A-LEVEL BIOLOGY LEARNING JOURNEY

AQA

FHS

Target Grade

EXAMS

Revision

Genetic Fingerprinting

Gene Therapy

Recombinant DNA Technology

Using Genome Projects

Gene Expression and Cancer

Regulation of transcription and translation

Revision

Conservation

Required Practical 12 - Investigation into the effect of a named environmental factor on the distribution of a given species

Succession

Sampling

Population size

Speciation

Evolution

Variation

Populations

Inheritance

Fertilisers & Eutrophication

Nutrient Cycles

Energy Transfer in Ecosystems

Respiration

Photosynthesis

Animal Responses

Plant Responses

Survival & Response

Alteration of the sequence of bases in DNA can alter the structure of proteins

Most of a cells DNA is not translated

Control of Blood Water Potential

Required Practical 11 - Production of a dilution series of a glucose solution and use of colorimetric techniques to produce a calibration curve with which to identify the concentration of glucose in an unknown 'urine' sample

Glucose in Urine

Homeostasis & Negative Feedback

Blood Glucose Concentration

Receptors

Control of Heart Rate

Nerve Impulses

Synaptic Transmission

Skeletal Muscles

Required Practical 10 - Investigation into the effect of an environmental variable on the movement of an animal using either a choice chamber or a maze

Required Practical 7 - Use of chromatography to investigate the pigments isolated from leaves of different plants, e.g. leaves from shade-tolerant and shade-intolerant plants or leaves of different colours

Required Practical 8 - Investigation into the effect of a named factor on the rate of dehydrogenase activity in extracts of chloroplasts

Required Practical 9 - Investigation into the effect of a named variable on the rate of respiration of cultures of single-celled organisms

Required Practical 6 - . Use of aseptic techniques to investigate the effect of antimicrobial substances on microbial growth

Investigating biodiversity

Biodiversity within a community

Species and taxonomy

Genetic Diversity and Adaptation

Genetic Diversity can arise as a result of mutation during meiosis

Haemoglobin

Digestion and Absorption

Gas Exchange

Surface area to volume ratio

Mass transport in plants

Mass transport in animals

Required Practical 5 - Dissection of animal or plant gas exchange or mass transport system or of organ within such a system

DNA, Genes and Chromosomes

DNA and Protein synthesis

Required Practical 1 - Investigation into the effect of a named variable on the rate of an enzyme-controlled reaction

Inorganic Ions

Water

ATP

DNA Replication

Transport across cell membranes

Required Practical 3 - Production of a dilution series of a solute to produce a calibration curve with which to identify the water potential of plant tissue

Required Practical 2- Preparation of stained squashes of cells from plant root tips; to identify the stages of mitosis in these stained squashes and calculation of a mitotic index

Cell recognition and the immune system

Required Practical 4 - Investigation into the effect of a named variable on the permeability of cell-surface membranes

All Cells arise from other cells

Methods of studying cells

Structure of prokaryotic cells and viruses

Structure of eukaryotic cells

Maths skills for A-level Biology

Structure of DNA & RNA

Many Proteins are Enzymes

General Properties of Proteins

Lipids

Carbohydrates

Monomers & Polymers

Statistics for A-level Biology

THE CONTROL OF GENE EXPRESSION

GENETICS, POPULATIONS, EVOLUTION AND ECOSYSTEMS

ENERGY TRANSFERS IN AND BETWEEN ORGANISMS

ORGANISMS RESPOND TO CHANGES IN THEIR INTERNAL AND EXTERNAL ENVIRONMENTS

GENETIC INFORMATION, VARIATION AND RELATIONSHIPS BETWEEN ORGANISMS

ORGANISMS EXCHANGE SUBSTANCES WITH THEIR ENVIRONMENTS

CELLS

BIOLOGICAL MOLECULES

Year 13

TEACHER 2

TEACHER 1

Year 12

TEACHER 2

TEACHER 1