

# The history of the atom assignment



Chapter 2 The History of the Atom It took many scientists and philosophers hundreds even thousands of years to come up with an accurate atomic theory. For nearly 2, 000 years science was unable to come up with experiments that were able to test and put forth the theories made up by Democritus which was a fifth century B. C. Greek philosopher. In 1803, John Dalton, who viewed the atom as a small solid sphere, and is credited for the developing of the first coherent atomic theory was now in the picture.

This all led to the the first periodic table of the elements, and the history of the atom. Democritus was a greek philosopher who thought that all matter was composed of indivisible particles called atoms which is greek for “ uncuttable”. He was born in 460 BC in Abdera which is in North Greece. Democritus wrote approximately seventy books including books about the atomistic theory. He didn't accept the Eleatic hypothesis that “ everything is one” and that change and motion are an illusion. He then explained motion and change.

He said change was an observation that does not deceive the senses; change is real. Democritus succeeded by inventing the concept of atoms for which he is still known. Next, is John Dalton who is known for developing the atomic theory. Dalton was born in Cumberland, England on September 6, 1766. Dalton also helped to explain the laws of chemical reactivity, and further the concept of atomic weights. John Daltons atomic theory is summarized here: 1. Matter is composed of small particles called atoms. 2.

All atoms of an element are identical, but are different from those of any other element. 3. During chemical reactions, atoms are neither created nor

destroyed, but are simply rearranged. 4. Atoms always combine in whole number multiples of each other. For example, 1: 1, 1: 2, 2: 3, or 1: 3. Lastly, the works of these two men have shown us today what the atom really is. The building blocks of life or even what scientists like to call “matter”. Atoms are very small, and there are up to one hundred different atoms today which are also known as elements.

The joining different types of atoms are called “compounds” and water would be an example of this; two hydrogens and one oxygen. Atoms are mostly made up of empty space but have a nucleus in the middle with protons and neutrons in it. Electrons surround the nucleus and act against the protons positive charge with its negative charge and that’s what makes the atom neutral. Clearly, the atom is a very complex structure and without these philosophers and scientists we would not have the history of the atoms.