
The Atomic Revolution

Start with the Ancient Greeks

- Democritus was first to propose a model for matter that was somewhat correct
 - All matter is made up of atoms and there are empty spaces between these atoms.
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John Dalton – English Chemist

- Father of Modern Atomic Theory - 1766
 - Agreed with Democritus that matter is indivisible
 - Revolutionized the way we think about matter by proposing 5 simple points
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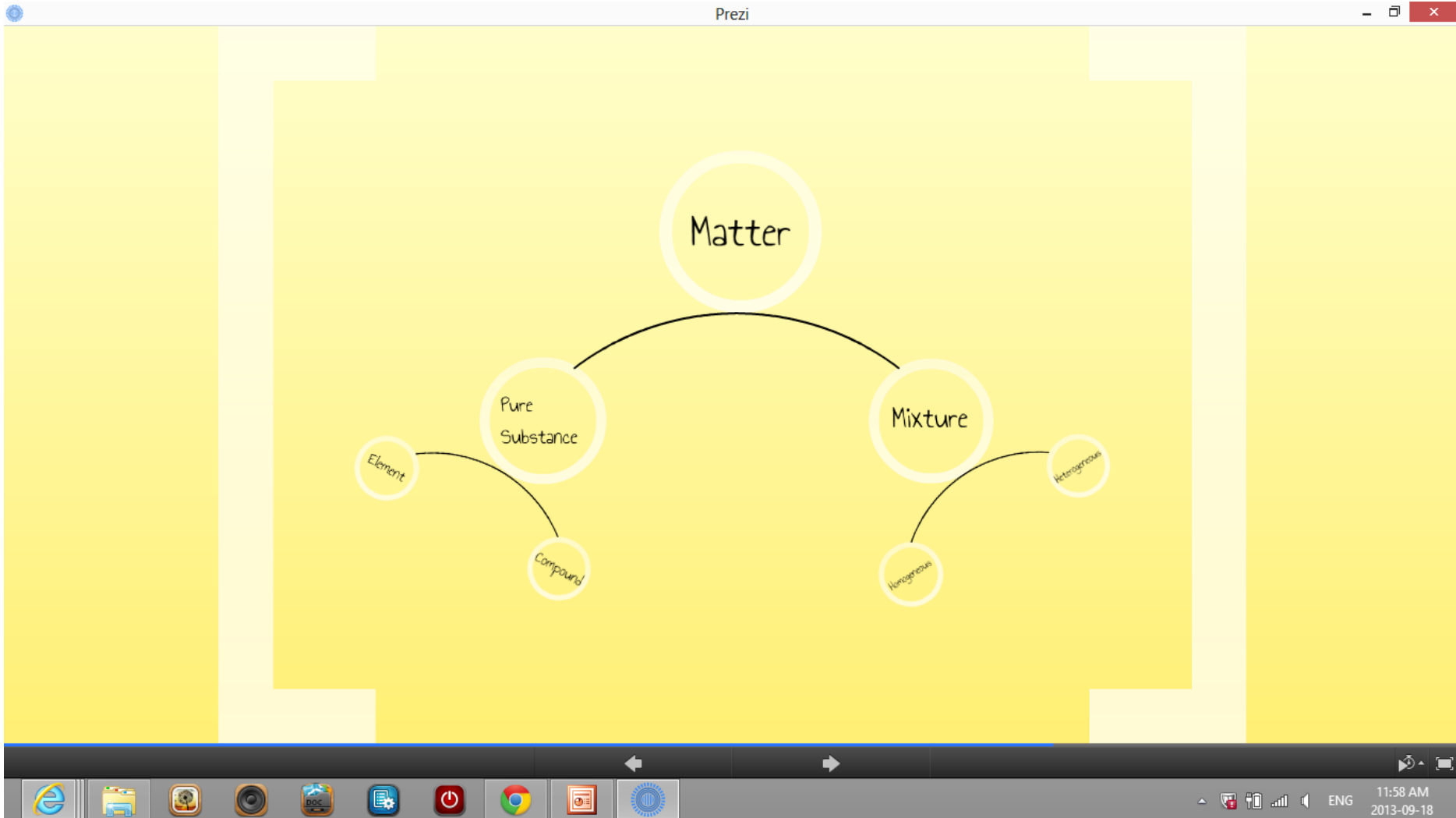
5 steps to Dalton

- I. Elements are made of extremely small particles called atoms
 - II. Atoms of a given element are equal in mass, size and other properties; atoms of different elements are different.
 - III. Atoms cannot be made, subdivided or destroyed
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5 steps to Dalton

- IV. Atoms of different elements can combine in simple whole number ratios to form chemical compounds
 - V. In chemical reactions, atoms are combined, separated or rearranged
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Matter is broken down into categories



Matter

- Pure Substance

- Element
- Compound

- Mixture

- Homogeneous
 - Heterogeneous
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Conservation of matter

- In a chemical reaction, whatever you start with is always what you end with in terms of mass.
 - The mass of the reactants equal the mass of the products without exception, whether it is a chemical or physical reaction
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