

## **PORTION FOR FINAL ASSESSMENT - MAY 2023**

### **YEAR 9 – BIOLOGY**

#### **Topic 1 – Key Biological Concepts**

1. Microscopes
2. Plant & animal cells.
3. Using Microscopes.
- Core practical – Using Microscopes
4. Specialized cells.
5. Inside bacteria.
6. Enzymes & Nutrition.
7. Testing foods.
- Core practical – Testing Foods
8. Enzyme action.
9. Enzyme activity.
10. pH & enzymes.
- Core practical – pH & enzymes
11. Transporting substances .
12. Osmosis in potato slices.
- Core practical – Osmosis in potato slices

#### **Extra GL exam topics**

1. Cell & Organisation
2. The skeletal and muscular system
3. Nutrition and Digestion
4. Gas exchange system - plants & humans (effects of smoking )
5. Reproduction (Sexual & Asexual )
6. Cellular respiration
7. Relationship in an ecosystem
8. Heredity & Evolution

#### **Topic 2– Cells and Control**

1. Mitosis.
2. Growth in animals.
3. Growth in plants.
4. Stem cells.
5. The brain.
6. Brain & spinal cord problems.
7. The eye.

#### **Topic 3 – Genetics**

1. Sexual and asexual reproduction.
2. Meiosis.

#### **Topic 8 – Exchange & transport in animals**

1. Efficient transport and exchange
2. Factors affecting diffusion

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## **YEAR 10 – BIOLOGY**

### **Topic 1– Key Biological Concepts**

1. Microscopes.
2. Plant & animal cells.
3. Using Microscopes.
- Core practical – Using Microscopes**
4. Specialized cells
5. Inside bacteria.
6. Enzymes & Nutrition.
7. Testing foods.
- Core practical – Testing Foods**
8. Enzyme action.
9. Enzyme activity.
10. pH & enzymes.
- Core practical – pH & enzymes**
11. Transporting substances .
12. Osmosis in potato slices.
- Core practical – osmosis in potato slices**

### **Topic 2– Cells and Control**

1. Mitosis.
2. Growth in animals.
3. Growth in plants.
4. Stem cells.
5. The brain.
6. Brain & spinal cord problems.
7. The nervous system.
8. The eye.
9. Neurotransmission speeds.

### **Topic 3 – Genetics**

1. Sexual and asexual reproduction.
2. Meiosis.
3. DNA.
4. DNA extraction.
5. Protein synthesis.
6. Genetic variants & phenotypes.
7. Mendel.
8. Alleles.
9. Inheritance.
10. Multiple and missing alleles.
11. Gene mutations.
12. Variation.

### **Topic 4– Natural selection and Genetic modification**

1. Evidence for human evolution.
2. Darwin's theory.
3. Development of Darwin's theory.
4. Classification.
5. Breeds and varieties.
6. Tissue Culture.
7. Genes in agriculture and medicine.
8. Fertilisers and biological control.

### **Topic 5 – Health, Disease and the Development of medicines**

1. Health and Disease.
2. Non-communicable diseases.
3. Cardiovascular diseases.
4. Pathogens.
5. Spreading pathogens
6. Virus life cycles
7. Plant defences.
8. Plant diseases.

### **Topic 8 – Exchange & transport in animals**

1. Efficient transport and exchange
2. Factors affecting diffusion

### **Extra GL exam topics**

1. Cell & Organisation
2. The skeletal and muscular system
3. Nutrition and Digestion
4. Gas exchange system - plants & humans (effects of smoking )
5. Reproduction (Sexual & Asexual )
6. Cellular respiration
7. Relationship in an ecosystem
8. Heredity & Evolution

**PORTION FOR FINAL EXAMINATION - MAY 2023**

**YEAR 12 – BIOLOGY**

<p><b><u>Biology B - Book 1</u></b></p> <p><b><u>Topic 1- Biological molecules</u></b> 1.1-Chemistry for life. 1.2-Biological molecules 1. 1.3-Biological molecules 2. 1.4–Enzymes</p> <p><b><u>Topic 2- Cells and viruses</u></b> 2.1- Prokaryotic cells. 2.2- Eukaryotic cells. 2.3- Eukaryotic cell division 2.4- Meiosis &amp; sexual reproduction</p> <p><b><u>Topic 3- Classification</u></b> 3.1- Classification 3.3- Biodiversity 3.3.1- Importance of Biodiversity</p> <p><b><u>Topic 4 – Exchange and transport</u></b> 4.1- Cell transport mechanisms 4.2- Gas exchange 4.3- Circulation</p>	<p><b><u>Biology B - Book 2</u></b></p> <p><b><u>Topic 7 – Modern genetics</u></b> 7.1 -Using gene sequencing</p>
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