Birches Head Academy

Part of the Frank Field Education Trust

Year 10 Science
Learning Programme 2

Loric for LP1 is Organisation

Vocabulary to be taught using the frayer model

The values we are learning about arecompassion and honesty

Compassion - sympathy and concern for the suffering or misfortunes of others
Honesty - being truthful and refraining from cheating or lying

What will I be learning about in this Learning Programme?
In this learning program, students will develop their understanding of the fundamental concepts of chemistry, starting with the structure and behaviour of atoms and moving through chemical reactions, bonding, and the periodic table. They will also explore techniques for

Where have I seen this learning before?
Prior knowledge of atoms, reactions, and lab techniques supports understanding of bonding, periodic trends, mixtures, and chemical principles.

What could I use it for?
Students will use this chemistry knowledge in the future to understand real-world processes such as how medicines work, how materials are made, and how chemical reactions affect the environment. It is essential for further science study at GCSE and beyond, especially in courses

In LP2.1, I will know : 20/10/25 - (WK 2)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
the basic structure and properties of atoms; how to write and interpret simple chemical equations; methods for separating mixtures, including fractional distillation and paper chromatography. - IGNITION.	I will show honesty by accepting the consequences for my mistakes.	Homework tasks are located in the Knowledge Organisers

In LP2.2, I will know : 03/11/25 - (WK 1)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
the historical development of the atomic model; the detailed structure of the atom, including protons, neutrons, and electrons; the differences between ions, atoms, and isotopes.	I will show compassion by giving encouragement to others.	Homework tasks are located in the Knowledge Organisers

LP2 RLW, I will: 10/11/25 - (WK 2)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
review my learning, recalling and applying key knowledge, focus on closing any gaps in my knowledge and prepare effectively for the upcoming assessments.		

In LP2.3, I will know : 17/11/25 - (WK 1)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
how electronic structure relates to the Periodic Table; the key stages in the development of the Periodic Table; the properties and reactivity of Group 1 alkali metals.	I will show honesty by listening to and accepting the views of others.	Homework tasks are located in the Knowledge Organisers

Extended Task

PRT Task 1

In LP2.4, I will know : 24/11/25 - (WK 2)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
how to calculate Rf values from chromatography experiments; the characteristics and trends of Group 7 halogens, including displacement reactions; how trends in reactivity occur across groups in the Periodic Table.	I will show compassion by asking someone how they are.	Homework tasks are located in the Knowledge Organisers

In LP2.5, I will know : 01/12/25 - (WK 1)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
the different states of matter and related concepts such as steric acid; how atoms form ions and understand ionic bonding; the structure and properties of giant ionic lattices.	I will show honesty by telling the truth about things.	Homework tasks are located in the Knowledge Organisers

In LP2.6, I will know : 08/12/25 - (WK 2)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
the principles of covalent bonding and polymers; structure and properties of giant covalent substances; the nature of metallic bonding.	I will show compassion by actively listening and engaging with others.	Homework tasks are located in the Knowledge Organisers

Extended Task

PRT Task 2

In LP2.7, I will know : 15/12/25 - (WK 1)	**Behaviour to support the values: STEPS/SLANT**	**Homework**
how to calculate relative masses and use the mole concept; how to balance chemical equations and perform related calculations; how to express and calculate concentrations of solutions.	I will show honesty by being true to myself.	Homework tasks are located in the Knowledge Organisers

Resources to support learning:
Kerboodle

FFET Award Challenge for this Learning Programme:
Research the indutstrial uses of graphine. Produce an information slide.