The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 10 GCSE Chemistry
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?
How the properties of substances relate to their bonding and structure, how to use the mole to calculate the amounts of a substance produced in a chemical reaction.

Where have I seen this learning before?
Atomic structure from LP1 and states of matter from KS3

What could I use it for?
Bonding and structure will be used to explain the properties of substances in electrolysis and organic chemistry. Quantitative chemistry is used across the course

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 draw dot and cross diagrams of unfamiliar ionic compounds; why ionic compounds have a high melting point and describe, in terms of ions, how an ionic compound can conduct electricity; how to draw dot and cross diagrams and ball and stick diagrams for H2, Cl2, O2, N2, HCl, H2O, NH3, and CH4.	Ionic bond	Complete task on SPARX science
In LP2.2, I will know: **02/11/26 - (WK 1)**	**Key Vocabulary**	**Homework**
how to explain the properties of diamond and graphite using their structure; how to compare the properties of simple molecules to giant covalent and giant ionic structures.	Covalent bond	Complete task on SPARX science
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.		Complete task on SPARX science
In LP2.3, I will know: **16/11/26 - (WK 1)**	**Key Vocabulary**	**Homework**
the properties and consequent uses of graphene, fullerenes and carbon nanotubes; in detail, including labelled diagrams, how alloying affects the structure and bonding in metals and its effect on properties; how to evaluate the use of nanoparticles in their applications, including sun cream. Extended Task.	Metallic bond	Complete task on SPARX science
In LP2.4, I will know: **23/11/26 - (WK 2)**	**Key Vocabulary**	**Homework**
how to calculate the relative formula mass for unfamiliar compounds when the formula is given; how to use balanced symbol equations to calculate reacting masses.	Moles	Complete task on SPARX science
In LP2.5, I will know: **30/11/26 - (WK 1)**	**Key Vocabulary**	**Homework**
how to use balanced symbol equations to calculate reacting masses when there is a limiting reactant; how to use balanced symbol equations to calculate reacting masses.	Molar ratio	Complete task on SPARX science
In LP2.6, I will know: **07/12/26 - (WK 2)**	**Key Vocabulary**	**Homework**
how to use balanced symbol equations to calculate reacting masses when there is a limiting reactant; how to calculate the percentage yield; how to calculate the concentration, in mol/dm^3 and g/dm^3, of a solution when the number of moles and volume in dm^3 is given. Extended Task.	Limiting reactant	Complete task on SPARX science
In LP2.7, I will know: **14/12/26 - (WK 1)**	**Key Vocabulary**	**Homework**
how to calculate a titre; how to calculate the unknown concentration of a reactant in a neutralisation reaction when the volumes are known and the concentration of one reactant is also known.	Concentration	Complete task on SPARX science

PRT Task 1

PRT Task 2

Resources to support learning:
EPC knowledge organiser, synergy, YouTube search: cognito science.

FFET Award Challenge for this Learning Programme:
Create a home video of yourself carrying out a chemical reaction.