## Introduction

'Generosity' is a word usually applied to the act of giving away money. But there are so many other things we can give: time, attention, encouragement, thanks… and they are all important. The scientist Michael Faraday (1791 – 1867) could have made himself rich from patenting his discoveries in the field of electricity and gases, but he chose simply to share his findings with as many people as possible, because as far as he was concerned, they didn't belong to him: they were given by the Creator for the good of everybody.

We can see a similar attitude now when computer programmers put freely available 'shareware' on the internet, or in the 'freecycling' movement that encourages the sharing of unwanted possessions for free. When Dido sang in 'Life for Rent' that nothing she had was truly hers she voiced an ancient wisdom. David's 'The earth is the Lord's, and everything in it' (Psalm 24:1, NLT) voices a similar call to consider and be accountable for careful stewardship of the world's limited resources.

## Preparation

Music for coming into assembly: the song 'Life for Rent' by Dido from the album No Angel.

Some battery – powered electrical gadgets – check they are in working order!

## Development

Life is full of mysteries. How do things work? (Demonstrate some of the electrical gadgets.) Why do people do the things they do? And what are the most important things of all?

Imagine we could go back in time by 150 years, to the reign of the young Queen Victoria, when scientists were just beginning to unpack the mysteries of the universe. Suppose we were investigating the life of a famous scientist who did secret work for the army – what would you think if you came across a report that read something like this?

Our 'suspect' is Mr Michael Faraday. He is famous for his science lectures at The Royal Society building, in which he demonstrates the power of electricity. People come to his lectures from far and wide to see the greatest wonders of the age. Every day, they queue round the block to get in. He's that good. For one particular lecture that he gives on electricity, Mr Faraday has created a massive wooden cage covered in wires. He sits in the middle and sends massive surges of electrical current through the wires, causing showers of sparks – but he emerges unharmed, because he knows how electrical insulators work and wants others to see it too. So our Mr Faraday is a bit of a showman.

These lectures happen in the evenings. In the afternoons, he is in his laboratory, running experiments and making new discoveries. He sometimes does work for the army.

But early in the morning, he comes out from his house carrying a covered basket, walks off down the

street, and returns at lunchtime from a different direction.

This is Michael Faraday's normal pattern of life, from Monday to Friday. So what do we think was going on in the mornings? (Discuss in pairs, share ideas.)

It's simple. Every day, Monday to Friday, Faraday was out visiting local people who were elderly, or frail, or sick. In his basket he had some bread, cheese, fruit, cakes and other goodies to give as presents. And he did it without making a fuss. It was all done in his spare time.

Here's another thing – other scientists, when they make a discovery, claim it for themselves and register a patent, saying, 'It's my idea, and if you want to use it, you'll have to pay me.' Faraday didn't do that. He was happy for others to use his discoveries to create new inventions.

And when Faraday was asked to work on chemical weapons such as poison gas, he refused. He preferred to work on projects that saved lives – such as lighthouses guiding ships to safe harbour. (His army work was about teaching soldiers not to kill themselves by accident when they handled gunpowder.)

## Looking deeper

Why was Faraday so generous with his time and his inventions? Because not only was he a scientist, he was also a Christian. For him, science was all about puzzling out and uncovering the laws that govern the universe. Faraday thought all his discoveries were a gift from God. He put it like this in his lecture notes of 1858:

The beauty of electricity or of any other force is not that the power is mysterious, and unexpected… but that it is under law… and [when Science learns to apply those laws] it conveys the gifts of God to man.

As Faraday approached the end of his life he was asked what he thought would come next. He said, 'I shall be with Christ, and that is enough.'

For Michael Faraday, life was all an amazingly generous gift from God – and he was happy to share what he had been given with as many people as possible. He shared his knowledge with children and young people by starting The Royal Institution Christmas lectures, which are still going today and are shown on TV every year. (Also, nobody had a bad word to say about him – and in the world of science, that's quite rare!)

Because Faraday was willing to share his discoveries for free, it meant other scientists were able to use his knowledge to create electrical batteries, motors, lights and a host of other inventions.

Michael Faraday followed the way of Jesus Christ, who said, 'Freely you have received; freely give' (Matthew 10:8, NIV) I wonder how you could be generous in sharing something with other people today? But who knows – the thing you share might not even be a 'thing' at all.

## Meditation

Think of all the electrical things you have used today. Every one of them exists because somebody like Michael Faraday discovered the laws that make them work, or invented them, or designed them, or built them. And we are able to use them at the click of a switch, or the press of a button, or the tap of a finger on a screen.

## Prayer

Thank you, Lord Jesus, for everyone who has ever worked hard at discovering new things about our amazing universe. Thank you for people who are generous with their time and money and talents. And thank you that everybody here can be generous with their time and talents, each in their own way. Amen

## Thought for today

*All good gifts around us*
*Are sent from heaven above,*
*Then thank the Lord, O thank the Lord,*
*For all his love.*
(Taken from the hymn 'We plough the fields and scatter' – Matthias Claudius, tr. Jane Montgomery Campbell)

## For the classroom

**Literacy:** imagine Faraday was alive today and went on a radio phone – in. What questions would he be asked? How do you think he would answer them?

**Speaking and Listening**: when explaining how he gave his famous scientific talks to an audience, Faraday said, 'I always… draw up a plan of it on paper and fill in the parts by recalling them to mind… This done, I have a series of major and minor headings in order, and from these I work out my subject.' Plan a short talk you can give to the class, explaining what you know or think about a favourite subject.

**Literacy**: Michael Faraday's career in science probably began on the day he started keeping a notebook to record ideas he was thinking about. Create a 'thinking diary' and use it for a month to record your ideas and thoughts. At the end of the month, consider whether to keep this up as a regular habit.

**Science/PSHE**: list all the many ways we use electricity in our homes. Create posters that either explain some key scientific ideas about how electricity works and how it is used, or warn children not to play with mains electricity. Design warning symbols that carry the same message.