

LETTERS FROM GRANDPA # 182

Dearest grandchild,

Today's letter will deal with one of the greatest scientists of all time. His name was Michael Faraday. Albert Einstein kept his picture on the wall of his study. Faraday was offered knighthood which he graciously declined indicating that he would remain "plain Mr. Faraday to the end". He was elected to the Royal Society in 1824 but declined on two different occasions to be its president. In 1832 he was elected a Foreign Honorary Member of the American Academy of Arts and Sciences and became the first Fullerian Professor of Chemistry at the Royal Institute in 1833. He was elected a foreign member of the Royal Swedish Academy of Sciences in 1838, and was elected to the French Academy of Sciences in 1844. In 1849 he was elected as associated member to the Royal Institute of the Netherlands.

While his discoveries and honors are too numerous to include in this brief letter I want you to know about him because of his faith. Faraday was a devout Christian who served as a deacon and later an elder in a small group of independent believers. Their devotion to the Bible led each congregation to have a plurality of elders. Their opposition to the clergy system was indicated by the fact that anyone with a message of edification was permitted to speak. They observed the Lord's Supper every week and because many were too poor to eat properly they also had a full meal together every Lord's Day. The early church apparently did the same and called them "love feasts" (Jude 12).

Faraday was born Sept. 22, 1791. He was the third of four children. His father was a blacksmith, but because of poor health was unable to adequately feed his family. Faraday recalls being given a single loaf of bread that was to sustain him for an entire week.

Faraday's only formal education came in Sunday School. The Sunday School movement was begun by Robert Raikes (1736 - 1811). Since children worked in factories every day but Sunday, Raikes chose that day to teach them to read and write. When Raikes died 31 years after holding his first class, there were an estimated 500,000 children in the British Isles attending Sunday School. Some opposed educating the poor in those days for fear it would lead to revolution.

At 14 Faraday dropped out of school and became an apprentice to a book dealer and book binder. In his spare time the young apprentice read some of those books. One of his favorites was the Third Edition of the Encyclopedia Britannica which featured an article on electricity.

A major break for Faraday came when he was offered a ticket to hear lectures in London by Sir Humphrey Davy. Davy was an expert on the subject of chemistry. Faraday listened intently to the lectures and took copious notes. When he returned to work he bound his notes together and sent them to Davy. Based on these notes later, in 1812, Davy invited the young Faraday to work with him. Someone later quipped that Faraday was Davy's greatest discovery.

By 1820 Faraday was as familiar with chemistry as anyone alive. This was the same year that

amazing discoveries were made by Hans Christian Orsted and Andre Marie Ampere in the field of electricity and magnetism. Now turning his focus to electricity Faraday's genius produced many innovations and discoveries including the first electric motor.

In the spring of 1831, Faraday began to work with Charles Wheatstone on the theory of sound. This led to what some consider Faraday's most famous experiment. On Aug. 29, 1831 Faraday wound a thick iron ring on one side with insulated wire connected to a battery. He then wound the opposite side with wire connected to a galvanometer. Based upon data from this experiment he proposed what he called the "electrotonic" state of particles in the wire. While the significance of this experiment is lost to a layman, it was revolutionary to scientists.

Faraday helps us to understand that you don't need to abandon your brain when you go to church, or your faith when you go into a laboratory. This truth is confirmed by the fact that many of the world's greatest scientists are believers. As I mentioned to you long ago the late Dr. Henry Morris wrote a book about over 100 famous scientists titled "Men of Science, Men of God" A more recent e-book was written by author and researcher Tiomir Dimitrov titled *Fifty Nobel Laureates Who Believe in God*. Thank God for men like Michael Faraday who has paved the way for others and demonstrated that it is possible to be both a devout Christian and a competent scientist at the same time.

I love you,

Grandpa Boyce