

**Subject: Chemistry**

**Year 12 Prep Task**

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| **Key Info**   * **Understand the importance of The Periodic Table of Elements and understand some of the key reactions.** * **Identify what polymers are and why they are useful to us in everyday life.** * **Recall the history of the atom and the key discoveries that led to each change in structure.** | | |
| **Week beginning:**  **22.07.24** | **Expected completion time:**  **Due Sept 2024 – first lesson.** | |
| **Activities to be completed** | **Location of resources** | **Additional resources/support** |
| 1. Watch the lecture and produce an A3 poster about the Elements and the Periodic Table (or minimum 2 sides of A4). Please include facts about:  * Groups and periods * Discovering inert gases * Transition metals * Reactions with oxygen  1. Read the article and answer the questions 2. Create a timeline for the history of the atom. Include the following scientists and concepts:  * Democritus * Dalton * Thomson * Rutherford * Bohr * Chadwick  1. Electrons 2. Protons 3. Neutrons 4. Shells 5. Isotopes 6. Alpha Scattering Experiment | YouTube -  Investigating the Periodic Table with Experiments with Peter Wothers - [Investigating the Periodic Table with Experiments - with Peter Wothers (youtube.com)](https://www.youtube.com/watch?v=kqe9tEcZkno)  Physical Science Journal for Teens.  Can materials made of the same elements have different properties?  [sugar\_article.pdf (sciencejournalforkids.org)](https://www.sciencejournalforkids.org/wp-content/uploads/2022/08/sugar_article.pdf)  [Atomic models - The evolution of the atom - GCSE Chemistry (Single Science) Revision - OCR 21st Century - BBC Bitesize](https://www.bbc.co.uk/bitesize/guides/zp3dh39/revision/1)  [History Of The Atom Timeline - GCSE Chemistry | kayscience.com (youtube.com)](https://www.youtube.com/watch?v=LCzLTQABYdE) | <https://pubchem.ncbi.nlm.nih.gov/periodic-table/>  <https://youtu.be/QxazXEjI0SU>  [Week1 Chemistry Atomic Theory Timeline Lesson 2.1a SDS - YouTube](https://www.youtube.com/watch?app=desktop&v=rxNIr9CZrhY) |
| **Work to be submitted:**   1. Elements and Periodic Table Summary Poster. 2. Polymers article question answers. 3. Timeline; The History of the Atom. | | |