Armfield Academy – Department of Science

Year 10 Biology Curriculum Overview

- ✔ Each lesson will start with a series of questions linked to both the previous lesson and topics studied previously.
- ✔ Formative assessment of skills linked to practical work will enable students to demonstrate their acquisition of new skills.
- ✔ Students are encouraged to consolidate learning at least once a week and seek tutor help if unsure on any topics.
- ✔ Within each unit, time will be allocated for consolidation and recall before assessment, this includes for mock exams.
- ✔ The following questions will be explored within the units
- ✔ Content in blue is only taught to students on the triple science route.

Half Term 1	
Date	**Topic**: Bioenergetics
Week 1	Introduction to science (expectations, standards, health and safety, introduction of key skills and assessing prior knowledge).
Week 2	How do plants make glucose?
Week 3	What factors affect photosynthesis?
Week 4	**Required practical: Photosynthesis**
Week 5	How do plants use glucose? **Application Time: Knowledge check 1**
Week 6	How do organisms make energy?
Week 7	How does the body respond to exercise?
	What is your metabolism? **Application Time: Knowledge check 2**
	Application time: End of topic assessment
Half Term 2	
Date	**Topic**: Infection and response
Week 8	What are communicable diseases?
Week 9	How do viruses cause disease?
Week 10	How do bacteria cause disease?
Week 11	How do fungi cause disease?
Week 12	How do protists cause disease? **Application Time: Knowledge check 1**
Week 13	How does the body defend itself against pathogens?
Week 14	
Half Term 3	
Date	**Topic**: Infection and response
Week 15	How does the body defend itself against pathogens?
Week 16	How do vaccines work? **Application Time: Knowledge check 2**
Week 17	How do antibiotics work?
Week 18	How are new drugs developed? **Application Time: Knowledge check 3**
Week 19	What are monoclonal antibodies? What are the uses of monoclonal antibodies?
Week 20	How do we identify plant diseases? How do plants defend themselves against pathogens? **Application Time: Knowledge check 4**
	Application time: End of topic assessment
Half Term 4	
Date	**Topic**: Homeostasis and response
Week 21	What is homeostasis? What is our nervous system?
Week 22	How do I respond to my environment?
Week 23	How fast can I react? **Required practical: Investigating reaction times** **Application Time: Knowledge check 1**
Week 24	How does my brain work? How do I see?
Week 25	How do I control my body temperature? **Application Time: Knowledge check 2**
Week 26	What's a hormone and where are they made?
Half Term 5	
Date	**Topic**: Homeostasis and response
Week 27	How does my body control sugar levels? How does my body control water levels? **Application Time: Knowledge check 3**
Week 28	How do reproductive hormones work? How do we prevent pregnancy? How can we increase fertility?
Week 29	What is negative feedback? **Application Time: Knowledge check 4**
Week 30	How do hormones work in plants?
Week 31	**Required practical: Investigating the effect of light and growth on newly germinated seedlings.**
Week 32	**Application time: End of topic assessment**
	Year 10 mock exams

Half Term 6	
Date	**Topic**: Inheritance, variation and evolution.
Week 33	**Year 10 mock exams**
Week 34	**Year 10 work experience**
Week 35	How do organisms reproduce? How are gametes formed? Why are there different reproductive methods? **Application Time: Knowledge check 1**
Week 36	
Week 37	What is DNA? What is the structure of DNA? **Application Time: Knowledge check 2**
Week 38	How do I inherit characteristics from my parents?
Week 39	What are genetic disorders?
	How can I show the chances of having a boy or a girl? Why are we all different? **Application Time: Knowledge check 3**