



## **BIOLOGY**

### **Curriculum Intent, Implementation and Impact**

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#### **Intent**

We aim to create the very best Biologists. We challenge students to think, act and speak like those working in the field would. We do this through quality first teaching and adhering to an established scheme of work encouraging the pursuit of knowledge and facts and applying these to unfamiliar contexts. We teach content from basics through to advanced concepts spiralling back and building on previous taught work.

Our curriculum at NHGS goes far beyond what is taught in lessons, for whilst we want students to achieve the very best examination results possible, we believe our curriculum goes beyond what is examinable. As a department we encourage wider reading through subscription to Biological Science Review intend to offer students the chances to conduct field work. Students support each other through Science mentoring schemes, getting the chance to hone their own understanding when revising with others.

Our curriculum in Biology forms a backbone to our ethos statement. Examples of how our curriculum supports the ethos statement are providing challenging and engaging activities that allow for group work and collaborative research as well as time spent working individually and using extended written tasks. We model how we would approach extended questions and regularly use low stakes quizzes to enhance memory.

As a knowledge engaged curriculum we believe that knowledge underpins and enables the application of skills; both are entwined. As a department we define the powerful knowledge our students need and help them recall it by the use of unit checklists. Their books are checked to encourage high standards of organisation and sixth form files are checked. Students are provided with exam papers and practice questions throughout their courses and are encouraged to seek out their own. Students use additional websites to enhance their revision materials and all are encouraged to use revision guides.

We build the Cultural Capital of our students by relating what is taught in lessons to real life situations and current developments in Biological understanding. We consider historical developments in Biology and explore those scientists responsible for furthering our understanding through technical innovation.

Further rationale behind our curriculum design includes trying to make sure that students are confident in their understanding and acquisition of knowledge through regular review and consolidation of what they have learnt at different stages of their academic journey. We offer support both within and out of lessons to support and scaffold those students that find concepts difficult but encourage students to be independent with the uses of books, their own devices and most importantly, each other. We have independent review meetings with sixth form students that allow us to set meaningful targets to enhance their performance.

In Biology we also implement our curriculum through consistent delivery of our schemes of work and use of a variety of teaching methods such as the use of Kerboodle and Kahoot, and wherever possible include the practical elements and skills needed to encourage and inspire the very best Biologists.

## **Implementation**

Collaborative curriculum planning lies at the heart of what we do in the department. We are committed to planning and developing our schemes of work and are currently working to update and modify KS5 schemes. Our work is focused on embedding challenge, metacognition and literacy into our department curriculum.

Alongside our schemes of work we continue to develop the use of knowledge organisers and revision resources. This is enabling us to define core knowledge that our students need to master. We constantly review assessment and teaching resources through regular communication within the department.

In Biology we also implement our curriculum through consistent yet individual delivery of our schemes of work and use a variety of teaching methods such as the use of online resources and wherever possible include the practical elements and skills needed to encourage and inspire the very best Biologists.

## **Impact**

We know that our curriculum is working in the Biology department.

“Biology is my favourite A level and it is well taught and the teacher is funny”

“Biology is a really challenging subject but the teaching is good and I like the range of activities”

These are just two of the regular comments that have come back from student voice surveys.

Uptake of Biology at A level is consistently very good with students taking Biology related degrees at a wide number of universities. Regular applications to medical and veterinary courses as well as health and natural sciences highlight the enthusiasm and enjoyment that we instill in Biologists at NHGS. Biology students support the department on open evenings and are often mentioned in Parent surveys as to how knowledgeable they are and how enthusiastic they come across about the department.

Teachers strive to do their utmost to offer the support and encouragement they need to be successful and approach lessons in a dedicated manner. Engagement in lessons is positive and purposeful with evident use of school behaviour systems but very infrequent behavior problems. Students show competent practical skills and are methodical and calm during practical sessions.

Biology students reflect that they feel confident when embarking on their exams and that there is a good balance of activity used to convey the considerable content.

## **Key Stage 3**

We follow the AQA specification in much the same order as published. Shared groups across KS5 allow for regular communication and review as to teaching order as best fits the classes, students and timetable allocations. Practical components are taught and delivered

consistently as demonstrated by a successful inspection visit. Students at the end of KS5 show abilities that will stand them in good stead for university study.

#### **Key Stage 4**

Take up of Biology at A level highlights the strength and impact of the teaching at KS4. Teachers see their groups from Y10 through to Y11 building purposeful and production relationships. There is a consistent delivery but teachers use their considerable expertise and judgement to adapt sequence of lessons and their content to best suit the learners. Testing follows the assessment calendar as much as is practicable. Teaching order is consistent across the department. Students show enthusiasm and interest when discussion topics such as global warming, immunity and vaccination, and inheritance and a sound grasp of technical terminology on which they build at KS5.

#### **Key Stage 5**

Lessons in Y8-9 build a foundation of knowledge and skills for moving on to GCSE. Given the spiral nature of the 5 year curriculum we do use GCSE language and content in KS3 given the challenging nature of lesson expected by students.

Given the recent upheaval in teaching Biology teachers have considerably enhanced their skills in terms of virtual and distance teaching. The use of the Google classroom is consistent across the department and used to very good effect.