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| How were atomic models developed?  What is Dalton’s Atomic Theory?  What is Thomson’s theory?  What is Rutherford’s theory?  What is Bohr’s model?  What is the cloud of electrons model?  What is the modern atomic model?  What are the particle charges and masses?  What is atomic number?  What are isotopes? | Ancient Greeks proposed the idea of atoms. The theory of atoms grew as more evidence was collected over time.  1. All elements are composed of atoms that cannot be divided.  2. All atoms of the same element are exactly alike.  3. Atoms cannot be created or destroyed, only rearranged.  4. Every compound is composed of atoms of different elements combined in a specific ratio.  Thomson discovered electrons. He thought they were randomly scattered throughout the atom.  Rutherford disproved Thomson’s model and suggested a new model with a nucleus filled with protons (positive particles).  Bohr suggested that elements orbit the nucleus.  According to the cloud model, electrons move rapidly in every direction depending on its energy level.  The modern model describes an atom consisting of a nucleus that contains protons and neutrons surrounded by cloudlike region of moving electrons.  1. Protons = +1 (same size as neutron)  2. Neutrons = 0 (same size as proton)  3. Electrons = -1 (2000 times smaller than proton)  Atomic number is the number of protons in the nucleus of the atom.  Isotopes are atoms with the same number of protons and a different number of neutrons. Isotopes are identified by its mass. |

Summary: