

GCSE AQA Combined Science: Trilogy

4.3.1.1 Communicable (infectious) diseases	<p>Students should be able to explain how diseases caused by viruses, bacteria, protists and fungi are spread in animals and plants.</p> <p>Students should be able to explain how the spread of diseases can be reduced or prevented.</p> <p>Pathogens are microorganisms that cause infectious disease. Pathogens may be viruses, bacteria, protists or fungi. They may infect plants or animals and can be spread by direct contact, by water or by air.</p>
4.3.1.3 Bacterial diseases	<p>Salmonella food poisoning is spread by bacteria ingested in food, or on food prepared in unhygienic conditions. In the UK, poultry are vaccinated against salmonella to control the spread. Fever, abdominal cramps, vomiting and diarrhoea are caused by the bacteria and the toxins they secrete.</p>
4.3.1.6 Human defence systems	<p>Students should be able to describe the non-specific defence systems of the human body against pathogens, including the:</p> <ul style="list-style-type: none">• skin• nose• trachea and bronchi• stomach <p>White blood cells help to defend against pathogens by:</p> <ul style="list-style-type: none">• phagocytosis• antibody production• antitoxin production.
4.3.1.7 Vaccination	<p>Students should be able to explain how vaccination will prevent illness in an individual, and how the spread of pathogens can be reduced by immunising a large proportion of the population.</p>
4.3.1.8 Antibiotics and painkillers	<p>Students should be able to explain the use of antibiotics and other medicines in treating disease.</p> <p>Antibiotics, such as penicillin, are medicines that help to cure bacterial disease by killing infective bacteria inside the body. It is important that specific bacteria should be treated by specific antibiotics.</p> <p>The use of antibiotics has greatly reduced deaths from infectious bacterial diseases. However, the emergence of strains resistant to antibiotics is of great concern.</p>