BIOLOGY LEARNING JOURNEY

Year 7

Understanding and Applying Scientific Skills

- Understanding variables
- Writing methods
- Assessing impact of scientific concepts
- Drawing conclusions
- Applying maths to the scientific concepts
- Describe patterns
- Evaluation of scientific concepts
- Drawing graphs and analysing graphical data
- Analysis of secondary data
- Modelling scientific concepts
- Understanding relationships between science and society
- IDEAL Identify, describe, explain, apply, link
- Risk Assessment
- Evaluating data and investigations

Year 11

Final GCSE exams

Revision

Inheritance, variation & Evolution

- Variation - mutations
- Selective breeding
- Meiosis
- Genetic engineering
- Genetic inheritance
- Inheritance
- Natural selection
- Variation
- Theories of evolution- Darwin

YEAR 11

- Menstrual cycle
- Fertility
- Diabetes
- The nervous system
- Homeostasis
- Urinary System
- Endocrine system
- Reflex arc

Homeostasis

Infection & Response

- The immune system
- Vaccinations
- Non-communicable & communicable disease
- Antibiotics and Painkillers
- Discovery and development of drugs
- The alveoli and gas exchange
- Cardiovascular disease
- Physical and chemical barriers

Bioenergetics

- Photosynthesis
- Transpiration
- Aerobic respiration
- Anaerobic respiration
- Factors affecting photosynthesis
- Absorbing minerals

Organisation

- Stem cells
- Cell transport
- The blood and blood vessels
- Enzymes
- The heart

Cells

- Mitosis
- Osmosis
- Cell cycle

Year 10

Ecology

- Decomposition
- Abiotic and Biotic factors
- Random Sampling- Quadrats and Transects
- Water cycle
- Predator Prey
- Adaptations for hot and cold environments
- Carbon and nitrogen cycle

Plant growth

- Leaves
- Plant minerals
- Photosynthesis

Genetics & evolution

- Variation
- Evidence for evolution
- Sex inheritance
- Continuous and discontinuous variation
- DNA structure
- Human genome project
- Extinction

STEM

- CSI techniques

Year 9

Food & nutrition

- Food tests
- Healthy diet
- Digestive system
- Nutrients
- Bacteria and enzymes in digestion

Unicellular organisms

- Prokaryotes and Eukaryotes
- Aerobic Respiration
- Unicellular organisms
- Anaerobic Respiration

Breathing & respiration

- Breathing rate
- Breathing
- Heart rate
- Respiration
- Gas exchange
- The effect of exercise

STEM

- Plant distribution
- Disruption to food chains and webs
- Food chains and webs
- Reproductive systems
- Fertilisation and implantation
- Seed dispersal
- Development of a fetus
- Plant and animal tissues
- Specialised cells
- Observing cells

Year 8

Ecosystems

- Competition and Adaptation
- Sampling techniques
- Ecosystems

Reproduction in plants & animals

- Fertilisation and germination
- Adolescence
- The menstrual cycle
- Flowers and pollination

Cells, tissues, organs & systems

- Plant and animal organs
- Levels of organisation
- Plant and animal cells
- Microscopy

Year 7

CROSS-CURRICULAR LINKS

Body systems	PE	Health and disease	History
Reproduction	PSHE	Data analysis	Mathematics
Health & Lifestyle	PSHE	Photosynthesis	Chemistry
C, N and H_2O cycle	Geography	Diffusion & Osmosis	Chemistry