

Biology Curriculum Overview

The Biology curriculum at Tiffin is designed to provide a comprehensive and ambitious program of study that meets and exceeds the standards set by the national curriculum. It is built around a coherent rationale, ensuring a strong progression of knowledge and concepts. This sequencing allows students to develop a deep understanding of Biology, from foundational principles to more complex topics, equipping them with the skills needed for further study and life beyond school. E.g. starting with physical protection from disease working up to monoclonal antibodies. Reading is integral to the curriculum, providing access to scientific literature, enhancing comprehension of complex ideas, and supporting literacy development. Likewise, mathematical fluency is embedded throughout the curriculum, ensuring students have the numerical skills required for data analysis, statistical interpretation, and scientific inquiry. We have an A Level skills teacher who focuses on essay writing and mathematical skills. Subject teachers play a pivotal role in curriculum design and delivery, ensuring coherence and alignment across year groups and monitoring its implementation through regular reviews and quality assurance. Our scheme of knowledge interlinks disciplinary and substantive knowledge from all Biology key stages and other cross-curricular subjects. The curriculum is mapped to ensure sufficient depth and coverage, meeting the needs of all student groups and offering targeted interventions when necessary. We have space on our SoK for 'retrieval questions' and also 'KS4 and more' (areas where we can extend the students' knowledge beyond the National Curriculum).

Assessment is thoughtfully designed to support future learning without being overly burdensome. These assessments are reliable and ensure that there is no mismatch between the intended and delivered curriculum, ensuring students successfully learn and apply the knowledge.

KS3: The work the students do in Year 8 builds on the science skills delivered in Year 7. GCSE begins in year 9 so in year 8 we make sure to cover anything in the National Curriculum that is not covered in Year 7 or GCSE. We also use year 8 to teach the foundations of the subject. Early understanding of topics such as cells and metabolism provide the basic knowledge that students need when entering GCSE Biology in Year 9. We also use Year 8 to teach students some important topics related to teenager development such as; puberty and reproduction, hygiene and healthy, balanced diets. Students will spend a lot of their time in lessons continuing to further their understanding of laboratory skills and of the scientific method that they will have begun in Year 7 Science.

KS4: At GCSE, we follow the GCSE Biology AQA specification. As a department, we look regularly at what other examination boards expect of students to make sure we are providing the best Teaching & Learning for our students. We begin teaching the GCSE content in Year 9 and delivery is spread over 3 years to allow for adequate time to investigate each topic to an appropriate level of detail. The Biology department at Tiffin has decided to alter the order of the topics that we teach from the AQA specification to give students the best opportunity to understand later topics fully. All students are put in for separate science.

KS5: The A Level is a two year linear course with all exams taken in the Summer of Year 13. We follow the AQA specification which includes a practical endorsement. They have 12 required practicals but we do many more. Students also go on a Field Trip to Bushy park where they are taught Ecology by specialists and carry out one of the required practicals.

Note: We finish a topic before we move onto the next, this may cross terms.

KS3/4 Biology Curriculum

	Year 8	Year 9
Autumn Term 1	Cells and Nutrition	Evolution
Autumn Term 2	Nutrition and Metabolism	Biochemistry
Spring Term 1	Reproduction	Cells & Membranes
Spring Term 2	Classification and Variation	Cell Division & Differentiation
Summer Term 1	Retrieval	Animal Organisation
Summer Term 2	Ecology	Plant Organisation

Note: We finish a topic before we move onto the next, this may cross terms.

KS4 Biology Curriculum

	Year 10	Year 11
Autumn Term 1	Central Themes	Nervous System
Autumn Term 2	Bioenergetics	Endocrine System & Plant coordination
Spring Term 1	Infection and Response	Homeostasis
Spring Term 2	Preventing and Treating Disease	Inheritance
Summer Term 1	Non-communicable Disease	Ecology and Human Impact
Summer Term 2	Plant Disease and Retrieval	

Note: We finish a topic before we move onto the next, this may cross terms.

KS5 Biology Curriculum

	Year 12	Year 13
Autumn Term 1	Biomolecules (carbs/lipids/proteins) + Cell Structure/Mitosis	Biochemistry + Response to Stimuli
Autumn Term 2	Biomolecules (enzymes/nucleic Acid/DNA rep) + Cell Transport	Biochemistry + Muscles
Spring Term 1	Exchange in Animals + Immunology	Ecosystems + Homeostasis
Spring Term 2	Transport in Animals + Genetic Diversity	Inheritance + Gene Expression
Summer Term 1	Exchange and transport in plants + Species Diversity	Populations + DNA Technology
Summer Term 2	Exam feedback and review Consolidation of identified knowledge gaps Teacher directed and supported project work and/or progressing to learn new material	