

Triple Biology: Foundation Revision list with hyperlinks

Biology Paper 1

<u>Topic</u>	Tick
<u>Chapter 1:</u>	
Outline the subcellular components found in prokaryotes and eukaryotes. Explain the function of subcellular components found in animal and plant cells. https://www.youtube.com/watch?v=QCCp-Y_-7J0	
Understand how microscopy techniques have developed over time Outline the difference between resolution and magnification Use the magnification, size of image and size of real object equation https://www.youtube.com/watch?v=VBdVARYWq1c	
RPA Light microscope https://www.youtube.com/watch?v=jBVxo5T-ZQM	
Outline the process of diffusion and explain the factors which affect the rate https://www.youtube.com/watch?v=C5pMigXBAgk	
Calculate surface area:volume ratios https://www.youtube.com/watch?v=8rcGHGzdQ4w	
Define the term osmosis and apply it to different situations https://www.youtube.com/watch?v=qge2NhQt8bY	
RPA: Investigate the effect of range of concentrations of salt solution on the mass of plant tissue. https://www.youtube.com/watch?v=ef2Ts2AKhq8	
Define the term 'Active transport' and apply it to different situations https://www.youtube.com/watch?v=vrO0QI8jRvA	
<u>Chapter 2:-</u>	
Recall the organs of the digestive system which work together to digest and absorb food https://www.youtube.com/watch?v=Ov7tfPO62xk	
Describe the nature of enzymes molecules and the factors that affect their activity. https://www.youtube.com/watch?v=qq1foXnvJao	
RPA: Use qualitative reagents to test for a range of carbohydrates, lipids and proteins (Food tests). https://www.youtube.com/watch?v=akMLGbNA0gE	
Describe the structure and function of the heart https://www.youtube.com/watch?v=y1DsaAzYamQ	
Describe the structure and function of the respiratory system https://www.youtube.com/watch?v=B44n2SMLv-s	
State the role of a pacemaker (natural and artificial) Describe what CHD is	

Describe the various treatments of CHD https://www.youtube.com/watch?v=UN5BIPfMUkg	
Define the term health Describe examples of risk factors for non-communicable diseases Describe the effect of lifestyle of non-communicable diseases https://www.youtube.com/watch?v=Td1itX2lMss	
Chapter 3:-	
Name and recall diseases caused by viruses, bacteria and fungi (note protist disease is not assessed). Outline how disease caused by viruses, bacteria and fungi are transmitted and treated. https://www.youtube.com/watch?v=dbd5iydu3EY	
Describe the non-specific defence systems in the human body https://www.youtube.com/watch?v=5X9MkILVhlw	
Describe how white blood cells help to defend against pathogens. https://www.youtube.com/watch?v=63XExOKWrqg	
Explain how vaccinations prevent illness. Describe how vaccines cause the body to quickly produce the correct antibody https://www.youtube.com/watch?v=23fQscOSqVU	
Explain the use of antibiotics and medicines in treating disease. https://www.youtube.com/watch?v=r_5GM3_uOWo	
Describe the process of drug discovery and development. Outline the testing new drugs have to undergo before entering the market. https://www.youtube.com/watch?v=w3ykU52K-Hw	
Describe the defence systems used by plants. https://www.youtube.com/watch?v=b3K1zUhimhs	
Chapter 4:	
Know the word and symbol equation for photosynthesis Describe photosynthesis https://www.youtube.com/watch?v=rAJGnS_ktk4	
Explain the effects of temperature, light, carbon dioxide and chlorophyll on the rate of photosynthesis Explain limiting factors of photosynthesis including using graphs	

Explain the importance of limiting factors and economics in greenhouses to gain maximum profit https://www.youtube.com/watch?v=JOKxRX3fyoI	
Use the inverse square law in terms of photosynthesis https://www.youtube.com/watch?v=Odv64i1ntV4	
RPA photosynthesis investigating the effect of light intensity on the rate of photosynthesis using pondweed. https://www.youtube.com/watch?v=cBCKedXdFeE	

Biology Paper 2

<u>Chapter 5</u>	
Explain how the structure of the nervous system is adapted to its functions Name and recall the order of the CNS response https://www.youtube.com/watch?v=oDS1hAqWp2M	
RPA: Human reaction times https://www.youtube.com/watch?v=Ws5qVXYHRnQ	
Outline how body temperature is monitored and controlled by the thermoregulatory centre. https://www.youtube.com/watch?v=IGsQi0JZUTw	
Describe the role of the endocrine system (hormonal) Label the following glands - pituitary gland; pancreas; thyroid; adrenal gland; ovary and testes https://www.youtube.com/watch?v=c6olhi88KZs	
Describe how blood glucose levels are monitored and controlled Explain the negative feedback cycle in terms of blood glucose https://www.youtube.com/watch?v=OHrX3X3LGzI Describe Type 1 and Type 2 diabetes - causes and treatments https://www.youtube.com/watch?v=bFnO8Uc9gjQ	
Describe the role of hormones in the menstrual cycle Describe how the hormones interact with one another in the menstrual cycle https://www.youtube.com/watch?v=iXswGsfeHJg	
Describe and compare the different methods of contraception https://www.youtube.com/watch?v=kMY-v0F6bX0	
Outline how plants produce hormones to coordinate and control growth https://www.youtube.com/watch?v=PxSkuyjZ3MM	

<p>RPA: The effect of light on the growth of newly germinated seedlings.</p> <p>https://www.youtube.com/watch?v=fEo21LbnJJM</p>	
<p>Chapter 6</p>	
<p>Explain the process of meiosis Outline how meiosis leads to non-identical cells whilst mitosis leads to identical cells. Describe how sexual reproduction uses gametes made by meiosis leads to variety in the offspring Describe how asexual reproduction uses mitosis leads to genetically identical offspring.</p> <p>https://www.youtube.com/watch?v=Fh9b6a-3DLQ</p>	
<p>Describe DNA as a polymer made from four nucleotides. Describe the structure of DNA</p> <p>https://www.youtube.com/watch?v=o4LHU79fB3s</p>	
<p>Complete punnet square diagrams and extract/interpret information from genetic crosses and family trees. State that some disorders are inherited by certain alleles. Be able to explain the following terms: Gamete, Chromosome, Gene, Allele, Dominant, Recessive, homozygous, heterozygous, genotype and phenotype</p> <p>https://www.youtube.com/watch?v=Vk8xu9LAW1E</p>	
<p>Describe the evidence for evolution including fossils and antibiotic resistance. Outline how fossils are formed from parts of organisms or preserved traces of organisms. Describe why scientist cannot be certain how life began on Earth</p> <p>https://www.youtube.com/watch?v=iYr3sYS9e0w</p>	
<p>State what is meant by Extinction. Describe the factors which may contribute to the extinction of a species.</p> <p>https://www.youtube.com/watch?v=ItqnYPriQDw</p>	
<p>Describe how living organisms are classified into a system developed by Carl Linnaeus. Outline the three domain system developed by Carl Woese where organisms are divided into archaea, bacteria and eukaryota.</p> <p>https://www.youtube.com/watch?v=HLnaIJm5wM4</p>	
<p>Chapter 7</p>	
<p>Describe the levels or organism in an ecosystem Describe food chains and webs Use the terms primary consumer, secondary consumer, tertiary consumer as well as predators, prey.</p> <p>https://www.youtube.com/watch?v=6t30hAabK58</p>	
<p>Name examples of biotic and abiotic factors. Explain how a change in an abiotic factors would affect a community. Explain how a change in an biotic factors would affect a community.</p>	

https://www.youtube.com/watch?v=kIfMwZU8nk4	
<p>Outline how raises in the number of prey can impact on the number of predators and vice versa.</p> <p>https://www.youtube.com/watch?v=dRFQ8rZCK6Q</p>	
<p>RPA Quadrats and transects</p> <p>https://www.youtube.com/watch?v=RhMOCxXcDrQ</p>	
<p>Evaluate the impact on environmental changes on the distribution of species in an ecosystem Describe the effects of the human population increasing on waste management and land use</p> <p>https://www.youtube.com/watch?v=b_WPF9TdfcM</p>	