KIMICHI SCHOOL WORCESTER · CURRICULUM JOURNEY

Biology

AQA GCSE Biology 8461

How Biology builds, year on year, from Lower School A to Upper Seniors

Lower School A
Year 7

- Cells: the foundation everything else is built on
- Safe practical enquiry and scientific vocabulary

MILESTONE
First independent practical

Lower School B
Year 8

- Zoology and classification
- Practical method, data and developing scientific vocabulary

MILESTONE
Can classify and explain why

Inters
Year 9

- Organisation and ecology
- GCSE bridge across the five big ideas; working scientifically

MILESTONE
GCSE options decision

Lower Seniors
Year 10

- Evolution, DNA and inheritance
- GCSE core units and the required practicals

MILESTONE
Required practicals logged

Upper Seniors
Year 11

- Genetic engineering; synoptic revision across all five big ideas
- Retrieval, application and exam practice

MILESTONE
GCSE Biology

WITH CHEMISTRY
Respiration, energy and the chemistry of living systems.

WITH MATHS
Data handling, graphs, sampling and statistics in ecology.

WITH LIFE AND CULTURE
Health, disease, ethics and the decisions people actually face.

CONSTANT AT EVERY STAGE

Classes of no more than ten · Music at the heart · Personalised pathways · Every pupil performs · Practical enquiry in every unit

Every stage builds knowledge, skills, confidence and character — with music enriching learning all the way through.

INTENT — WHY WE TEACH IT

Biology builds pupils' understanding of living things from cell to ecosystem. Five big ideas — cells and organisation; health and disease; coordination, control and bioenergetics; inheritance, variation and evolution; ecology and biological resources — recur each year at rising demand, so pupils secure the foundations before applying them to GCSE contexts. It is also the science that most often reconnects a pupil to their own body and their own health, which for this cohort is rarely a neutral subject.

WHY THE SEQUENCE RUNS THIS WAY

Cells and classification precede systems, which precede genetics and ecology. The big ideas spiral, so pupils revisit and deepen rather than meet a topic once and move on. Practical and fieldwork skills build throughout rather than being saved for Key Stage 4. The Kimichi TEACH → KNOW → REMEMBER cycle makes explicit what is taught, what is practised and what must be retrieved.

WHAT IT BUILDS ON, AND WHAT IT LEADS TO

Builds on primary science with no assumption of prior knowledge, and with a baseline on entry because so many of our pupils have gaps caused by absence. Draws on Maths for data handling and on Chemistry for energy and respiration. Leads to GCSE Biology (AQA 8461), and to A level Biology, applied science, health and care routes and veterinary and animal-care pathways.

HOW IT IS ASSESSED

AQA GCSE Biology 8461. Low-stakes retrieval every lesson against the five big ideas. Required practicals logged as they are completed, not reconstructed later. Half-termly topic assessments with cumulative review built in. Full papers from the summer of Year 10. Tier decision made on evidence in Year 11.

ADAPTED FOR OUR PUPILS

Required practicals are pre-taught and, where a pupil is anxious about equipment, rehearsed before the assessed run. Method sheets are chunked and issued in advance. Calculations are supported jointly with the Maths teacher so the method matches. A pupil who cannot manage a practical on the day observes and writes it up from a recording rather than losing the content. All material is on the online platform so a pupil at home during illness or a period of anxiety keeps pace.

IMPACT — WHAT YOU WOULD SEE

Pupils who can explain how a living system works rather than recite a definition. Required practicals completed and understood. Confident use of scientific vocabulary in speech. Progress in line with or better than target, with no systematic gap between recall and application questions.

WHAT HELPS AT HOME

Watch a nature documentary and let them tell you what is happening. Ask about the required practicals — what they did, not what mark they got. Gardening, cooking and walking all count as biology if you talk about them.