

# Scheme of Learning: Elements and The Periodic Table

## Topic Sequence:

1	2	3	4	5	6	7	8	9	10
Lab Skills	Particles and Separation Techniques	Forces	Cells and Organisation	Elements and the Periodic Table	Energy	Health and Human Body	Chemical Reactions	Electricity and Magnetism	Reproduction

## Topic Overview:

The national curriculum requires that we teach the following:

- Differences between atoms, elements and compounds
- Chemical symbols and formulae for elements and compounds.
- The concept of a pure substance.
- The varying physical and chemical properties of different elements.
- The principles underpinning the Mendeleev Periodic Table.
- The Periodic Table: periods and groups; metals and non-metals.
- How patterns in reactions can be predicted with reference to the Periodic Table.
- The properties of metals and non-metals
- The chemical properties of metal and non-metal oxides with respect to acidity.

## Lesson Sequence:

We start with an introduction to the Periodic Table, including uses, properties and trends. We then use this knowledge to identify differences in elements, compounds and mixtures. Once pupils have understood this we then explore the uses and patterns found in groups 1,7 and 0 in more depth.

### Sequence of Lessons:

1	The Periodic Table
2	Uses of Elements
3	Trends in The Periodic Table
4	Development of The Periodic Table
5	Compounds and Mixtures
6	Pure and Impure Substances
7	Group 1 Elements
8	Group 7 Elements
9	Group 0 Elements
10	Revision
11	Assessment

### Resources:

1	Print table for pupils to complete
2	Info slides for elements in prep room drawers, squares of plain paper
3	Print table for pupils to complete. Selection of metals (Mg, Al, Zn, cobalt, nickel etc...), 1 basic electrical circuit set up (bulb, ammeter, wires, battery), tray of water, set of bar magnets
4	Print timeline slide and pictures to cut and stick slide. Both on A3.
5	Print worksheet for pupils to complete. Possible demo sandy water, sieve, filter paper, funnel.
6	Print graph worksheet. Salt water and pure water (for use with Bunsen burners and thermometers).
7	Demo: Li, Na, K in water trough, UI.
8	None
9	None
10	Revision
11	Assessment sheets in shared folder.

## Supportive Reading:

Comprehension activity	TBC
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## Assessment:

Knowledge:	Multiple choice questions.
Application of Knowledge:	Compare the trends and uses of group 7 and group 1 elements.