

A Little History of Science

Science is dynamic, come from the influence of various questions about what they have been around them, building upon the ideas and discoveries. The first scientists of the world were probably priests.

The earliest science and technology were created by human societies of China, India, and the Middle east, specially Babylon and Egypt. Babylonian and Egyptian were both concentrated on astronomy. Chinese and Indians discovered many drugs that could be used to treat diseases. We got numbers(Arabic) from India and paper from China.

Ancient Greece also had many scientists, for example, Democritus who believed that everything in the universe composed of atoms which could not be broken down and have many sizes.

The sample of Most well-known of Ancient scientist are:

1. Hippocrates was known as the father of medicine. He was a doctor with a little known about him, so diagnosing and treating diseases were written by Hippocratic corpus (a group of writing). He believed that disease was a natural and illness could get better by itself.
2. Aristotle was a teacher, who spent his whole life learning and teaching. He studied about how plants germinate and animals were born, they grow and then die.
3. Galen was the emperor of Roman's doctor. He was the first who wrote treatise about how the pulse of heart could be useful in diagnosing disease.

After new religion arose in the Middle East, All Islamic scholars had translated manuscript from Egypt, Greece, Roman, China, and India into their language. When Europeans translated Islamic work into Latin that is why the Indian's numbers then are called Arabic.

After the fall of Roman Empire called the Middle Age, there were many universities in Europe established by the Church, which had four faculties; Theory, law, medicine, and arts.

Andreas Vesalius was the first man who uncovered the human body and published his great book named De Farica, which illustrated the structure of human body much more than writing.

Nicholas Copernicus was the first astronomer who realized that the Earth and other planets revolved around the Sun, instead of placing the Earth at the center.

The first telescope was made by Galileo Galilei, which was the most useful equipment led him to know more about planets in the heaven. But his findings were banned by the Church.

William Harvey, who did research about blood circulation and function of human heart, was recognized as the founder of experimentation in biology and medicine.

Sir Isaac Newton was the most creative scientist who brought the heavens and Earth together by his laws of motions applied throughout the universe.

In the early eighteenth century scientists had started to make many research about electricity. Benjamin Franklin was the first who found that electricity can be produced by a device called battery.

King of France, Louis XV, had sent two expeditions to Lapland (at North pole) and Peru (at equator) in order to prove that the Earth was actually flattened at the poles as Newton said before.

Comte de Buffon, a French nobleman, described nearly everything about animals he had. His research was collected in a massive work of 127 volumes, called *Historie naturelle*.

But there was Carl Linnaeus, a Swedish doctor, who clarified both animals and plants in groups by genus and species. He produced a short book called *Systema Naturae* (The system of nature)

There were many scientists in the late eighteenth century, who had found about atoms and some of both organic and inorganic compounds. John Dalton set up Dalton theory showing how elements on atoms combine in definite proportion to form compounds. Jons Jacob Berzelius discovered several new elements and he published lists of them in chemical table.

Michael Faraday was one of the chief investigators in the early of nineteenth century. He spent half of his life to work with electricity and magnetism, so he invented the first electrical generator and transformer. James Clerk Maxwell was one of the most creative physicists of all time. His treatise on Electricity and Magnetism is probably the most important physics book before those of the twentieth century.

Charles Darwin made his travel around the world. After his dream was ignored by his parents, who wanted him to be doctor or scientist instead, he started to make his own travel. His remarkable discovery is the journey to Galapagos island. There, he discovered the core idea of evolution. Turtle and tortoise, various species of bird on the island are his main discovery that he could make it.

Louis Pasteur succeeded in making his anthrax bacteria much lessable to causes disease and he called these weakened bacteria a vaccine. He cultured Rabies disease in rabbits and made vaccine for human, which was the first case of the world.

J.J.Thomson used cathode tube in his experiment work. He found electron and stream of energy on particles radiate from the tube. Ernest Rutherford is considered the founder of nuclear physics. He found that atom composed of nucleus and electrons circle around.

Wilhelm Rontgen was the first who understood about X-ray power and discovered that it was not affected by magnetic field. Marie Curie discovered radium which its could kill cancer cells more suitable than X-ray.

Alexander Fleming received Nobel Prize for the discovery of penicillin, the first antibiotic drug of the world. Selman Waksman tried to isolate compounds from bacteria that could act as antibiotics. Finally, streptomycin was made, from bacteria *Streptomyces*, could against bacterium that cause tuberculosis.

Linus Pauling achieved to reveal the molecular structure of the genes, He suggested that it was a long-coiled molecule made up of three strands twisted together.

Crick and Watson revealed the structure of DNA, a lot of molecules of adenine(A) and Thymine (T), Cytosine(C) and guanine(G) arranged in their double helix in the nucleus of the cell.

Hubble Space Telescope revealed more than cosmologists have seen with the telescope at the mount Wilson Observatory in California. Fred Hoyle suggested that the universe has no beginning and no end because of the continuous creation of new matter.

This book is arguing about the origin of each important section of science. For example, origin of genetic and evolution, origin of telescope, etc. This book support scientists who invent each crucial thing that effect the world. Even the unknown scientist, the author can pick his idea up and write story about him.

This book's strength is deep detail in origin of each scientist and timeline arrangement. It has good arrangement which make reader understand which technology, which development come first. But this book also has weakness that some feature that is somewhat not interesting. For example, some chapter doesn't have any crucial history about science.

I would like to recommend this book to people who interest in history of scientist and how things developed. Because most part of this book have scientific word, it is hard to understand for someone.