



# Yr10 Biology- Curriculum Overview

## Year 10

| Half Term:               | Autumn 1   | Autumn 2  | Spring 1  | Spring 2  | Summer 1  | Summer 2  |
|--------------------------|--|---|---|---|---|---|
| Topics:                  | 7.4.1 Trophic levels<br>7.4.1 Producers, consumers and decomposers<br>7.4.2 Pyramids of biomass<br>7.4.3 Transfer of biomass<br>7.5.1 Factors affecting food security<br>7.5.2 Farming techniques<br>7.5.3 Sustainable fisheries<br>7.5.4 Role of biotechnology<br>1.1.1 Eukaryotes and prokaryotes<br>1.1.2 Animal and Plant cells<br><b>Microscopy Required Practical</b><br>1.1.2 Cell specialisation<br>1.1.4 Cell differentiation | 1.2.1 Chromosomes<br>1.2.2 Mitosis and the cell cycle<br>1.2.3 Stem cells<br>1.3.1 Diffusion<br>1.3.2 Osmosis<br><b>Osmosis Required Practical</b><br>1.3.3 Active Transport<br>2.1.1 Organisational hierarchy<br>2.2.1 The Human digestive system<br><b>Food test Required Practical</b><br>2.2.1 Properties of enzymes<br>2.2.1 Human digestive enzymes | <b>Enzymes Required Practical</b><br>2.2.2 The Heart and blood vessels<br>2.2.3 Blood<br>2.2.4 Coronary Heart Disease<br>2.2.5 Health Issues<br>2.2.6 The effect of lifestyle on some non- communicable diseases<br>2.2.7 Cancer<br>2.3.1 Plant organs and tissues<br>2.3.2 Plant transport systems | 3.1.1 Communicable disease<br>3.1.2 Viral diseases<br>3.1.3 Bacterial diseases<br>3.1.4 Fungal diseases<br>3.1.5 Protist diseases<br>3.1.6 Human defence systems<br>3.1.7 Vaccination<br>3.1.8 Antibiotics<br><b>Antibiotic/disinfectant Required Practical</b> | 3.1.9 Painkillers<br>3.1.9 Discovery and development of new drugs<br>3.2.1 Producing monoclonal antibodies<br>3.2.2 Uses of monoclonal antibodies<br>3.3.1 Plant diseases<br>3.3.1 Detection and identification of plant diseases<br>3.3.2 Plant defence responses<br>4.1.1 Photosynthetic reaction<br>4.1.2 Rate of photosynthesis | <b>Photosynthesis Required Practical</b><br>4.1.2 Limiting factors<br>4.1.3 Uses of glucose from photosynthesis<br>4.2.1 Aerobic respiration<br>4.2.1 Anaerobic respiration<br>4.2.2 Response to exercise<br>4.2.3 Metabolism<br>5.1.1 Introduction to Homeostasis<br>5.2.1 Structure and function<br><b>Reflex action Required practical</b><br>5.2.1 Reflex actions |
| Assessment & End Points: | STAR TEST – Ecology<br>STAR HWK -Plant and animal cells<br>STAR TEST – Cells   | STAR HWK – Diffusion<br>STAR TEST – Mitosis and transport   | STAR HWK – CHD<br>STAR TEST – Organisation<br>STAR HWK – Xylem and phloem   | STAR HWK – White Blood cells<br>STAR TEST – Human defences and vaccines   | STAR HWK – Drugs testing<br>STAR TEST – Infection and response<br>STAR HWK - Photosynthesis   | STAR TEST – Bioenergetics<br>STAR HWK – Reflexes<br>STAR TEST – Respiration and reaction time   |