



SHS LEARNING ACTIVITY

CHEM1-03-01

Name: _____ Score/Mark: _____

Grade and Section: _____ Date: _____

Strand: STEM ABM HUMSS ICT (*TVL Track*)

Type of Activity : Concept Notes Skills: Exercise/Drill Illustration

Laboratory Report Essay/Task Report Other: _____

Activity Title: 03-01.Dalton's atomic theory (~1805) v05

Learning Target: To describe the atomic theory of John Dalton

Authors/References: Victor Sojo / Brown's Central Science; Wikipedia

Unlike most scientists of his time, **John Dalton** (1766-1844) was born poor. He worked and studied very hard and went on to make multiple significant contributions to Science. Chief of these is his **Atomic Theory**, built upon work by many other scientists of his time (all great Science is built upon the knowledge gathered by previous scientists; this is why we must study their work).

The main ideas of Dalton's atomic theory are:

1. **Elements** are made of **extremely small particles** (the **atoms**).
2. Atoms of the **same element** are **identical**.
3. Atoms of **different elements** are **different**.
4. Atoms **are indivisible**.
5. In a **chemical compound**, atoms of **different elements** are **combined in simple proportions of integer (whole) numbers** (1, 2, 3, ...).
6. In **chemical reactions**, atoms are **combined, separated or rearranged**.
7. Atoms **cannot be created or destroyed**.
8. Atoms of an element **do not change into atoms of another element**.

Questions

- a) We now know that idea #4 above is wrong. How do we know this?
- b) We also know that ideas #7 and #8 are right in the vast majority of the chemistry that we do. However, there are cases in which atoms can indeed be created, destroyed, or transformed into other atoms. Do you know which kind of processes these cases belong to?

