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**Subject: Science**

**Year: 10**

**Term: Autumn 1**

**Greenwood School Curriculum Summary**

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| **Episode name** | **Episode outline** | **Online link(s)**  | **Other Resources** |
| Atoms, elements and compounds | Define elements and compounds as well as identify them from diagrams. Learn how to name compounds. | <https://continuityoak.org.uk/lessons> |  |
| Mixtures, filtration and crystallisation | Identify mixtures, describe the process of filtration and crystallisation, explain how to separate a mixture of a soluble and an insoluble substance. | <https://continuityoak.org.uk/lessons> |  |
| Distillation | Recap changes in state, describe the method of distillation and explain the process of distillation using the particle model. | <https://continuityoak.org.uk/lessons> |  |
| Chromatography | Describe the method of chromatography and why it's useful, and then interpret chromatograms. | <https://continuityoak.org.uk/lessons> |  |
| Atomic structure | Describe the structure of an atom, understand the difference between atomic mass and atomic number. Calculate the number of protons, neutrons, and electrons within an atom. | <https://continuityoak.org.uk/lessons> |  |
| Development of the atomic model | Describe the work that led to an increased understanding of what atoms are made of and how this led to changes to the atomic model. | <https://continuityoak.org.uk/lessons> |  |
| Isotopes | Define an isotope, compare isotopes and calculate relative atomic mass using isotopic abundances. | <https://continuityoak.org.uk/lessons> |  |
| Isotopes case study | Describe the contributions of Marie Curie and Frederick Soddy to enhance our understanding of isotopes and the atomic model. | <https://continuityoak.org.uk/lessons> |  |
| Electronic configuration | Explain why the charge of an atom is neutral. Draw and write the electron configuration of atoms and explain how electron configuration is linked to the group number. | <https://continuityoak.org.uk/lessons> |  |
| Periodic table development | Describe the main features of the modern periodic table, describe early versions of the periodic table, and then compare the modern periodic table with the early periodic tables. | <https://continuityoak.org.uk/lessons> |  |
| Why elements react | Describe what happens when metals and non-metals react in terms of electrons. Explain why noble gases don't react and describe and explain the physical property trends of group 0. | <https://continuityoak.org.uk/lessons> |  |
| Group 1 | Describe the trends in the physical properties of group 1 elements, and the reactions of group 1 metals with water and oxygen. | <https://continuityoak.org.uk/lessons> |  |
| Group 7 | Describe and explain the trends in the physical properties of group 7 elements. | <https://continuityoak.org.uk/lessons> |  |
| Group 7 displacement  | Describe trends in group 7 reactivity, predict the products and colours changes that occur during displacement reactions of group 7 elements and write word and symbol equations for these displacement reactions. | <https://continuityoak.org.uk/lessons> |  |
| Comparing group 1 and group 7 | Use electron configuration to explain trends in reactivity in both group 1 and group 7 elements. | <https://continuityoak.org.uk/lessons> |  |
| Transition elements | scribe the properties of transition metals and how their properties apply to their uses. We will also compare the properties of transition metals and their compounds to those of group 1 metals. | <https://continuityoak.org.uk/lessons> |  |