KS3: B3.2 Human Interaction	Big Picture: Organisms are independent

Big Picture: Organisms are independent

Organisms are independent

Living organisms may form populations of single species, communities of many species and ecosystems, interacting with each other, with the environment and with humans in many ways. Living organisms are interdependent and rely on other organisms in their community to survive and reproduce.

Progress Objectives		Year 9: Building	Yr 9: Developing	Yr 9 Securing	Yr 9 : Mastering
		Students should be able to:		By the end of Yr 9 students should be able to:	By the end of Yr 9 students may also be able to:
Factual and Conceptual Understanding		state the definitions of a producer, consumer, predator and prey. define biodiversity. define pollution. Define global warming.	Compare the different types of pollution. State three types of pollution. describe some consequences of pollution	Explain the difference between global warming and climate change State three greenhouse gases. .	*Define the term sustainability.* *Describe some methods of increasing food security.*
Application of Knowledge and Skills		describe the transfer of energy through a food chain. Explain how the growth of the human population has led to an increase in demand for resources. describe some consequences of pollution	explain the importance of plants in food chains. explain why high biodiversity is important for an ecosystem describe the biological consequences of global warming	describe the effect of the increasing human population on the amount of waste produced. describe some source of greenhouse gas emissions.	Describe what is happening to the carbon dioxide and methane levels in the atmosphere.

Maths, Practical and Enquiry Skills	biodiversity can be measured by using sampling techniques. *explain the energy losses between trophic levels*	measure the distribution of organisms in environments. *identify the levels of a pyramid of biomass in terms of produces and consumers*	finding the mean median and mode are averages used to help understand data. Interpret greenhouse gas data from graphs *state the approximate efficiency biomass transfer between trophic levels*	explain why scientific data can sometimes be uncertain or incomplete.
Language and Communication	Describe how waste is having a negative impact on biodiversity.	describe the harmful effects that humans are having on biodiversity. *describe advantages and disadvantages of intensive farming methods.*	describe how scientists and citizens can reduce human impact on biodiversity describe the effect of the increasing human population on the amount of waste produced.	evaluate whose responsibility it is to reduce human impact on the environment *describe an application of biotechnology in food production.*