

Russell Suter 2002
Hitchmead School, Biggleswade Beds

ORIGINAL CAST

Conference Organiser - (CO:) Russ Suter

Gallileo Gallilei - (GG:) Judith Wakeling

Newton - (NWTN:) Tim Walker

Alexander Graham Bell - (AGB:) Audrey Webb

Louis Pasteur - (LP:) Jill Hems

Marie Currie - (MC:) Veronica Davies

Albert Einstein - (AE:) Lloyd Dyson

Future Scientist - (FS:) Stephen Cheshire

Music - 2001AD

This is science week, in science year 2002.

I've got a few famous scientists to help me explain to you what science is and represents.

CO: Firstly we have:

1) CO: Galileo Galilei - Born in 1564.

(GG start walking around dropping a few objects - 2 at a time, testing their decent times)

CO: As a boy Galileo was already extremely clever, constructing his inventions, but being poor, he supported himself teaching astrology and astronomy before he went to study medicine.

You've probably heard him already, so I'll let him tell you:

GG: Well, I performed an experiment where I dropped two objects from the top of the leaning tower of Pisa at the same time, one simultaneously dropped, one light object and one heavy.

GG: Which one do you think hit the ground first?

GG: Would you believe it - but the two objects travelled the same speed, touching the ground at the same time!

GG: I also invented the compass and produced telescopes so powerful that I could look at the Moon and see its mountains.

GG: I even carried out my research after, at the age of 73 years old, I become blind and deaf.'

CO: Unfortunately people were not ready for Gallileo's ideas and he was thrown into prison for many years.

2) CO: Sir Issac Newton - born in 1643 in England (died aged 84 in London, England)

CO: Isaac Newton came from a family of farmers and was basically treated as an orphan, after his parents died young. He did not have a happy childhood.



(NWTN comes in tossing an apple up in the air)

NWTN: I was interested in mathematics after buying an astrology book at a fair in Cambridge and found that he could not understand the mathematics in it.

NWTN: I discovered that when I passed a thin beam of sunlight through a glass prism (show one) the spectrum of colours was formed. I argued that white light is really a mixture of many different colours of rays.

NWTN: Where can we see this? Clue: if it's sunny when it rains. (rainbows)

NWTN: In 1666 I imagined that the Earth's gravity influenced the Moon. You must have heard of the story when I was sitting under a tree having a snooze and an apple fell on my head - it certainly woke me up, and I realised that this was gravity at work.'

CO: 'In 1705, Issac Newton was knighted by Queen Anne and became the first scientist to be so honoured for his work. '

3) CO: Louis Pasteur - born in France 1822

CO: As a young boy, he preferred to draw and paint.

As he got older, he trained as chemist.

I'll let him tell you what he did for science:

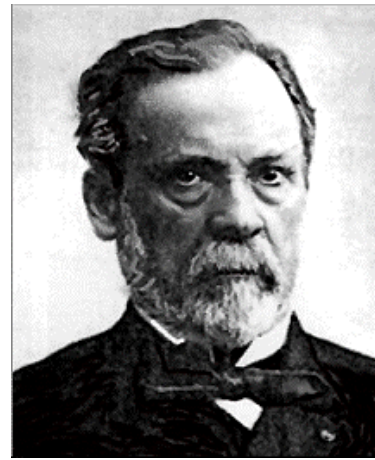
(LP get up with a syringe, lab coat, beard?)

LP: 'I made the important discovery that germs cause most diseases.

LP: I suggested changes in hospitals to slow the spread of disease by microbes. I discovered that if I injected weak forms of germs into people and animals, then they would be protected (or immunized) against stronger forms of the microbe.

LP: Hands up anyone who has had their BSG jab. I discovered such vaccinations.

LP: I also developed "pasteurisation," a process by which harmful microbes in perishable food products are destroyed using heat, without destroying the food. This is very important to food technology teachers and kitchens all over the world. Food will not go off so quickly. Today we use this for milk.



4) CO: Alexander Graham Bell - born in 1847 in Edinburgh, Scotland

AGB: 'Because my mother, Eliza, was almost totally deaf,

I was intrigued with the human ability to speak and listen.

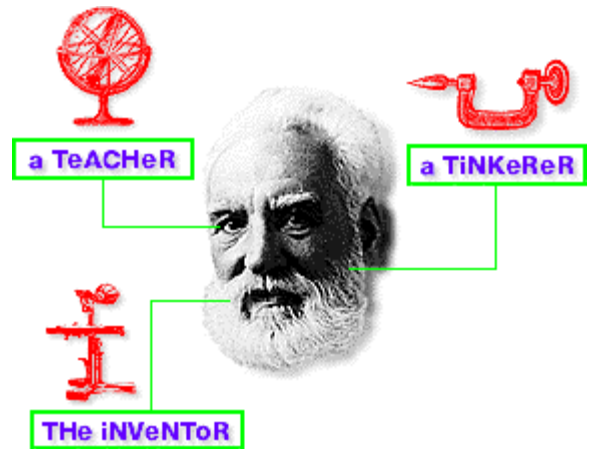
My early days were spent teaching the deaf and I

discovered that by pressing my lips against my

mother's forehead, I could make the bones resonate to my voice.

AGB: My first invention, a machine for cleaning wheat, was developed when I was just 11 years old. At the age of 75, a year before I died, I developed the fastest watercraft in the world. Between these two inventions, I worked on 100s of new concepts.

AGB: My most famous discovery came from playing the piano - I noticed that a note played on one piano would be echoed by a piano in another room. This simple observation led to the telephone.



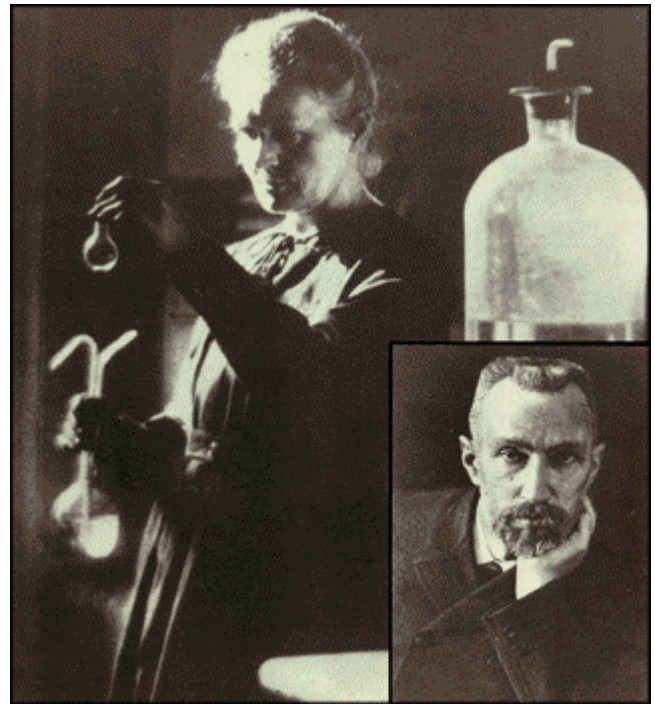
5) **Marie Curie** - born in Warsaw, Poland in 1867

MC: 'I began to investigate radioactivity, with my husband Pierre. We discovered 2 new elements - polonium & Radium.

MC: When the first world war broke out in 1914, I shouted. "We must act, act," and with my daughter (Irène), we used the X-rays that I had developed to find shrapnel and bullets in the wounded. I realised that it was important not to move the wounded and created X-ray vans to help.

MC: I then started to provide equipment for hospitals and my findings enabled cancer patients to be treated for the first time

CO: Unfortunately Marie Curie's love for her job was to be her undoing, all of the radiation she had been exposed to caused her to contract leukaemia and she died in 1934, aged 67.



6) **CO: Albert Einstein** - Born: 1879 in Germany lived for 76 years

AE: When I was 7, I began my school career in Munich. I failed my exams and found reading and writing difficult, but I did manage to get a temporary job as a teacher, teaching mathematics at the High School.

AE: Most of my work was on the laws of physics - mainly mass and energy, mechanics and electrodynamics.

AE: I was also able to make predictions about how a ray of light from a distant star, passing near the Sun, would appear to be bent slightly, in the direction of the Sun.

AE: I made many contributions to peace during my life.

7) **CO: Future Scientist** - who knows what the future holds, but **here** are some ideas:

Future Scientist: I am currently working on a project to do with cryogenics (which means freezing people for many years before waking them up). Maybe I might find a cure for cancer or make travelling at the speed of light possible. The future is in our hands!

Point of my assembly = science is fun, carried out by everyday people like you and me.