**Curriculum Intent - BIOLOGY**

In the Biology department we aim to develop scientifically knowledgeable, literate students who are curious about the world. We want to develop students able to understand and discuss current affairs, including global warming and conservation issues, technological development and who understand their responsibility as citizens of Earth.

Students will build upon their KS3 and KS4 Science knowledge to further develop their understanding of scientific method, including the use and evaluation of additional sources of information to support/inform their findings. This will include an understanding of the peer review process, in order to allow them to make important life choices. Crucially they understand the concept of ethics and asking the question of “Should we” rather than simply “Can we”.

**Curriculum Implementation**

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|  | | | **Autumn** | | **Spring** | | **Summer** | |
| HT1 | HT2 | HT3 | HT4 | HT5 | HT6 |
| **Yr 10** | **BROAD** | Core content, knowledge and skills | B1 – Cell structure and transport  B2 – Cell Division | B2 – Cell division  **B6.5 B6.6 – Monoclonal Antibodies**  B7 – Non-Communicable Diseases  B8 – Photosynthesis | B9 – Respiration  B10 – Human Nervous System  B11 – Hormonal Coordination | B11 – Hormonal Coordination  **B12 – Homeostasis in Action**  B13 – Reproduction | **Revision of previous topics and required practicals** | B13 – Reproduction  *B14 – Variation and Evolution (could move into Yr 11)*  *B15 – Genetics and Evolution (could move into Yr 11)* |
| Ways the Y10 curriculum goes beyond the national curriculum, including extra-curricular opportunities | Science week activities | | | | | |
| **COHERENT** | Prior knowledge required to access this unit | Year 9 Topics  B1.1 from KS3 | Year 9 Topics  B2.1, B2.2 from KS3 | Year 9 Topics  B1.2, B1.1, B1.3 from KS3 | Year 9 Topics  B1.3 from KS3 | Year 9 Topics | Year 9 Topics  B1.3, B2.3 from KS3 |
| Assessment | End of topic test after every topic. End of Year 10 examination. | | | | | |
| Points when this knowledge/these skills will be revisited | Thinking and linking activities every lesson.  Required practical work. | | | | | |
| **EMPOWERING** | Key vocabulary | Students provided with a glossary, at the start of each topic; this is accessed throughout the topic | | | | | |
| Opportunities to engage with different cultures/perspectives/voices | Screening for genetic disorders. | | | | | |
| Relevance to real world and careers | Prevention of diseases, understanding of different health conditions, reproduction, healthcare professions | | | | | |
| **CHALLENGING** | Homework | My GCSE Science – watch videos, answer multiple choice questions  Kerboodle – various different tasks  Seneca Learning  Exam questions | | | | | |
| Super curricular recommendations | BBC bitesize: <https://www.bbc.co.uk/bitesize/levels/z98jmp3>  TedEd – Science and Technology: <https://ed.ted.com/lessons?category=science-technology>  National Geographic: <https://www.nationalgeographic.com/>  BBC iPlayer: <https://www.bbc.co.uk/iplayer/categories/science-and-nature/featured>  Science Museum: <https://www.sciencemuseum.org.uk/home>  Horniman Museum: <https://www.horniman.ac.uk/>  Eden Project: <https://www.edenproject.com/>  London Zoo: <https://www.londonzoo.org/>  Royal Institution: <https://www.rigb.org/> | | | | | |

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|  | | | **Autumn** | | **Spring** | | **Summer** | |
| HT1 | HT2 | HT3 | HT4 | HT5 | HT6 |
| **Yr 11** | **BROAD** | Core content, knowledge and skills | *B14 – Variation and Evolution (could be in year 10)*  *B15 – Genetics and Evolution (could be in year 10)* | **Revision for TES Exams**  B16 – Adaptations, Interdependence and Competition | B16 – Adaptations, Interdependence and Competition  B17 – Organising an Ecosystem  B18 – Biodiversity and Ecosystems  **Revision for TES exams** | B18 – Biodiversity and Ecosystems  **Revision for Summer Exams** | **Revision for Summer Exams** |  |
| Ways the Y11 curriculum goes beyond the national curriculum, including extra-curricular opportunities | Science week activities  GCSE Science lecture LIve | | | | | |
| **COHERENT** | Prior knowledge required to access this unit | Year 9 Topics  Year 10 Topics  B2.3 from KS3 | Year 9 Topics  Year 10 Topics  B2.2, B2.3 from KS3 | Year 9 Topics  Year 10 Topics  B2.2, B2.3 from KS3 | Year 9 Topics  Year 10 Topics  B2.2, B2.3 from KS3 | Year 9 Topics  Year 10 Topics  Year 11 Topics |  |
| Assessment | End of topic test after every topic. November and February TES Exam. Summer examinations. | | | | | |
| Points when this knowledge/these skills will be revisited | Thinking and linking activities every lesson.  Required practical work. | | | | | |
| **EMPOWERING** | Key vocabulary | Students provided with a glossary, at the start of each topic; this is accessed throughout the topic | | | | | |
| Opportunities to engage with different cultures/perspectives/voices | Recognition that discoveries in science can sometimes have harmful and beneficial effects | | | | | |
| Relevance to real world and careers | Genetics, laboratory work, ecosystems | | | | | |
| **CHALLENGING** | Homework | My GCSE Science – watch videos, answer multiple choice questions  Kerboodle – various different tasks  Seneca Learning  Exam questions | | | | | |
| Super curricular recommendations | BBC bitesize: <https://www.bbc.co.uk/bitesize/levels/z98jmp3>  TedEd – Science and Technology: <https://ed.ted.com/lessons?category=science-technology>  National Geographic: <https://www.nationalgeographic.com/>  BBC iPlayer: <https://www.bbc.co.uk/iplayer/categories/science-and-nature/featured>  Science Museum: <https://www.sciencemuseum.org.uk/home>  Horniman Museum: <https://www.horniman.ac.uk/>  Eden Project: <https://www.edenproject.com/>  London Zoo: <https://www.londonzoo.org/>  Royal Institution: <https://www.rigb.org/> | | | | | |