

**Invasion! Infection and Immunity Curriculum Links for OCR A-Level Biology A (H020, H420)**

**Teaching from September 2015 onwards**

**Module 4 - Biodiversity, evolution and disease**

OCR A –Level Biology Unit Information	Invasion! Infection and Immunity Unit	Core or Additional unit
<b>Module 4 – Biodiversity, evolution and disease</b>		
<b>4.1.1 Communicable diseases, disease prevention and the immune system</b>		
a) The different types of pathogen that can cause communicable diseases in (plants and) animals. Includes: 1. Bacteria (TB) 2. Viruses (HIV/AIDS) 3. Protoctista (Malaria) 4. Fungi (Athlete’s Foot)	Pathogens and the Immune Response	Core
b) The means of transmission of animal communicable pathogens.	Pathogens and the Immune Response	Core
d) the primary non-specific defences against pathogens in animals  Non-specific defences to include skin, (blood clotting, wound repair), inflammation, expulsive reflexes and mucous membranes	Pathogens and the Immune Response	Core
e) The structure and mode of action of phagocytes	Pathogens and the Immune Response	Core
f) the structure, different roles and modes of action of B and T lymphocytes in the specific immune response	Pathogens and the Immune Response	Core
g) the primary and secondary immune responses	Pathogens and the Immune Response	Core
h) the structure and general functions of antibodies	Pathogens and the Immune Response	Core
j) the differences between active and passive immunity, and between natural and artificial immunity	Pathogens and the Immune Response  Vaccination	Core  Additional
l) The principles of vaccination and the role of vaccination programmes in the prevention of epidemics	Vaccination	Additional
n) The benefits and risks of using antibiotics to manage bacterial infection.  To include the wide use of antibiotics	Antibiotic Resistance	Additional

<p>following the discovery of penicillin in the mid-20<sup>th</sup> century AND the increase in bacterial resistance to antibiotics (examples to include Clostridium difficile and MRSA) and its implications.</p>		
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