Great Park Academy Science Curriculum Overview: Year 10 Biology

In year 10 we are pragmatic and focus on preparing for GCSE exams at the end of year 11. Year 10 biology starts with a working scientific investigation in a biological context. As part of this, pupils revisit and enhance some fundamental scientific skills, developing these up to GCSE level. Biology lessons are used for these scientific skills necessary across biology, chemistry and physics and these are reviewed regularly as part of lessons, across the sciences, not least through the GCSE required practical. Building on biology topics from Y7-9, the sequencing of topics and lessons in Y10 have been carefully crafted to support learning and long-term memory, as well as being pragmatic with regard to the seasons and organising content in preparation for the structure of GCSE exam papers.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
10	1. Working scientifically investigation – Reflexes  (a) Safety in science (b) Planning experiments (c) Collecting data (d) Handling data (e) Conclusions (f) Evaluating data	2. B3 – Infection & response  Key questions of biology - What are living things made of?  Key questions of biology - How does life survive and thrive? (a) Eukaryotic and prokaryotic cells. (b) Pathogens and communicable diseases.	3. B4 – Bioenergetics  Key questions of biology - How does life survive and thrive? (a) Photosynthesis. (b) Respiration. (c) Metabolism.	4. B5 – Homeostasis & response  Key questions of biology - What are living things made of?  Key questions of biology - How does life survive and thrive? (a) The nervous system. (b) Homeostasis. (c) Maintaining blood glucose.	4. B5 – Homeostasis & response  Key questions of biology - What are living things made of?  Key questions of biology - How does life survive and thrive? (a) The nervous system. (b) Homeostasis. (c) Maintaining blood glucose. (d) Maintaining water	5. B7 - Ecology  Key questions of biology - How do organisms rely on, interact with, and impact the environment? (a) Ecosystems. (b) Competition and adaptations. (c) Feeding relationships. (d) Sampling ecosystems. (e) Water cycle. (f) Carbon cycle. (g) Decomposition (Separate biology only).

		(c) Protecting the body. Natural defenses and drugs. (d) Plant diseases.		(d) Maintaining water and nitrogen balance the kidney (Separate biology only). (e) Hormones in reproduction. (f) Plant hormones (Separate biology only).	and nitrogen balance the kidney (Separate biology only). (e) Hormones in reproduction. (f) Plant hormones (Separate biology only).	(h) Biodiversity and climate change. (i) Trophic levels and biomass (Separate biology only). (j) Food production (Separate biology only).