The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 12 Chemistry
Learning Programme 4

The LORIC skill focus for this LP is: INITIATIVE.
The Moral Virtues focus for this LP are: INTEGRITY and GRATITUDE.

Integrity - Having strong moral principles. I will show integrity by taking responsibility for my actions.
Gratitude - Feeling and expressing thanks. I will show gratitude by saying please and thank you.

What will I be learning about in this Learning Programme?
The classification and properties of various organic compounds based on their functional groups. Developing and extending prior knowledge of various homologous series of compounds, including reaction mechanisms.

Where have I seen this learning before?
GCSE chemistry, building on basic organic nomenclature and compounds.

What could I use it for?
Developing and synthesising new compounds in pharmaceutical, petrochemical and sustainable development industries.

Literacy Non-Negotiables:
- 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
- Vocabulary to be taught using the Frayer model

In LP4.1, I will know: 09/03/26 - (WK 2)	Frayer Model Words	Homework
how to name alcohols and describe their properties; how to describe the various reactions of alcohol and provide detailed mechanisms.	Alcohol	Exam question on alcohols
In LP4.2, I will know: 16/03/26 - (WK 1)	**Frayer Model Words**	**Homework**
how to name and describe the reactivity of haloalkanes; how to carry out experimental tests on haloalkanes; how to categorise primary, secondary and tertiary haloalkanes.	Haloalkane	Exam question on haloalkanes
In LP4.3, I will know: 23/03/26 - (WK 2)	**Frayer Model Words**	**Homework**
the uses of organohalogen compounds; how radicals can breakdown the ozone layer. Extended Task.	Organohalogen	Exam question on organohalogens
In LP4.4, I will know: 13/04/26 - (WK 1)	**Frayer Model Words**	**Homework**
how to use Quckfit apparatus when refluxing experiments; how to carry out the techniques required for the preparation and purification of organic liquids.	Reflux	Exam question on organic techniques
In LP4.5, I will know: 20/04/26 - (WK 2)	**Frayer Model Words**	**Homework**
how to identify the properties and reactions of various organic functional groups; how to construct two- step synthetic organic routes.	Synthetic	Exam question on synthetic routes
In LP4.6, I will know: 27/04/26 - (WK 1)	**Frayer Model Words**	**Homework**
how to construct futher two- step synthetic organic routes; how to interpret and identify compounds from mass spectrum graphs. Extended Task.	Mass spectroscopy	Exam question on mass spectroscopy
In LP4.7, I will know: 04/05/26 - (WK 2)	**Frayer Model Words**	**Homework**
how to interpret and identify compounds from infrared spectra; how to identify compound from various spectroscopic techniques.	Infrared sprectroscopy	Exam question on infrared sprectroscopy.

PRT Task 1

PRT Task 2

Resources to support learning:
OCR exam questions, OCR textbook, https://www.youtube.com/watch?v=rvbnHgQrvcA&list=PLi6oabjl6cowGEkY8OBJkI35QDK29OWGK

FFET Award Challenge for this Learning Programme:
Research and present findings on the depletion and rebuilding on the ozone layer.