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| Science 9 | Unit B |
| Lesson 3: The Atomic Model | 84 Mins |

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| **Atomic Theory**  **Billiard Ball Model**  All matter is made up of **elements**  Elements are made up of Atoms  All atoms of an elements have the same mass.  **Cathode Rays**  The rays in a cathode tube were found out to have a charge.  These particles turned out to be Electrons.  **Raisin Bun Model**  A positive atom (bun) has negative electrons in it (raisins)  **Solar Model**  Electrons orbit around a large positive atom  **Gold Foil Experiment**  To prove Hantaro Model, Rutherford shot alpha particles (Positive Particles)  The Nucleus is small and positively charged, orbited by electrons  **Bohr’s Model**  Electrons have specific orbits called shells. Electrons can ‘jump’ and ‘fall’ from these orbits by gaining or releasing energy.  **Discovery of the Neutron**  Nucleus made up of:   * Protons (Positive) * Neutrons (Neutral) * Electrons (Negative) | John Dalton 1808 (English)  All Oxygens are the same mass and that is different from Chlorine  JJ Thomson 1897 (English)  https://www.youtube.com/watch?v=O9Goyscbazk  Thomson  (Draw the Model)  Hantaro Nagaoka (1904) (Japanese)  (Draw the Model)  Ernest Rutherford (1908) (Canadian)  Draw the Experiment and new Model (pg. 119)  Neils Bohr (1913) (Danish)  Draw pg. 120  James Chadwick (Enlish) |