The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 10 GCSE Combined Science
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?
In Physics about heat transfers and how to reduce them and about renewable and non-renewable resources. In Biology, you will be learning about food types and enzymes. In Chemistry, you will be learning about the periodic table and the reactions on groups.

Where have I seen this learning before?
You will have seen this learning at KS3 when you have studied science.

What could I use it for?
You could use this learning for various degrees in science and science Alevels and BTECs.

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 carry out RP1: investigate the specific heat capacity of various materials; how to describe power as the rate of energy transfer (or work done), and use the calculations: P=E÷t and P=W÷t; how to describe insulation and methods to reduce the thermal conductivity in a building; how to use the equations for efficiency in terms of energy transferred and power and renewable and non-renewable energy sources.□	Watts	Complete task on Sparx Science.
In LP2.2, I will know: 02/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to describe the advantages and disadvantages of renewable energy sources (wind, water, waves, tides, hydroelectricity, the solar, geothermal and bio-fuel); how to describe the advantages and disadvantages of non-renewable energy resources (fossil fuels and nuclear fuels); how to compare non-renewable and renewable energy resources in terms of transport, environmental issues, heating, cost and reliability.□	Renewable	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 different food groups and their importance for a heathy diet; how to investigate the main food groups using standard food tests, required practical; review the results of food tests; the roles played by different digestive enzymes and the factors that may affect them. Extended Task.	Digestion	Complete task on Sparx Science.
In LP2.4, I will know: 23/11/26 - (WK 2)	**Key Vocabulary**	**Homework**
how to complete a formative assessment and improve my learning; how to investigate the effect of pH on the rate of amylase action, required practical;□ how hydrochloric acid and bile make digestion more efficient structure of the villi; the structure and function of blood vessels in carrying blood and the importance of valves.□	Exchange	Complete task on Sparx Science.
In LP2.5, I will know: 30/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
the structure and function of the heart; the structure and function of the respiratory system; how surfaces are specialised for gas exchange; to review my learning with a summative assessment.	Organ system	Complete task on Sparx Science.
In LP2.6, I will know: 07/12/26 - (WK 2)	**Key Vocabulary**	**Homework**
how the modern periodic table is arranged and how it came to be developed from the early one first suggested by Mendeleev; how the group 1 metals - the alkalis - are arranged (in terms of electron configuration), their key; properties, uses and reactions; how group 7 - the halogens - are arranged (in terms of electron configuration), their key; properties, uses and reactions; how group 0- the Noble gases- are arranged and their key properties. Extended Task.	Trend	Complete task on Sparx Science.
In LP2.7, I will know: 14/12/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to recall and draw the standard circuit diagram symbols, and describe how to build working circuits using standard circuit diagrams; how to describe conventional current and to define current as the rate of flow of charge, applying the equation Q=It; how to define potential difference as the energy per unit charge; how to review learning through formative assessment and PRT.	Component	Complete task on Sparx Science.

Resources to support learning:
EPC knowledge organiser, Synergy, BBC bitesize, YouTube search "GCSE combined science".

FFET Award Challenge for this Learning Programme:
Learn all the words of the Periodic Table song and perform it for your class.