## Armfield Academy – Department of Science



## Year 11 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 the A pathway (students on the triple science route)

|  | Half Term 1   |
|--|---|
| Date   | Topic: Inheritance, variation and evolution.  |
| Week 1   | How do organisms reproduce?   |
| Week 2   | How are gametes formed?   |
| Week 3   | Why are there different reproductive methods?   |
| Week 4   | What is DNA? What is the structure of DNA?  |
| Week 5   | How do I inherit characteristics from my parents?   |
| Week 6   | What are genetic disorders?   |
| Week 7   | How can I show the chances of having a boy or a girl? Why are we all different?   |
| WCCK7  | Half Term 2   |
| Date   | Topic: Inheritance, variation and evolution   |
| Week 8   | How do species change over time?  |
| Week 9   | What is selective breeding?   |
| Week 10  | What is genetic engineering? What are the steps in the process of genetic engineering?  |
| Week 11  | What is cloning? Who was Charles Darwin? How do different species evolve?   |
| Week 12  | How has our understanding of genetics changed?  |
| Week 13  | How do we group living things? Why are evolutionary trees important?  |
| Week 14  | Mock examinations   |
|  | Half Term 3   |
| Date   | Topic: Ecology  |
| Week 15  | How do living things interact within an ecosystem?  |
| Week 16  | What are abiotic and biotic factors?  |
| Week 17  | How are organisms adapted to survive in their habitats?   |
| Week 18  | Why are producers so important?   |
| Week 19  | How and why do we sample species?   |
| Week 20  | What is the carbon cycle? What is the water cycle?  |
| TOCK 20  | Half Term 4   |
| Date   | Topic: Ecology  |
| Week 21  | Why is decomposition important? How does the temperature affect the rate of decay?  |
| Week 22  | What is biodiversity and how is it maintained? What is deforestation and how does it affect global warming?   |
| Week 23  |   |
| WCCK 25  | What is waste management and why is it necessary?   |
| Week 23<br>Week 24   | What is waste management and why is it necessary?<br>What are trophic levels?   |
|  |   |
| Week 24  | What are trophic levels?  |
| Week 24<br>Week 25   | What are trophic levels?<br>What is food security and what factors affect it? What is sustainable farming and fishing?<br>What is biotechnology and how can we use it to make food?   |
| Week 24<br>Week 25<br>Week 26  | What are trophic levels?<br>What is food security and what factors affect it? What is sustainable farming and fishing?<br>What is biotechnology and how can we use it to make food?<br>Half Term 5  |
| Week 24<br>Week 25<br>Week 26<br>Date  | What are trophic levels?   What is food security and what factors affect it? What is sustainable farming and fishing?   What is biotechnology and how can we use it to make food?   Half Term 5   Topic: Consolidation  |
| Week 24<br>Week 25<br>Week 26<br>Date<br>Week 27   | What are trophic levels?<br>What is food security and what factors affect it? What is sustainable farming and fishing?<br>What is biotechnology and how can we use it to make food?<br>Half Term 5<br>Topic: Consolidation<br>Walking talking mocks   |
| Week 24<br>Week 25<br>Week 26<br>Date<br>Week 27<br>Week 28  | What are trophic levels?   What is food security and what factors affect it? What is sustainable farming and fishing?   What is biotechnology and how can we use it to make food?   Half Term 5   Topic: Consolidation  |
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| Week 24<br>Week 25<br>Week 26<br>Date<br>Week 27<br>Week 27<br>Week 28<br>Week 29<br>Week 30   | What are trophic levels?<br>What is food security and what factors affect it? What is sustainable farming and fishing?<br>What is biotechnology and how can we use it to make food?<br>Half Term 5<br>Topic: Consolidation<br>Walking talking mocks<br>Revision and recap of key knowledge and required practicals  |
| Week 24<br>Week 25<br>Week 26<br>Date<br>Week 27<br>Week 28<br>Week 29<br>Week 30<br>Week 31   | What are trophic levels?<br>What is food security and what factors affect it? What is sustainable farming and fishing?<br>What is biotechnology and how can we use it to make food?<br>Half Term 5<br>Topic: Consolidation<br>Walking talking mocks   |
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| Week 24<br>Week 25<br>Week 26<br>Date<br>Week 27<br>Week 28<br>Week 29<br>Week 30<br>Week 31<br>Week 32  | What are trophic levels?<br>What is food security and what factors affect it? What is sustainable farming and fishing?<br>What is biotechnology and how can we use it to make food?<br>Half Term 5<br>Topic: Consolidation<br>Walking talking mocks<br>Revision and recap of key knowledge and required practicals<br>GCSEs begin, Exam timetable and extra revision for assessments<br>Half Term 6 |
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