The Fisher Way: Curriculum

The Fisher Way aims to educate and inspire with joy, faith and love because we are an inclusive Catholic community.

Successful and resilient learners who aspire to and achieve excellence

Confident individuals who can explore and communicate effectively

Responsible citizens who are active, loving and wise in all their endeavours

Subject	Biology
Year Group	Year 9
Intent	**Successful and resilient learners:** who are able to use their biological knowledge and their scientific skills to investigate the world around them and solve problems associated with the living world. **Confident individuals:** who can apply their knowledge of organ systems, bioenergetics, genetics and the ecological interactions between species to understand and articulate what happens in the wider world. **Responsible citizens:** who are able to distinguish between what we CAN do as scientists and what is morally right for us to do as human beings. Pupils should be able to suggest solutions to some of the world's problems such as global

	warming and pollution and should be able to evaluate and debate the issues around current global issues such as Genetic Engineering, IVF, Pandemics and Stem cell research. They should be able to use their understanding to help them make informed decisions in later life to benefit both themselves and the wider world.					
Narrative	All learners will be able to distinguish between Eukaryotic and prokaryotic cell and describe the main structures and their function in each. They will be able to describe the process of digestions including the main organs and enzymes involved. Learners will be able to explain how the circulatory systems works and name the components of the blood. By the end of the year students will be able to describe the main structure of plants and how they respond to changes in their environment. Finally, all learners will be able to describe the difference between communicable and non-communicable and explain bother how they can be transmitted and treated. Students will build on their work done in year 7 on basic cells and their structures as well as the difference between plan and animal cells. They will also build on their understanding of the digestive system and the enzymes involved in this process from year 8. The work of cells is the foundation of biology and student will need this knowledge in many future topics including the nervous system and reproduction in year 10 and variation and genetic in year 11. The work on disease will be key knowledge for students when studying the immune system in year 12.					
Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (topics studied)	B5 Cells	B6a Organisation, Enzymes and Digestion	B6a Organisation Enzymes and Digestion	B6b Blood, circulation and non-communicable diseases	B7 Plants and plant responses	B8 Disease
Key skills	Magnification equations, calculations e.g. percentage changes practical skills and safety, discussions	Practical skills, data analysis,	Practical skills, data analysis,	Dissection techniques, practical skills and safety.	Practical skills, data analysis	Calculating percentage change, practical skills and safety when handling microorganisms, discussion

Cultural capital	Stem cell research and its implications in relation to the ethical use of them.	Healthy balanced diets and their importance. Factors that can effect efficient use of enzymes. Use of enzymes in industry	Healthy balanced diets and their importance. Factors that can effect efficient use of enzymes. Use of enzymes in industry	Cancer development and treatment, treatments of heart disease, effects of smoking, alcohol and drugs on health.	Uses of photosynthesis in a commercial environment.	The work of Semmelweiss, importance of vaccination and prevention of the spread of disease.
Assessment	B5 end of unit test 45 mins Foundation or higher		B6a end of unit test 45 mins Foundation or higher	B6b end of unit test 45 mins Foundation or higher	B7 end of unit test 45 mins Foundation or higher	B8 end of unit test 45 mins Foundation or higher