



AQA GCSE Biology Topic Checklists

4.3 Infection and Response

4.3.1 Communicable Diseases

Topic	Success Criteria	Progress		
Communicable (Infectious) Diseases	I can give a definition for the term 'pathogen' and give some examples of pathogens.			
	I can describe some ways that diseases caused by viruses, bacteria, protists and fungi are spread.			
	I can explain how the spread of diseases can be reduced or prevented.			
	I can describe how bacteria and viruses reproduce inside the body.			
	I can explain how bacteria can make us feel ill.			
	I can explain how viruses can cause cell damage.			
Viral Diseases	I can describe how measles is spread.			
	I can describe the symptoms of measles.			
	I can explain why most young children are vaccinated against measles.			
	I can describe how HIV is spread.			
	I can describe the initial symptoms of HIV infection.			
	I can explain when late-stage HIV infection (AIDS) occurs.			
	I can describe the signs of tobacco mosaic virus (TMV) infection in plants.			
	I can explain how TMV affects the growth of plants.			
Bacterial Diseases	I can describe how <i>Salmonella</i> food poisoning is spread.			
	I describe the symptoms of <i>Salmonella</i> food poisoning and explain how they are caused.			
	I can explain how the spread of <i>Salmonella</i> in poultry is controlled in the UK.			
	I can describe how gonorrhoea is spread.			
	I can describe the symptoms of gonorrhoea.			
	I can explain how the spread of gonorrhoea can be controlled.			
	I can explain why gonorrhoea is no longer easily treated with the antibiotic penicillin.			



Topic	Success Criteria	Progress		
Fungal Diseases	I can describe how rose black spot is spread in the environment.			
	I can describe the signs of rose black spot in plants.			
	I can explain how rose black spot affects the growth of plants.			
	I can explain how rose black spot can be treated.			
Protist Diseases	I can describe how malaria is spread.			
	I can describe the symptoms of malaria.			
	I can explain how the spread of malaria can be controlled.			
Human Defence Systems	I can describe the non-specific defence systems of the human body against pathogens.			
	I can explain the role of the immune system in the defence against disease.			
	I can explain how white blood cells help to defend against pathogens by: <ul style="list-style-type: none">• phagocytosis;• antibody production;• antitoxin production.			
Vaccination	I can explain how vaccination prevents illness.			
	I can explain how the spread of pathogens can be reduced by immunising a large proportion of the population (herd immunity).			
Antibiotics and Painkillers	I can describe how antibiotics, such as penicillin help to cure bacterial disease.			
	I can explain why it is important that specific bacteria are treated using specific antibiotics.			
	I can explain why the emergence of strains resistant to antibiotics is of great concern.			
	I can explain why antibiotics cannot be used to treat viral infections.			
	I can explain what painkillers are used for.			
	I can explain why it is difficult to develop drugs that kill viruses.			



Topic	Success Criteria	Progress		
Discovery and Development of Drugs	I can recall the plant or microorganism from which the following drugs were extracted: <ul style="list-style-type: none"> • the heart drug digitalis; • the painkiller aspirin; • the antibiotic penicillin. 			
	I can describe how new drugs are synthesised.			
	I can explain why new drugs have to be tested and trialled before being used.			
	I can describe how preclinical testing is done in a laboratory.			
	I can describe the stages of a clinical trial using healthy volunteers and patients.			
	I can explain the use of a placebo in a double-blind trial.			

4.3.2 Monoclonal Antibodies (HT Only)

Topic	Success Criteria	Progress		
Producing Monoclonal Antibodies	I can give a definition for the term 'monoclonal antibody'.			
	I can describe how monoclonal antibodies are produced.			
	I can explain why lymphocytes and tumour cells are used in the production of monoclonal antibodies.			
Uses of Monoclonal Antibodies	I can describe some ways in which monoclonal antibodies can be used.			
	I can explain how tests or treatments involving monoclonal antibodies work when given appropriate information.			
	I can explain why monoclonal antibodies are not yet as widely used as everyone hoped when they were first developed.			

**4.3.3 Plant Disease**

Topic	Success Criteria	Progress		
Detection and Identification of Plant Diseases	(HT only) I can describe some signs of plant diseases.			
	(HT only) I can explain how plant diseases can be identified.			
	I can give some of the causes of plant diseases.			
	I can describe how plants are affected by tobacco mosaic virus (a viral disease).			
	I can describe how plants are affected by rose black spot (a fungal disease).			
	I can describe how plants are affected by aphids (insects).			
	I can explain how plants can be damaged by nitrate deficiency.			
	I can explain how plants can be damaged by magnesium deficiency.			
Plant Defence Responses	I can describe some physical plant defence responses to resist invasion of microorganisms.			
	I can describe some chemical plant defence responses.			
	I can describe some mechanical adaptations of plants.			