

John dalton and atomic theory outline and sources

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John Dalton and Atomic Theory John Dalton was a British scientist who made important contributions to science and to the atomic model specifically. I.

Experiences in his life that led to his interest in science and the study of the atom A. Education and teaching career brought him in contact with amateur meteorologists B. Mentors and meteorology directed his interest toward air pressure and properties of gaseous elements C. Study of elements led to interest in components of elements and his atomic theory. D.

This is the general path to his discoveries. However, no one knows specifically how he reached most of his conclusions about atoms. II. Work on the atom and its contribution to the modern atomic model A. Lavoisier's Law influenced Dalton's assertion that atoms cannot be created, destroyed, or subdivided. B. Proust's Law of Definite Proportions led Dalton to his Law of Multiple Proportions C. He was trying to explain why water absorbs different gases in different proportions. D. Contributions 1. All matter consists of tiny particles, atoms. 2.

Atoms cannot be created, destroyed, separated into smaller parts or transformed into another element. 3. All atoms of the same element have identical weights, while atoms of different elements have different weights. 4. When elements react, their atoms combine in simple, whole-number ratios. 5. When elements react, their atoms sometimes combine in more than one simple, whole-number ratio. 6. When atoms combine in only one ratio, they are combining in a 1: 1 ratio. III. Contributions which were eventually disproven and thus are not part of the modern model A.

The idea that atoms that combine in only one ratio do so in a 1: 1 ratio not only led him to wrong conclusions, but also caused his theory to be rejected

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for many years. B. Another mistaken idea was that atoms cannot be separated into smaller parts or transformed into another element. C. The assertion that all atoms of the same element have identical weights, while atoms of different elements have different weights is inaccurate. IV. Conclusion A. His work was important and foundational to modern atomic model. Sources [1] " John Dalton (British Scientist): Atomic Theory. Encyclopedia Britannica Online. Encyclopedia Britannica, n. d. Web. 5 Feb. 2013. . [2] Lefers, Mark, and Holmgren Lab. " Northwestern University/Morimoto Laboratory-Definitions. " Online Posting. Morimoto Laboratory. Northwestern University, 26 July 2004. Web. 5 Feb. 2013. . [3] " John Dalton Biography. " Bio. com. A&E Networks Television, n. d. Web. 5 Feb. 2013. . [4] Senese, Fred. " Foundations of Dalton's Atomic Theory. " General Chemistry Online: Companion Notes: Atoms & Ions: Dalton's Atomic Theory: Dalton's Postulates. N. p. , 25 July 2005. Web. 5 Feb. 2013. .