

**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.**
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| **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.
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