The Ellesmere Port C of E College

Part of the Frank Field Education Trust

Year 13 Biology T2
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 profiling and genetic engineering, cloning and biotechnological techniques. □

Where have I seen this learning before?
You have covered structure of DNA, artificial selection, genetic engineering in GCSE biology topic inheritance, variation and evolution.□

What could I use it for?
You will use this again if you pursue a career in genetics, forensic science.□

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 explain how genome sequencing has allowed for genome wide comparisons between individuals and species; how to explain the principles of genetic engineering.□	Genome	Exam questions on the human genome project.
In LP2.2, I will know: 02/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to describe the techniques used in genetic engineering; how to explain the ethical issues relating to the genetic modification of organisms.□	Genetic engineering	Write a review on the advantages and disadvantages of genetic modification of organisms.
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 task
In LP2.3, I will know: 16/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to explain the principles of, and potential for, gene therapy in medicine; how to review the work completed on genetics. □ Extended Task.	Gene therapy	Exam question on gene therapy.
In LP2.4, I will know: 23/11/26 - (WK 2)	**Key Vocabulary**	**Homework**
about natural clones in plants and the production of natural clones for use in horticulture; how to take plant cuttings as an example of a simple cloning technique.	Horticulture	Research the importance of decomposers in the ecosystem.
In LP2.5, I will know: 30/11/26 - (WK 1)	**Key Vocabulary**	**Homework**
about natural clones in animal species; how artifical clones in animals can be produced by artificial embryo twinning or by enucleation and somatic cell nuclear transfer.	Clone	Exam question on natural clones.
In LP2.6, I will know: 07/12/26 - (WK 2)	**Key Vocabulary**	**Homework**
the use of microorganisms in biotechnological processes; the use of microorganisms in biotechnological processes to include penicillin production, insulin production and bioremediation. Extended Task.	Biotechnological	Research the use of microorganisms in biotechnological processes.
In LP2.7, I will know: 14/12/26 - (WK 1)	**Key Vocabulary**	**Homework**
how to cultivate microorganisms effectively, using aseptic technique; the standard growth curve of microorganisms in a closed culture.	Aseptic	Write up of practical tecniques used.

PRT Task 1

PRT Task 2

Resources to support learning:
EPC Knowledge Organiser, Studymind, Synergy, Seneca.

FFET Award Challenge for this Learning Programme:
Research how the use of microorganissms in industry has changed over the years. □