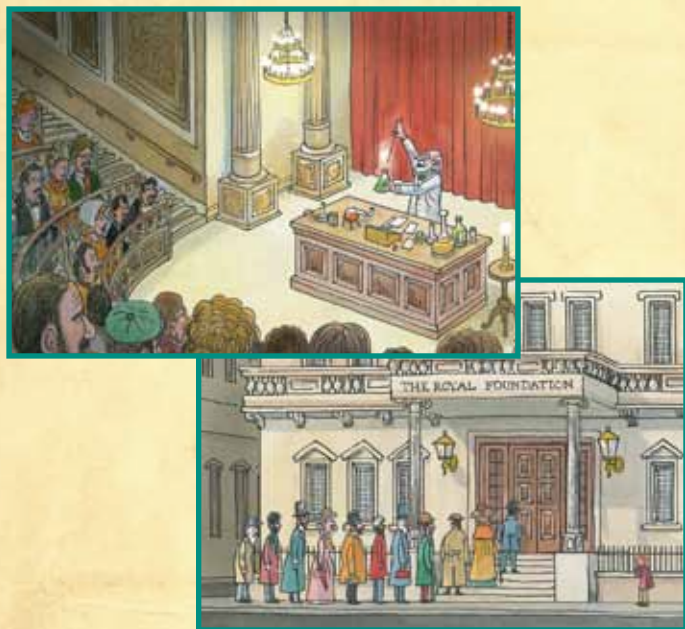
Science lectures were so popular at this time, that sometimes up to 400 or 500 people crowded into the hall to hear a famous lecturer like Joseph Priestley!





## Bringing science to everyone

Many societies and institutions were set up to help people learn about science. Scientists wanted to make sure that everyone could find out about the new discoveries. So they held big public lectures at places like the Royal Institution – an organization which was set up at about the time of the story, to teach the public about science.



## The Royal Institution

Many important scientists – like Michael Faraday – joined the Royal Institution. Faraday gave lots of lectures there. The Royal Institution still exists today, and it still holds lectures (including some special ones for children every Christmas). It also has a museum which you can visit to find out more about science both today and in the past. The Royal Foundation, in the story, is based on The Royal Institution.

## Packing in the crowds

In the audience at a science lecture in Tyler's time, you could find men, women and children, and poor people as well as rich people. So why did so many people want to go to lectures about science?

Partly, it was because they were fascinated by all the new discoveries, and wanted to find out how these things might help to improve their lives. Partly, though, it was because the lectures were fun! The lecturers tried hard to make their experiments look as dramatic as possible, so people would come along in the hope of seeing something amazing.

## The electrical boy

One of the most famous experiments, which was performed to show the audience how static electricity worked, was called 'the electrical boy'. In this experiment, a boy was strung up on silk ropes hanging from the ceiling, so that it looked as if he was lying down in the air. An electrical machine was then used to electrify the boy. This turned him into a sort of living magnet, so that his body could attract small items like feathers and pieces of paper. Sometimes a girl from the audience would be asked to touch or even kiss the boy, so that sparks would shoot between them!

## Educational and fun

Demonstrations like that were obviously good fun to watch. But scientists were very keen to point out that as well as being fun, their lectures were educational – and it's certainly true that they helped to give ordinary people the chance to find out about science.

### Fact Keen students

People enjoyed the public lectures but they often took them very seriously. Lots of people were keen enough to turn up every week for a long series of lectures, and lectures were often timed to start at 6 o'clock in the evening so that people who were working all day could come and hear them.

## Some more websites to explore

- The website of the Royal Institution – here you can find out about what the Royal Institution was like at the time of the story, and also follow links to see what's going on in the Royal Institution's museum or find out about the children's Christmas lectures. <http://www.rigb.org/>
- The website of the Royal Society – another scientific organization which was set up at about the same time as the Royal Institution. <http://royalsociety.org/>
- The website of the Whipple Museum of the History of Science in Cambridge, where you can have a look at some amazing scientific equipment from the past: <http://www.hps.cam.ac.uk/whipple/explore/>