NHGS – Biology - Curriculum Intent, Implementation and Impact

Intent (Aims and purpose)

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 and offer students the chances to visit Huddersfield University to experience what it is like to conduct investigations in university laboratories. 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 from students that allow us to set meaningful targets to enhance their performance.

Implementation

Collaborative curriculum planning lies at the heart of what we do in the department. We are committed to a three-year plan of developing our schemes of work. In 2019/2020 we are working on KS4 schemes of work. These are focussed on embedding challenge, metacognition, memory techniques and literacy into our departmental curriculum

Alongside our schemes of work, we are developing knowledge organisers at KS3. This is enabling us to define the core knowledge our students need to master.

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.

Impact

We know our curriculum is working in the Biology department.
“Biology is a really challenging subject but the teaching is good and I like the range of activities”
“Biology is my favourite A level and it is well taught and the teacher is funny”
These are just two of the regular comments that have come back from student voice surveys. Uptake of Biology at A level is very good and students regularly say how confident they feel going in to their exams and that there is a good balance of activity used to convey the considerable content. All students passed A level Biology and all students achieved a Grade 4 or above at GCSE 2019. The percentage of students achieving 9-7 increased showing that our knowledge and understanding of the new specification is becoming embedded. Students have said through QA activity that they enjoy Biology and how it is taught. The results are good and subject teachers strive to do their utmost to offer the support students need and approach lessons in a dedicated manner. Since in start of the new specification we have a 100% pass rate the in practical endorsement ratified with an external AQA assessment.