YEAR 9 SCIENCE

HALF TERM 1

MAGHULL HIGH SCHOOL – CURRICULUM MAP

Unit: **Ecosystems** **LESSON TOPIC QUESTION(S)**	1. Ecologist Career 2. Food Chains 3. Food Webs 4. Pyramids of Number and Biomass	5. Interdependence 6. Sampling Techniques 7. Insect Pollinated Crops (Reading)	8. Bioaccumulation 9. Organic Farming 10. Chemosynthesis
Knowledge & Skills Development	• Construct food chains and food webs • Constructing and interpreting pyramids of numbers and biomass • Describe the interdependence show in a food web • Calculating energy losses between trophic levels • Understand how organisms interact and depend on biotic and abiotic factors • Practical skills- sampling	• Numeracy skills – calculating and predicting numbers of organisms in a given area • Describe chemosynthesis including how it was discovered. • Understanding the importance of insect pollination • The human impact on food chains • Assessing the pros and cons of organic farming • Describe the process of chemosynthesis	
Assessment / Feedback Opportunities	**Formative Assessment** Teacher questioning Quizzes	**Summative assessment** End of topic assessment	
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly Chemosynthesis, Mutualistic, Organisms, Nitrogen, Bacteria, Ecosystems, Predators, Carnivore, Herbivore, Omnivore Producer, Consumer, Environments, Adaptation, Combustion, Climate, Bioaccumulation		
Literacy/Reading Opportunities	Dedicated reading lesson Subject specific vocabulary introduced before reading of related texts Word etymology from Latin and Greek roots Reading of simple and complex sentences, paragraphs, articles Scientific writing including structuring methods, comparisons and evaluations		
Cross Curricular Themes	Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators, significant figures		

Personal Development (Including British Values, RSE, Citizenship)	Global citizenship – Use of pesticides and impact on the ecosystem, Impact of pollution on the environment
Career Opportunities	Dedicated careers lesson at start of topic Horticulture, Industrial Chemist, Floristry, Pest Control, Conservationist, Politics