

## YEAR 9 A - F – BIOLOGY

**WEEK 31(18<sup>th</sup> April to 22<sup>nd</sup> April)**

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

**SB 3b-Meiosis & SB-8a-Efficient transport and exchange**

**L.O** : Explain the role of meiotic cell division, including the production of four daughter cells, each with half the number of chromosomes, and that this results in the formation of genetically different haploid gametes. Describe the need to transport substances into and out of a range of organisms and the need for exchange surfaces and a transport system in multicellular organisms including the calculation of surface area : volume ratio

<p><b>Sunday-Zero period( boys)</b></p> <p><b>Sunday-7<sup>th</sup> period(girls)</b></p>	<p><b>Zoom: SB-3b-Meosis(continuation)</b></p> <p><b>Resources:</b> Textbook, Video Links &amp; Power point.</p> <p><a href="https://www.youtube.com/watch?v=micUPynqx9k">https://www.youtube.com/watch?v=micUPynqx9k</a>  <a href="https://www.youtube.com/watch?v=5pvwIsDE6eg">https://www.youtube.com/watch?v=5pvwIsDE6eg</a></p> <p><b>Students able to:</b> ●State the number of chromosomes in a male gamete ●Organize the various stages of meiosis in sequence. ●Describe the production of gamete cells by meiosis.</p>
<p><b>Sunday -1<sup>st</sup> period(boys)</b></p> <p><b>Wednesday-2<sup>nd</sup> (girls)</b></p>	<p><b>Zoom: SB-8a-Efficient transport and exchange</b></p> <p><b>Resources:</b> Textbook, Video Links &amp; Power point.</p> <p><a href="https://www.youtube.com/watch?v=DHGWH3NdAjc">https://www.youtube.com/watch?v=DHGWH3NdAjc</a>  <a href="https://www.youtube.com/watch?v=mZvzl8KH6iI">https://www.youtube.com/watch?v=mZvzl8KH6iI</a></p> <p><b>Students able to:-</b></p> <ul style="list-style-type: none"> <li>●Recall the names of substances that need to be transported into and out of the body.</li> <li>●Describe the functions of the substances that are transported into the body.</li> <li>●Calculate surface area : volume ratios.</li> <li>●Explain the importance of surface area : volume ratios in transport systems</li> <li>●Define gaseous exchange .</li> <li>●Explain few adaptive features of the alveoli to favour gaseous exchange.</li> <li>●Describe the adaptations of the lungs for gas exchange.</li> <li>●Calculate surface area : volume ratios</li> </ul>
<p><b>Sunday-2<sup>nd</sup> period(boys)</b></p> <p><b>Wednesday -3<sup>rd</sup> period (girls)</b></p>	<p><b>GC:</b> Students write answers to textbook questions on Pgs 52-53 and turn in their work on GC.</p>

## YEAR 10 A-F – BIOLOGY

WEEK 31 (18<sup>th</sup> April – 22<sup>nd</sup> April)

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

### SB5c-NON-COMMUNICABLE DISEASES-CARDIO-VASCULAR DISEASE-CVD

L.O- Describe the types of Cardio vascular diseases and explain how it affects our health.

<p>Sunday – 3rd Period (Boys)</p> <p>Sunday – 5th Period (Girls)</p>	<p><b><u>ZOOM SESSION/GOOGLE MEET</u></b></p> <p>Students must watch the video link given below on</p> <p><a href="https://www.youtube.com/watch?v=5wSfCZESRHU">https://www.youtube.com/watch?v=5wSfCZESRHU</a></p> <p><a href="https://www.youtube.com/watch?v=28CYhgjrBLA">https://www.youtube.com/watch?v=28CYhgjrBLA</a></p> <p>Read Text book Page- 100,101</p> <p>Complete question Page 101- 5&amp; S1</p> <p><b>Resources:</b> PowerPoint /Board work &amp;Video link</p> <p><b>Students able to:-</b></p> <ul style="list-style-type: none"><li>●<b>Define</b> Cardio vascular disease and Atherosclerosis.</li><li>●<b>Identify</b> the different types of CVD .</li><li>●<b>Explain</b> the process of Atherosclerosis.</li><li>●<b>Describe</b> how smoking can lead to CVD.</li></ul>
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### SB5c-NON-COMMUNICABLE DISEASES-CORONARY HEART DISEASE-CHD

L.O- Describe the effects and formation of Coronary Heart Disease.

<p>Monday-4th period (Boys)</p> <p>Tuesday -1<sup>st</sup> Period (Girls)</p>	<p><b><u>ZOOM SESSION/GOOGLE MEET</u></b></p> <p>Students must watch the video link given below on</p> <p><a href="https://www.youtube.com/watch?v=uW3o0OX-6y4">https://www.youtube.com/watch?v=uW3o0OX-6y4</a></p> <p><a href="https://www.youtube.com/watch?v=qJq5hA4pnOk">https://www.youtube.com/watch?v=qJq5hA4pnOk</a></p> <p>Read Text book Page- 101</p> <p>Complete question 6&amp; E1</p> <p><b>Resources:</b> PowerPoint /Board work &amp;Video link</p>
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	<p><b>Students able to:-</b></p> <p>●<b>Define</b> Coronary Heart Disease. ●<b>Describe</b> the effects of CHD. How smoking causes CHD. ● <b>Explain</b> the formation, treatment and diagnosis of CHD. ● <b>Name</b> the drugs used in the treatment for CHD.</p>
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**SB5c-NON-COMMUNICABLE DISEASES-CORONARY ANGIOPLASTY**

**L.O-** Role of Coronary Angioplasty.

<p>Thursday-1<sup>st</sup> Period(Boys) Tuesday -2<sup>nd</sup> Period (Girls)</p>	<p><b><u>ZOOM SESSION/GOOGLE MEET</u></b></p> <p>Students must watch the video link given below on  <a href="https://www.youtube.com/watch?v=UN5BIPfMUkg">https://www.youtube.com/watch?v=UN5BIPfMUkg</a>  <a href="https://www.youtube.com/watch?v=GZCSKAZlioo">https://www.youtube.com/watch?v=GZCSKAZlioo</a></p> <p>Read Text book Page- 100,101</p> <p>Complete question Page 101- Exam Style question</p> <p><b>Resources:</b> PowerPoint /Board work &amp;Video link</p> <p><b>Students able to:-</b></p> <p>●<b>Define</b> Coronary Angioplasty. ●<b>Describe</b> how cardiovascular disease can be treated-(surgery). ●<b>Explain</b> what happens during Coronary Angioplasty.</p>
<p>Wednesday-4<sup>th</sup> period (Girls) Thursday-2<sup>nd</sup> Period (Boys)</p>	<p><b>GOOGLE CLASSROOM</b></p> <p><b>Students to complete the Text book Pages-100-101 and turn in the work in GC .</b></p>

## YEAR 12 - Batch 1 - BIOLOGY

WEEK 31 (18<sup>th</sup> April –22<sup>nd</sup> April)

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

**Topic 3.1- 3 – Identifying individual species & Topic 7:- Using Gene Sequencing**

L.O –Role of PCR & DNA finger printing in identifying species & gene sequencing

**Biology Students Book 1 & 2**

<p><b>B1- Tuesday– 4<sup>th</sup> period(Zoom)</b></p>	<p><b>Students able to</b></p> <ul style="list-style-type: none"> <li>● <b>Explain</b> role of Gel electrophoresis &amp; southern blotting technique , DNA hybridization &amp; autoradiography works in gene sequencing</li> <li>● <b>Evaluate use of</b> PCR ,Gel electrophoresis , southern blotting technique , DNA hybridization &amp; autoradiography ,in gene sequencing</li> </ul> <p><b>Resources:</b> Boardworks &amp; PowerPoint - Study of Genome &amp; Video link  <a href="https://www.youtube.com/watch?v=CSrUm-EgTK4">https://www.youtube.com/watch?v=CSrUm-EgTK4</a>  <a href="https://www.youtube.com/watch?v=z7ZaceU3tfE">https://www.youtube.com/watch?v=z7ZaceU3tfE</a></p> <p><b>Students to complete text book questions – STUDENT’S BOOK 2 - Textbook Questions – Page 95, 97 and 101</b></p>
<p><b>B1- Thursday– 1<sup>st</sup> period(Zoom)</b></p>	<p><b>Students able to</b></p> <ul style="list-style-type: none"> <li>● <b>Identify</b> stages of restriction mapping &amp; Sanger method in gene sequencing</li> <li>● <b>Explain</b> role restriction mapping &amp; Sanger method in gene sequencing</li> <li>● <b>Evaluate use of</b>, Restriction mapping &amp; Sanger method in gene sequencing</li> </ul> <p><b>Resources:</b> Boardworks &amp; PowerPoint - Analysis of Genome &amp; Video link  <a href="https://www.youtube.com/watch?v=FF8PL8kQVqI">https://www.youtube.com/watch?v=FF8PL8kQVqI</a>  <a href="https://www.youtube.com/watch?v=-QIMkQ4E_wE">https://www.youtube.com/watch?v=-QIMkQ4E_wE</a>  <a href="https://www.youtube.com/watch?v=-QIMkQ4E_wE&amp;t=52s">https://www.youtube.com/watch?v=-QIMkQ4E_wE&amp;t=52s</a></p>
<p><b>B1- Thursday–2<sup>nd</sup> period(GC)</b></p>	<p><b>Students to complete text book questions – STUDENT’S BOOK 2 –Exam Style Questions - Page 104 &amp; 105 and turn in the work in GC</b></p>

## YEAR 12 - Batch 2 - BIOLOGY

WEEK 31 (18<sup>th</sup> April –22<sup>nd</sup> April)

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

### Topic 3.3 .1- Biodiversity

L.O –The importance of biodiversity, Assessing and measuring biodiversity

**Biology Students Book 1**

<b>B2- Monday – 5<sup>th</sup> period(Zoom)</b>	<p><b>Students able to</b></p> <ul style="list-style-type: none"><li>● <b>Define</b> the key terms Species richness, Species evenness , Endemism &amp; Biodiversity hotspots</li><li>● <b>Differentiate</b> Species richness &amp; Species evenness</li><li>● <b>Significance</b> of Endemism &amp; Biodiversity hotspot related to biodiversity</li></ul> <p><b>Resources:</b> Boardworks &amp; PowerPoint - Biodiversity &amp; Video link <a href="https://www.youtube.com/watch?v=iWLvz4UmY6Y">https://www.youtube.com/watch?v=iWLvz4UmY6Y</a> <a href="https://www.youtube.com/watch?v=JePixuWr2n0">https://www.youtube.com/watch?v=JePixuWr2n0</a></p> <p><b>Students to complete text book questions – Page 198</b></p>
<b>B2- Monday – 8<sup>th</sup> period(Zoom)</b>	<p><b>Students able to</b></p> <ul style="list-style-type: none"><li>● <b>Identify</b> sampling techniques used for calculating species diversity index &amp; Lincoln index</li><li>● <b>Explain</b> sampling techniques used for calculating species diversity index &amp; Lincoln index</li><li>● <b>Calculate</b> species diversity index &amp; Lincoln index in estimating biodiversity</li></ul> <p><b>Resources:</b> Boardworks &amp; PowerPoint - Biodiversity &amp; sampling techniques &amp; Video link <a href="https://www.youtube.com/watch?v=R80LsxKV9uc&amp;t=499s">https://www.youtube.com/watch?v=R80LsxKV9uc&amp;t=499s</a> <a href="https://www.youtube.com/watch?v=Diq4A7QGknM">https://www.youtube.com/watch?v=Diq4A7QGknM</a></p> <p><b>Students to complete text book questions - Exam style questions 1 – 3 (page 208)</b></p>
<b>B2- Wednesday– 5<sup>th</sup> period(GC )</b>	<p><b>Students to complete text book questions – Exam Style Questions - Page 170 &amp;171 and turn in the work in GC</b></p>

## YEAR 12 - B1 and B2- BIOLOGY

WEEK 31 (18<sup>th</sup> April –22<sup>nd</sup> April)

Work sent through Google classroom/Gmail/Online Quiz/ZOOM Learning Platform

Topic - 4.4-Transport in Plants

**L.O** – Explain structure of xylem and phloem tissues is related to their role in transport. Water movement through plant cells by the apoplastic and symplastic pathways. The cohesion-tension model explains the transport of water from plant roots to shoot

Biology Students Book 1

<p><b>B1- Sunday – 8th period[ zoom]</b></p> <p><b>B2- Tuesday – 3rd period [Zoom]</b></p>	<p><b>Students able to</b></p> <ul style="list-style-type: none"><li>●Describe structure of xylem and phloem tissues is related to their role in transport.</li><li>●Enlist <b>few</b> structural features of xylem &amp; phloem for transport.</li><li>●Differentiate between apoplast, symplast &amp; vacuolar pathway of substances in plants.</li></ul> <p><b>BOARD WORKS –Transport in plants-[3 -18]</b></p> <p><b>Video and PPT: Transport in plants</b></p> <p>:<a href="http://www.science.co.uk/biology/transport_in_plants.html">www.science.co.uk/biology/transport_in_plants.html</a>, <a href="http://www.internet4classrooms.com">www.internet4classrooms.com</a></p> <p>For an introductory video on xylem and phloem visit <a href="http://www.nationalstemcentre.org.uk">www.nationalstemcentre.org.uk</a> and search for ‘plant transport’.</p> <p><b>Text Book Page Numbers – 278-279</b></p>
<p><b>B1 - Monday – 1st &amp; 2nd period (Zoom)</b></p> <p><b>B2- Thursday – 5th and 6th period(Zoom)</b></p>	<p><b>Students able to</b></p> <ul style="list-style-type: none"><li>●<b>Describe</b> the mechanism of uptake and transport of substances in plants – osmosis, active transport &amp; mass flow concept.</li><li>●<b>Interpret</b> the evidence for transport through xylem using dyes &amp; phloem using aphids and radioactively</li></ul>

labeled carbon

● **Correlate** the role of transpiration with uptake and transport of nutrients.

Differentiate between transpiration, translocation and guttation in plants

**BOARD WORKS –Transport in plants-[3 -18]**

**Video and PPT: Transport in plants**

:[www.science.co.uk/biology/transport\\_in\\_plants.html](http://www.science.co.uk/biology/transport_in_plants.html),  
[www.internet4classrooms.com](http://www.internet4classrooms.com)

Animations of water movement, transpiration and transpiration pull can be found at [www.kscience.co.uk](http://www.kscience.co.uk), including a matching activity. Click on ‘Animations’.

[www.saps.org.uk](http://www.saps.org.uk) has a video of transport in xylem and phloem (search for ‘xylem video’). On the same website, search for ‘microscopy’ for help in main activity 1.

**Text Book Page Numbers – 281-285**