The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 12 BTEC Applied Science SRS
Learning Programme 2

The LORIC skill focus for his LP is: ORGANISATION

The Moral Virtues focus for this LP are: COMPASSION and HONESTY

Compassion - the quality of feeling pity and concern for the sufferings or misfortunes of others.
Honesty - the quality of being truthful.

What will I be learning about in this Learning Programme?
Quantitiative chemistry, rate of reaction, enthalpy changes and reversible reactions.

Where have I seen this learning before?
Quantiatative chamistry and enthalpy changes in GCSE chemistry.

What could I use it for?
Degree in Chemistry based subjects.

Literacy:
- Capital letters must be used at the start of sentences and for the first letter of proper nouns
- Full stops must be used at the end of a sentence
- Question marks must be used at the end of a question
- Apostrophes should only be used for possession or omission
- Days of the week and months must be spelled correctly
- Key words must be spelled correctly

In LP2.1, I will know: 19/10/26 - (WK 2)	Key Vocabulary	Homework
how to predict the type of bond atoms will have using ideas about electronegativity; the different types of intermolecular forces and their relative strengths.	Intermolecular	Practice questions on electronegativity.
In LP2.2, I will know: 02/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to interpret and explain trends in the properties of elements down a group and across a period; how to write half equations for oxidation and reduction reactions and link to the oxidative states of transition metal ions.	Oxidation	Exam question on Redox reactions.
LP2 RLW, I will: 09/11/26 - (WK 2)		
review my learning, recalling and applying key knowledge, and focus on closing any gaps in my knowledge.	Review	
In LP2.3, I will know: 16/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to describe and expain trends in the reactions of period 3 elements; how to use balanced symbol equations to work out moles, molar masses and molarities. Extended Task.	Moles	Practice questions on moles, molar masses and molarities.
In LP2.4, I will know: 23/11/26 - (WK 2)	**Key Vocabulary**	**Homework**
how to calculate empirical formula; how to calculate reaction quantities and yeild.	Yield	Exam question on reaction quantities and yeild.
In LP2.5, I will know: 30/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
the relationship between mole, gas molar volume (24 dm3 at room temperature and pressure) and volume of a gas; how the factors affecting rate of reaction to include concentration, pressure, temperature, surface area and catalysts relate to collision theory and activation energy.	Rate of reaction	Practice questions on rate of reaction.
In LP2.6, I will know: 07/12/26 - (WK 2)	**Key Vocabulary**	**Homework**
how to interpret concentration vs time graphs; how to understand Maxwell-Boltzmann distribution curves and calculate rate equations. Extended Task.	Maxwell-Boltzmann	Exam question on Maxwell-Bolzmnn distribution curve.
In LP2.7, I will know: 14/12/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to describe and explain enthalpy changes using energy level diagrams and reaction profile diagrams; how to describe hess's Law and energy cycles.	Enthalpy	Practice questions on enthalpy changes.

PRT Task 1

PRT Task 2

Resources to support learning:
EPC Knowledge Organisers
Youtube BTEC Applied Science help.

FFET Award Challenge for this Learning Programme:
To complete and write up a scientific investigation and write it up for peer review.