Combined Science Biology

Topic	Done in Class	RAG	Revised	RAG
B1 Cells and organisation – Paper 1				
Microscopes				
Animal and plant cells				
Eukaryotic and prokaryotic cells				
Specialisation in animal cells				
Specialisation in plant cells				
Diffusion				
Osmosis				
Active transport				
Exchanging materials				
B2 Cell division – Paper 1				
Cell division				
Growth and differentiation				
Stem cells				
Stem cell dilemmas				
B3 Organisation and the digestive system – Paper 1				
Tissues and organs				
The human digestive system				
The chemistry of food				
Catalysts and enzymes				
Factors affecting enzyme action				
How the digestive system works				
Making digestion efficient				
B4 Organising animals and plants – Paper 1				
The blood				
The blood vessels				
The heart				
Helping the heart				
Breathing and gas exchange				
Tissues and organs in plants				
Transport systems in plants				
Evaporation and transpiration				
Factors affecting transpiration				
B5 Communicable diseases – Paper 1				
Health and disease				
Pathogens and disease				
Preventing infections				
Viral diseases				
Bacterial diseases				
Diseases caused by fungi and protists				
Human defence responses				

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B6 Preventing and treating disease – Paper 1				
Vaccination				
Antibiotics and painkillers				
Discovering drugs				
Developing drugs				
B7 Non-communicable diseases – Paper 1				
Non communicable diseases				
Cancer				
Smoking and the risk of disease				
Diet, exercise and disease				
Alcohol and other carcinogens				
B8 Photosynthesis – Paper 1				
Photosynthesis				
The rate of photosynthesis				
How plants use glucose				
Making the most of photosynthesis (HT)				
B9 Respiration – Paper 1				
Respiration				
The response to exercise				
Anaerobic respiration				
Metabolism and the liver				

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B10 the human nervous system – Paper 2				
Principles of homeostasis				
The structure and function of the nervous system				
Reflex actions				
B11 Hormonal coordination – Paper 2				
Principles of hormonal control				
The control of blood glucose levels				
Treating diabetes				
The role of negative feedback (HT)				
Human reproduction				
Hormones and the menstrual cycle(HT)				
The artificial control of fertility				
Infertility treatments (HT)				
B12 Homeostasis in action – Paper 2 TRIPLE ONLY				
B13 Reproduction – Paper 2				
Types of reproduction				
Cell division in sexual reproduction				
DNA and the genome				
Inheritance in action				
More about genetics				
Inherited disorders				
Screening for genetic disorders				
B14 Variation and evolution – Paper 2				
Variation				
Evolution by natural selection				
Selective breeding				
Genetic engineering				
Ethics of genetic technologies				
B15 Genetics and evolution – Paper 2				
Evidence for evolution				
Fossils and extinction				
More about extinction				
Antibiotic resistant bacteria				
Classification				
New systems of classification				
B16 Adaptations, independence and competition – Paper 2				
The importance of communities				
Organisms in their environment				
Distribution and abundance				
Competition in animals				
Competition in plants				
Adapt and survive				
Adaptation in animals				
Adaptation in plants				
B 17 Organising an ecosystem – Paper 2				
Feeding relationships				
Materials cycling				
The carbon cycle				

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B18 Biodiversity and ecosystems – Paper 2				
The human population explosion				
Land and water pollution				
Air pollution				
Deforestation and peat destruction				
Global warming				
Maintaining biodiversity				

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Required practicals paper 1				
Microscopy (cell structure and transport)				
Osmosis (cell structure and transport)				
Enzymes (organisation and the digestive system)				
Food Tests (organisation and the digestive system)				
Photosynthesis (photosynthesis)				
Required practicals paper 2				
Reaction times (the human nervous system)				
Field investigations (adaptations, interdependence and competition)				