

AQA GCSE Combined Science BIOLOGY

Year 10 – Autumn Term

CONTENT:

B4 Organising Animals and Plants;

In this section we will learn about the human digestive system which provides the body with nutrients and the respiratory system that provides it with oxygen and removes carbon dioxide. In each case they provide dissolved materials that need to be moved quickly around the body in the blood by the circulatory system. Damage to any of these systems can be debilitating if not fatal. Although there has been huge progress in surgical techniques, especially with regard to coronary heart disease, many interventions would not be necessary if individuals reduced their risks through improved diet and lifestyle. We will also learn how the plant's transport system is dependent on environmental conditions to ensure that leaf cells are provided with the water and carbon dioxide that they need for photosynthesis.

4.1 Blood; 4.2 Blood vessels; 4.3 The Heart; 4.4 Helping the heart; 4.5 Breathing and Gas exchange; 4.6 Tissues and Organs in Plants; 4.7 Transport Systems in Plants; 4.8 Evaporation and Transpiration; 4.9 Factors affecting transpiration.

B5 Communicable diseases

Pathogens are microorganisms such as viruses and bacteria that cause infectious diseases in animals and plants. They depend on their host to provide the conditions and nutrients that they need to grow and reproduce. They frequently produce toxins that damage tissues and make us feel ill. This section will explore how we can avoid diseases by reducing contact with them, as well as how the body uses barriers against pathogens. Once inside the body our immune system is triggered which is usually strong enough to destroy the pathogen and prevent disease. When at risk from unusual or dangerous diseases our body's natural system can be enhanced by the use of vaccination. Since the 1940s a range of antibiotics have been developed which have proved successful against a number of lethal diseases caused by bacteria. Unfortunately many groups of bacteria have now become resistant to these antibiotics. The race is now on to develop a new set of antibiotics.

5.1 Health and Disease; 5.2 Pathogens and Disease; 5.5 preventing infections; 5.6 viral infections; 5.7 bacterial infections; 5.8 diseases caused by fungi and protists; 5.9 human defence responses.

Recommended online resources:

Kerboodle- Digital Textbook – w:kerboodle.com u:initialsurname
p:initialsurname inst.code:yh7 – the individual lesson breakdown is here.

BBC Bitesize: KS4 Science AQA – then find the relevant topics

YOUTUBE: 'GCSESCIENCELESSONS' then search for the topic of interest

Oak National Academy: Lessons available linked to above topics.

Google Classroom: class code details will be released using Class Charts