

Name: _____

Date: _____

Science 9 – Timeline of Atomic Theory

Purpose

To investigate contributions to atomic theory that led to the current model of the atom.

Task

The model of the atom has developed significantly since early theories. To visualize this evolution, you and a partner will create one section of a timeline from the following contributions to atomic theory:

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| 1. Leucippus and Democritus – Atomic Hypothesis | 17. Richard Wilhelm Heinrich Abegg – Atomic stability |
| 2. Antoine Lavoisier – Law of Conservation of Mass | 18. Albert Einstein – $E=mc^2$ |
| 3. Joseph Proust – Law of Constant Composition | 19. Hans Geiger – Geiger counter |
| 4. John Dalton – Dalton Atomic Theory, Law of Multiple Proportions | 20. R.A. Millikan – Oil Drop Experiment |
| 5. J. Plucker – Cathode Ray Tubes | 21. Ernest Rutherford – Gold Foil Experiment, Rutherford Atomic Theory |
| 6. Dmitri Mendeleev – Periodic Table | 22. H.G.J. Moseley – Atomic number |
| 7. G.J. Stoney - Electron | 23. Francis William Aston - Isotopes |
| 8. Sir William Crookes – Cathode Ray Tubes | 24. Niels Bohr – Planetary Model of the Atom |
| 9. Wilhelm Roentgen – X-rays | 25. De Broglie – Particle/wave duality of electrons |
| 10. Antoine Henri Becquerel – Radioactivity | 26. Erwin Schrodinger – Mathematical model of the atom |
| 11. J.J. Thomson – Thomson Atomic Theory | 27. James Chadwick – Neutrons |
| 12. Marie Curie – Radioactivity | 28. Lise Meitner – Fission |
| 13. Soddy – Half-life of radioactive isotopes | 29. Glenn Seaborg – Transuranium elements |
| 14. Max Planck – Quanta | 30. Enrico Fermi – Chain reactions |
| 15. Pierre Curie – Gamma rays | |
| 16. Hantaro Nagaoka – Saturn Model of the Atom | |

Specifics

- All of your information must be presented clearly and colourfully on an 8.5" by 11" piece of white paper.
- Pictures should be the majority of the page, but there should also be a short paragraph (2-3 sentences) or point-form list that explains what you are showing. Everything you write should be written in your own words. Do not copy directly from the internet, and do not write anything you do not understand!

Evaluation

Criteria	Great	Satisfactory	Poor
Description of theory is scientifically accurate.			
Explanation and pictures used are clear, readable and using grade-level language.			
Evidence of a high level of effort – attractive, nothing is copied from the internet, space is used well.			