Granville Academy

GCSE Revision Topics 2017 - 2019
Biology Only - Higher

Topic	Tick/date when revised				
B1 Cell Structure and Transport					
B1.1 The world of the microscope					
B1.2 Animal and plant cells					
B1.3 Eukaryotic and prokaryotic cells					
B1.4 Specialisation in animal cells					
B1.5 Specialisation in plant cells					
B1.6 Diffusion					
B1.7 Osmosis					
B1.8 Osmosis in plants					
B1.9 Active transport					
B1.10 Exchanging materials					
B2 Cell Division					
B2.1 Cell division					
B2.2 Growth and differentiation					
B2.3 Stem cells					
B2.4 Stem cell dilemmas					
B3 Organisation and the Digestive System					

B3.1 Tissues and organs					
B3.2 The human digestive system					
B3.3 The chemistry of food					
B3.4 Catalysts and enzymes					
B3.5 Factors affecting enzyme action					
B3.6 How the digestive system works					
B3.7 Making digestion efficient					
B4 Organising Animals and Plants					
B4.1 The blood					
B4.2 The blood vessels					
B4.3 The heart					
B4.4 Helping the heart					
B4.5 Breathing and gas exchange					
B4.6 Tissues and organs in plants					
B4.7 Transport systems in plants					
B4.8 Evaporation and transpiration					
B4.9 Factors affecting transpiration					
B5 Communicable Diseases					
B5.1 Health and disease					
B5.2 Pathogens and disease					
B5.3 Growing bacteria in the lab					

B5.4 Preventing bacterial growth					
B5.5 Preventing infections					
B5.6 Viral diseases					
B5.7 Bacterial diseases					
B5.8 Diseases caused by fungi and protists					
B5.9 Human defence responses					
B5.10 More about plant diseases					
B5.11 Plant defence responses					
B6 Preventing and Treating Diseases					
B6.1 Vaccination					
B6.2 Antibiotics and painkillers					
B6.3 Discovering drugs					
B6.4 Developing drugs					
B6.5 Making monoclonal antibodies					
B6.6 Uses of monoclonal antibodies					
B7 Non-communicable Diseases					
B7.1 Non-communicable diseases					
B7.2 Cancer					
B7.3 Smoking and the risk of disease					
B7.4 Diet, exercise and disease					
B7.5 Alcohol and other carcinogens					

B8 Photosynthesis					
B8.1 Photosynthesis					
B8.2 The rate of photosynthesis					
B8.3 How plants use glucose					
B8.4 Making the most of photosynthesis					
B9 Respiration					
B9.1 Aerobic respiration					
B9.2 The response to exercise					
B9.3 Anaerobic respiration					
B9.4 Metabolism and the liver					
B10 The Human Nervous System					
B10.1 Principles of homeostasis					
B10.2 The structure and function of the nervous system					
B10.3 Reflex actions					
B10.4 The brain					
B10.5 The eye					
B10.6 Common problems of the eye					
B11 Hormonal Co-ordination					
B11.1 Principles of hormonal control					
B11.2 The control of blood glucose levels					
B11.3 Treating diabetes					

B11.4 The role of negative feedback					
B11.5 Human reproduction					
B11.6 Hormones and the menstrual cycle					
B11.7 The artificial control of fertility					
B11.8 Infertility treatments					
B11.9 Plant hormones and responses					
B11.10 Using plant hormones					
B12 Homeostasis in Action					
B12.1 Controlling body temperature					
B12.2 Removing waste products					
B12.3 The human kidney					
B12.4 Dialysis – an artificial kidney					
B12.5 Kidney transplants					
B13 Reproduction					
B13.1 Types of reproduction					
B13.2 Cell division in sexual reproduction					
B13.3 The best of both worlds					
B13.4 DNA and the genome					
B13.5 DNA structure and protein synthesis					
B13.6 Gene expression and mutation					
B13.7 Inheritance in action					

B13.8 More about genetics					
B13.9 Inherited disorders					
B13.10 Screening for genetic disorders					
B14 Variation and Evolution					
B14.1 Variation					
B14.2 Evolution by natural selection					
B14.3 Selective breeding					
B14.4 Genetic engineering					
B14.5 Cloning					
B14.6 Adult cell cloning					
B14.7 Ethics of genetic technologies					
B15 Genetics and Evolution					
B15.1 The history of genetics					
B15.2 Theories of evolution					
B15.3 Accepting Darwin's ideas					
B15.4 Evolution and specialisation					
B15.5 Evidence for evolution					
B15.6 Fossils and extinction					
B15.7 More about extinction					
B15.8 Antibiotic resistant bacteria					
B15.9 Classification					

B15.10 New systems of classification					
B16 Adaptations, Interdependence and Competition					
B16.1 The important of communities					
B16.2 Organisms in their environment					
B16.3 Distribution and abundance					
B16.4 Competition in animals					
B16.5 Competition in plants					
B16.6 Adapt and survive					
B16.7 Adaptation in animals					
B16.8 Adaptations in plants					
B17 Organising and Ecosystem					
B17.1 Feeding relationships					
B17.2 Materials cycling					
B17.3 The carbon cycle					
B17.4 Rates of decomposition					
B18 Biodiversity and Ecosystems					
B18.1 The human population explosion					
B18.2 Land and water pollution					
B18.3 Air pollution					
B18.4 Deforestation and peat destruction					
B18.5 Global warming					

B18.6 The impact of change					
B18.7 Maintaining biodiversity					
B18.8 Trophic levels and biomass					
B18.9 Biomass transfers					
B18.10 Factors affecting food security					
B18.11 Making food production efficient					
B18.12 Sustainable food production					