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Dalton's Atomic Model

QUESTION
Is matter continuous or discontinuous?

WORLD'S VIEW
Chemical reactions follow quantitative laws, that must be discovered for the advancement of science

THEORY
ARISTOTLE
Matter is continuous and can be divided indifinetely.

EVENTS
Measurements of masses in chemical reactions

DATA
Elements always combine in fixed proportions

DATA TRANSFORMATION
Elements always combine in fixed proportions; therefore, matter has to be composed of indivisible particles (atoms).

KNOWLEDGE VALUE: DALTON'S ATOMIC THEORY

1. All matter is composed of tiny particles called atoms
2. All atoms of a given element have identical chemical properties
3. Atoms of different elements have distinct properties
4. In chemical reactions atoms change the way they combine, but they are neither created nor destroyed

VALUE CLAIM
By knowing the structure of matter science can progress and we can take advantage of that.