The BIOLOGY LEARNING JOURNEY

YEAR 12

Cloning
- Natural cloning
- Artificial cloning
- Cloning in animals

Biotechnology
- Microorganisms and biotechnology
- Medicines
- Culturing in and lab and industry
- Immobilised enzymes

Test | Revision | Revision | A Level Exams

Mock Exam | Biotech Intro | Test | Photosynthesis | Mock Exam

- Energy cycles
- Light dependent reactions
- Light independent reactions
- Factors affecting the rate of photosynthesis

Manipulating Genomes
- DNA profiling
- DNA sequencing
- Genetic engineering
- Gene technology and ethics

Inheritance
- Mutations
- Gene expression
- Inheritance
- Evolution and selection

Homeostasis and Plant Responses
- Hormone communication
- Structure and function of the pancreas
- Diabetes
- Coordinated responses

Respiration
- Glycolysis
- Krebs cycle
- Electron transport chain
- Respiratory substrates

Test | Ecosystems | Test | Hormonal Control | Test

- Ecosystems
- Biomass transfer
- Recycling in ecosystems
- Succession
- Measuring distribution

- Thermoregulation
- Excretion
- Kidneys
- Plant hormones and growth
- Plant responses
- Uses of plant hormones

YEAR 13

Revision

Revision

Mock Exam | Populations | Test | Neuronal Communication

- Population size
- Competition
- Predator-prey relationships
- Conservation
- Sustainability
- Ecosystem case studies

- Coordination
- Neurones
- Nerve transmission
- Synapses
- Structure and function of the brain
- Reflexes
- Muscles

Test | Transport in Plants | Test

- Transport in dicotyledonous plants
- Water transport in multicellular plants
- Transpiration
- Translocation
- Plant adaptations

Biodiversity
- Biodiversity
- Sampling
- Calculating biodiversity
- Maintaining biodiversity

Classification and Evolution
- Classification
- 5 kingdoms
- Phylogeny
- Evidence for evolution
- Variation
- Adaptations
- Population characteristics

Communicable Disease and Defence
- Pathogens and diseases
- Plant defences
- Non-specific defences
- Specific immune defences
- Preventing and treating disease

Transport in Animals
- Transport systems in Multicellular organisms
- Blood vessels
- Blood, tissue fluid and lymph
- Transport of oxygen and carbon dioxide
- The heart

Cell Division
- Cell cycle
- Mitosis
- Meiosis
- Specialisation of cells
- Stem cells

Test | Enzymes | Test | Exchange Surfaces and Breathing | Test

- Enzyme function
- Factors that affect enzyme action
- Inhibitors
- Cofactors

- Mammalian gaseous exchange
- Measuring gas exchange
- Gas exchange in fish and insects

Mock Exam | Nucleotides | Test | Biological Molecules

- Importance of water and ions
- Structure and function of carbohydrates
- Structure and function of lipids
- Structure and function of proteins
- Testing for biological molecules

Biological Membranes
- Structure of the plasma membrane
- Factors affecting membrane structure
- Diffusion
- Active transport
- Osmosis

- Structure and function of nucleic acids
- DNA Replication
- Protein synthesis

Basic Components of Living Things
- Microscopy
- Ultrastructure of animal cells
- Ultrastructure of plant cells
- Interrelations of organelles
- Prokaryotic cells

welcome

To develop Knowledgeable, Skillful, Inquisitive Scientists