

YEAR 11 A - F BIOLOGY (GCSE)

WEEK 40 - 30th May to 3rd June

Work sent to students through Class Bio Whats App Group/G mail/Google Classroom

Topics –SB9k-The carbon cycle,SB9l-The nitrogen cycle, Topic SB8c – The circulatory system

L.O.: Explain the importance of carbon cycle, including the processes involved and the role of microorganisms as decomposers. Explain how nitrates are made available for plant uptake, including the use of fertilisers, crop rotation and the role of bacteria in the nitrogen cycle. Describe the adaptations of red blood cells for the transport of oxygen, including shape, structure and the presence of haemoglobin.

<p>Sunday-6th period(girls) & 8th period(boys)</p>	<p>Zoom session-SB9k-The Carbon cycle</p> <p>Text book pages 198 to 199</p> <p>Resources: Board works & Video link</p> <p>https://www.youtube.com/watch?v=cWj3u8voDSg</p> <p>Students able to</p> <ul style="list-style-type: none">●Identify which process removes /adds carbon dioxide from/into the air.●Draw a diagram / flow chart to show what happens to the carbon in an animal that is eaten by a predator.●Describe and explain how carbon dioxide is used in photosynthesis and given out in respiration
<p>Monday -3rd period(girls) Tuesday -5th period (boys)</p>	<p>Zoom session-SB9l-The Nitrogen cycle</p> <p>Text book pages 200 to 201</p> <p>Resources: Board works & Video link</p> <p>https://www.youtube.com/watch?v=vWZWPIFmua4</p> <p>Students able to</p> <ul style="list-style-type: none">●Identify the role of bacteria in the nitrogen cycle.●Define terms nitrification , de-nitrification, ammonification and nitrogen fixation ●Draw a labelled diagram to show how nitrogen recycles

	through food chains • Explain why adding manure to the soil increases the nitrate contents of the soil• Describe the stages in which soil bacteria change the amount of plant nutrients in the soil •Significance of crop rotation in nitrogen cycle .
Tuesday-7 th & 8 th period(girls) Thursday-5 th & 6 th period(boys)	Asynchronous lesson SB8c- The Circulatory system Research -Red blood cells are unusual in not having a nucleus.Explain how this is an adaptation for their role in carrying oxygen and why they have a limited life.
Wednesday--6 th period (boys) & 7 th period (girls)	Asynchronous- SB9k-The carbon cycle. Completion of worksheet – Global carbon cycle

YEAR 11 G & H – BIOLOGY (IGCSE)

WEEK 40 - 30th May to 3rd June

Work sent to students through Class Bio WhatsApp Group/G mail/Google Classroom

BIOTECHNOLOGY: Vaccines

L.O.: To describe the production and the effectiveness of different types of vaccines.

Sunday- 4 th period	Asyn GC: Describe the production of different types of vaccines. Each group (divided work) completes the task sheet for the type allocated. https://www.youtube.com/watch?v=IFjIVllcCvc https://www.youtube.com/watch?v=PXCT12dXuqQ Resources: Video Links, Powerpoint & textbook. Students able to: List types of vaccines. Differentiate between live attenuated and killed vaccines. Describe in brief how vaccines are produced.
Monday- 7 th period	Asyn GC: Students collaborate (on their own)to create a presentation on the research work on the effectiveness of different types of vaccines..
Tuesday – 3 rd and 4 th	Zoom: Compare the effectiveness, advantages and disadvantages

<p>period</p>	<p>of different vaccines. Students present their research work.</p> <p>https://www.youtube.com/watch?v=3a6TuyOsAWg https://www.youtube.com/watch?v=HgB2Z6wtxOQ</p> <p>Resources: Video Links, Powerpoint & textbook.</p> <p>Students able to:</p> <p>List the advantages of Recombinant vaccines State the disadvantages of live weakened vaccines. Evaluate the effectiveness of the different types of vaccines</p>
<p>Wednesday – 5th period</p>	<p>Asyn GC: Research about the current Covid-19 vaccines used globally w.r.t the type, countries used in, effectiveness, side effects and create a table to present the work and urn in on GC.</p> <p>https://www.youtube.com/watch?v=IFjIVIIcCvc https://www.youtube.com/watch?v=K3odScka55A</p>

YEAR 12 - Batch 1 - BIOLOGY

WEEK 40 - 30th May to 3rd June

Work sent to students through Class Bio Whats App Group /Google Classroom

Topic 3. 2 -1 – Evolution and Adaptation

L.O – Discuss Darwinism & Neodarwinism. Describe Anatomical ,Physiological & Behavioural Adaptations linked to natural selection .

Biology Students Book 1

<p>B1- Thursday– 1st period(Zoom) B1- Thursday–2nd period(Zoom)</p>	<p>Students able to</p> <ul style="list-style-type: none"> ● Differentiate Darwinism & Neodarwinism. ● Identify & explain Anatomical ,Physiological & Behavioural Adaptations of organisms linked to survival of fittest <p>Resources: Boardworks & PowerPoint - Evolution & Video link</p> <p>https://www.youtube.com/watch?v=JOk_0mUT_JU https://www.youtube.com/watch?v=cC8k2Sb1oQ8 https://www.youtube.com/watch?v=vnmPdHmRv9o</p> <p>Students to complete text book questions - Page 177</p>
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YEAR 12 - Batch 2 - BIOLOGY

WEEK 40 - 30th May to 3rd June

Work sent to students through Class Bio Whats App Group /Google Classroom

Topic 3.1 - 4 New evidence for evolution

L.O – Role of DNA sequencing ,scientific journals ,peer reviewing & scientific conferences in support of theory of evolution

Biology Students Book 1

B2- Wednesday– 5th period(GC)	<p>Students able to</p> <ul style="list-style-type: none">●Recall DNA Sequencing in determining evolutionary relationship●Significance of scientific journals ,peer reviewing & scientific conferences in support of theory of evolution.●Compare new evidence of evolution to old evidences of evolution <p>Resources: Boardworks & PowerPoint - Study of Genome & Video link https://www.youtube.com/watch?v=ZzUQVedsdDk https://www.youtube.com/watch?v=7lf3Q5BINWo https://www.youtube.com/watch?v=m8gaq7ei7zc</p> <p>Students to complete text book questions – Page 161</p>
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YEAR 12 B1 & B2- BIOLOGY

WEEK 40 - 30th May to 3rd June

Work sent through Google classroom/G mail/Online Quiz/ZOOM Learning Platform

Topic - 4.2-Water potential in plant cells

L.O – Determine the water potential of a plant tissue

Biology Students Book 1

<p>B2- Thursday – 5th and 6th period(Zoom)</p>	<p>Students able to</p> <ul style="list-style-type: none">● Plan an investigation to show the effects on plant cells of immersion in solutions of different water potential.● Draw & label the graph for % change against concentration .● Draw few conclusions from the results obtained.● Describe the results obtained scientifically.● Determine the water potential using the formula : <p>Water potential = turgor pressure + osmotic potential</p> $\psi = P + \pi$ <p>BOARD WORKS –Transport in plants No[-15 -20]</p> <p>Video and PPT: water potential</p> <p>:www.science.co.uk/biology/translocation..html, www.internet4classrooms.com</p> <p>Read Turgeon, R. The Puzzle of Phloem Pressure. <i>Plant Physiology</i> 2010 vol. 154 no. 2, pages 578–581 (available online).</p> <p>Distil the <i>Wikipedia</i>® entry on the pressure flow hypothesis to 10 bullet points.</p> <ul style="list-style-type: none">● Read Knoblauch, M. & Oparka, K. The structure of the phloem – still more questions than answers. <i>Plant Journal</i>. Volume 70, Issue 1, pages 147–156, April 2012 (available online). Add to your notes on the weaknesses of the pressure flow hypothesis.. <p>Text Book Page Numbers – 287-289</p>
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YEAR 13 B1 & B2- BIOLOGY

WEEK 40 - 30th May to 3rd June

Work sent through Google classroom/G mail/Online Quiz/ZOOM Learning Platform

L.O –Revise and recall the concepts related to Antibiotics–case study

<p>B1- Tuesday – 5th period (GC)</p> <p>B2- Sunday – 0 period (GC)</p>	<p>Asynchronous learning-Class work Case study-Anti-adhesive antibiotics ,analyse and evaluate the advantages and disadvantages based on the case study given and task to be turned in Google classroom</p> <p>Resources: Case study and worksheets based on Antibiotics</p> <p>Students able to analyse and evaluate the concepts on antibiotics</p>
<p>B1- Thursday – 1st and 2nd period(GC)</p> <p>B2 - Monday – 8th & Thursday 7th period (GC)</p>	<p>Asynchronous learning-Research work Electricity from waste products-analyse and evaluate the advantages and disadvantages and task to be turned in Google classroom</p>

YEAR 13 Batch 1& 2 - BIOLOGY

WEEK 40 - 30th May to 3rd June

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Topic 9.2 – 6:- CNS- Brain & spinal cord

L.O –.Describe the parts & functions of various parts of the human brain and spinal cord .Recall PNS and compare voluntary and involuntary actions .Significance of reflex actions .

Biology Students Book 2

<p>B2 - Sunday –6th & 7th Period (Zoom)</p> <p>B1- Monday –1st & 2nd Period (Zoom)</p>	<p>Students presenting ppt on Brain structure & Functions in groups allotted</p> <p>Students able to</p> <ul style="list-style-type: none"> ● Identify lobes of the Cerebral hemisphere and functions of occipital, parietal, frontal and temporal lobes ● Describe the structure and functions of cerebellum, hypothalamus& medulla oblongata in relation to coordination of response ● Compare structure of brain and spinal cord <p>Resources: PPT – Structure of human brain and spinal cord & Video link</p> <p>https://www.youtube.com/watch?v=kMKc8nfPATI https://www.youtube.com/watch?v=gGeZaEABacE https://www.youtube.com/watch?v=1iiW5Z52dgc https://www.youtube.com/watch?v=5bCCb7lj6QA</p> <p>Students to draw and label section of spinal cord & components of reflex arc</p>
<p>B2 - Monday– 3rd Period (Zoom)</p> <p>B1- Tuesday – 4th Period (Zoom)</p>	<p>Students presenting ppt on Spinal cord & Reflexes in groups allotted</p> <p>Students able to</p> <ul style="list-style-type: none"> ● Identify various components of reflex arc ● Describe the knee jerk & withdrawal reflex as examples of monosynaptic and poly synaptic reflexes in human ● Compare cranial and spinal reflexes in human <p>Resources: PPT – Reflex action & Video link</p> <p>https://www.youtube.com/watch?v=qfDr-9k0_n0 https://www.youtube.com/watch?v=bY0oQnflmog https://www.youtube.com/watch?v=E6_rZdpUmUk</p> <p>Students to complete text book questions Pg.213</p>