Yr12 Medical Science – Unit 3

MAGHULL HIGH SCHOOL – CURRICULUM MAP

	Sequence		
TOPIC (S) **Transmission and Treatment of Infectious Diseases**	1. Direct and indirect transmission of infectious agents 2. Chain of infection and importance of herd immunity 3. Signs , symptoms and progression of bacterial diseases – tuberculosis, meningitis,chlamydia and cholera 4. Signs , symptoms and progression of viral diseases- HIV, Ebola,norovirus, influenza, COVID 19 5. Signs , symptoms and progression of fungal diseases- ringworm, mycotoxicosis, candidiasis	6. Signs , symptoms and progression of prionic diseases- Creudzfeldt-Jakob disease (CJD), acquired and variant kuru. 7. Signs , symptoms and progression of protistic diseases- malaria, giardiasis and amoebic dysentery 8. Peventing Infection 9. Treatment of infection 10. Antibiotic resistance 11. Causes, signs and treatments of sepsis	12. Overuse and inappropriate use of antibiotics and their use in agriculture 13. Benefits and importance of herd immunity and the role of vaccination programs 14. Antigenic variation in viruses including SARS-CoV-2 15. Social and cultural factors affecting the uptake of some vaccines and treatments and the impact of these
Knowledge & Skills development	• Be able to describe the difference between a target orgnand an agent • Describe the difference between direct transmission of infectious agents and indirect transmission • Be able to explain the chain of infection through communities and define herd immunity,, agents, hosts, reservoir, portals of exit, mode of transmission, portals of entry • Be able to describe the signs, symptoms and progression of the 5 types of pathogen with regards to specific examples of disease • Describe different methods to prevent infection to include mode of action of vaccines, vaccine type, use of antiseptics and disinfectants, behaviours and environmental steps that can be taken • Be able to describe the mode of action of various treatments such as antibiotics, antifungal agents, antivirals, antiprotozoal drugs	• Be able to describe the causes and importance of antibiotic resistance • Know the causes , signs and treatments of sepsis. • Be able to discuss how modern practices have led to an increase in infectious diseases eg overuse and inappropriate use of antibiotics and thei use in agriculture • Be able to recall and discuss the importance of herd immunity in limiting transmission of disease and the role in vaccination programmes • Be able to describe antigenic variation in viruses including SARS-CoV-2 • Be able to discu/ss social and cultural factors affecting the uptake of some vaccines/treatments and the impact of these	

Assessment / Feedback Opportunities	**Formative Assessment** Teacher questioning Discussions	**Summative assessment** Final Assignment Submission
Personal Development (Including British Values, RSE, Citizenship)	• **Healthy Lifestyles** : Understanding how pathogens access the human body and cause illness and therefore how to avoid this • **RSE**: Practicing safe sex to avoid transmission of sexually transmitted diseases • **Personal Development:** Collaborative problem solving	
Literacy/Reading Opportunities	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 for coursework assignments	
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly, Describe, Explain, Compare, Analyse, Calculate, Suggest, Absolute, Uncertainty, Error, Herd Immunity, Mode Of Transmission, Antigenic Variation, Transmission	
Cross-Curricular Links	Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators Sport – Understanding processes within the human body Health and Social Care – Understanding how disease spreads through a population	
Career Opportunities	Biological Scientists, Microbiology, Biochemistry, Medicine, Pathology, Nursing, Health Visitor, Virologist	