The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 11 Biology
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?
You are learning about DNA and its role in controlling the characteristics of an organism.

Where have I seen this learning before?
You have learnt about the structure of DNA and sexual reproduction at KS3.

What could I use it for?
You will use this again if you study A-level Biology or pursue a BSc in Genetics.

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
the role of the kidneys in osmoregulation; that plants produce hormones to coordinate and control growth, and responses to light and gravity.□	Osmoregulation	Complete Sparx Science task.
In LP2.2, I will know: 02/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to carry out experiments safely to measure response to the environment; that genes work by coding for the production of a particular protein, and non-coding genes switch genes on and off. the importance of understanding the human genome in understanding historical human migration.	Nucleotide	Complete Sparx Science task.
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.		
In LP2.3, I will know: 16/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
the structure of DNA as repeating nucleotide units, identify the four bases in DNA and complementary bases; how proteins are synthesised according to the DNA template of a gene and explain that the genetic code specifies the protein to be made; mutations as changes to the base sequence of DNA, and explain how mutations can affect protein function.□	Variation	Complete Sparx Science task.
In LP2.4, I will know: 23/11/26 - (WK 2)	**Key Vocabulary**	**Homework**
the process of mitosis and describe the events of the cell cycle; review and improve my learning through formative assessment and PRT.	Mitosis	Complete Sparx Science task.
In LP2.5, I will know: 30/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
that the four gametes produced by meiosis are genetically different, that sexual reproduction leads to variety in the offspring and the differences between sexual and asexual reproduction; how selective breeding can lead to inbreeding and evaluate the benefits and risks of selective breeding. how to complete an assessment in science to review my progress.	Selective breeding	Complete Sparx Science task.
In LP2.6, I will know: 07/12/26 - (WK 2)	**Key Vocabulary**	**Homework**
how genetic engineering works and introduce applications of the process; how to review my learning. Extended Task.	Genetic modification	Complete Sparx Science task.
In LP2.7, I will know: 14/12/26 - (WK 1)	**Key Vocabulary**	**Homework**
how cuttings and tissue culture are used to produce new plants and the use of adult cell cloning in animals; how to describe the search for genes that are linked to disease and understand and use probability when predicting the outcomes of genetic crosses; how to construct Punnett squares. review my attainment in assessments and close gaps in my learning.	Gene	Complete Sparx Science task.

PRT Task 1

PRT Task 2

Resources to support learning:
EPC Knowledge organiser, BBC GCSE Bitesize, Synergy, Cognito videos.

FFET Award Challenge for this Learning Programme:
Complete a practice paper independently.