

Biology Paper 1 Topics – FRIDAY 10th MAY 2024

Use your Y9, Y10 & Y11 exercise books , the online textbook and resources on Kerboodle & Educake to help you revise

Cell Biology

Cell Structure & Transport

1. The World of the Microscope
2. Animal & Plant Cells
3. Eukaryotic & Prokaryotic Cells
4. Specialisation in Animal Cells
5. Specialisation in Plant Cells
6. Diffusion
7. Osmosis
8. Osmosis in Plants
9. Active Transport
10. Exchanging Materials

Cell Division

1. Cell Division
2. Growth & Differentiation
3. Stem Cells
4. Stem Cell Dilemmas

Organisation and the Digestive System

1. Tissues & Organs
2. The Human Digestive System
3. The Chemistry of Food
4. Catalysts & Enzymes
5. Factors affecting Enzyme Action
6. How the Digestive System Works
7. Making Digestion Efficient

Organising Animals & Plants

1. The Blood
2. The Blood Vessels
3. The Heart
4. Helping the Heart

5. Breathing & Gas Exchange
6. Tissues & Organs in Plants
7. Transport Systems in Plants
8. Evaporation & Transpiration
9. Factors Affecting Transpiration

Disease & Bioenergetics

Communicable Diseases

1. Health & Disease
2. Pathogens & Disease
3. Growing Bacteria in the Lab
4. Preventing Bacterial Growth
5. Preventing Infections
6. Viral Diseases
7. Bacterial Diseases
8. Diseases Caused by Fungi & Protists
9. Human Defence Responses
10. More about Plant Diseases
11. Plant Defence Responses

Preventing & Treating Disease

1. Vaccination
2. Antibiotics & Painkillers
3. Discovering Drugs
4. Developing Drugs
5. *Making Monoclonal Antibodies (HT only)*
6. *Uses of Monoclonal Antibodies (HT only)*

Non-Communicable Diseases

1. Non-communicable Diseases
2. Cancer
3. Smoking & the Risk of Disease
4. Diet, Exercise & Disease

5. Alcohol and Other Carcinogens

Photosynthesis

1. Photosynthesis
2. The Rate of Photosynthesis
3. How Plants Use Glucose
4. *Making the Most of Photosynthesis (HT only)*

Respiration

1. Aerobic Respiration
2. The Response to Exercise
3. Anaerobic Respiration
4. Metabolism & the Liver

Required Practicals

1. Using a light microscope
2. Investigating the effects of antiseptics and antibiotics on bacterial growth
3. Investigate the effect of a range of concentrations of salt or sugar solutions on the mass of plant tissue
4. Use standard food tests to identify food groups
5. Investigate the effect of pH on the rate of reaction of the amylase enzyme
6. Investigate the effect of light intensity on the rate of photosynthesis