Armfield Academy – Department of Science

Year 11 Physics 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. Nb. This will take longer than the weeks allocated

Half Term 1	
Date	**Topic**: Waves
Week 1	Introduction to science (expectations, standards, health and safety, introduction of key skills and assessing prior knowledge).
Week 2	What types of waves are there?
Week 3	How do we represent waves?
Week 4	How suitable is apparatus to measure the frequency, wavelength and speed of waves? **Required practical: Waves**
Week 5	**Application time: knowledge check 1**
Week 6	What happens when waves hit a surface? **Required practical: Reflection**
Week 7	How do we use waves? **Application time: knowledge check 2** What is the electromagnetic spectrum? **Application time: knowledge check 3** How do lenses work? What is visible light? Why is the Earth's temperature changing? **Application time: knowledge check 4** **Application time: End of unit test**
Half Term 2	
Date	**Topic**: Magnetism and electromagnetism
Week 8	What do magnetic fields look like?
Week 9	How do you plot the magnetic field around a magnet? How do we know the Earth's core is magnetic?
Week 10	How do we create a magnetic field using a current? **Application time: knowledge check 1**
Week 11	What is Fleming's left-hand rule and how do we use it?
Week 12	How do electric motors? **Application time: knowledge check 2** Calculate magnetic flux density?
Week 13	How does a speaker work? How do we generate electricity?
Week 14	How do we use the generator effect? How do transformers work? **Application time: knowledge check 3** **Application time: End of unit test** **Y11 Mock Examinations**
Half Term 3	
Date	**Topic**: Space (triple only) **Topic**: Consolidation (combined only)
Week 15	What is our place in the Universe?
Week 16	How did our Sun form and what will be its fate?
Week 17	How do satellites stay in orbit? **Application time: knowledge check 1**
Week 18	What is the Big Bang theory?
Week 19	How do we know if the Universe is getting bigger or smaller? **Application time: knowledge check 2**
Week 20	**Application time: End of unit test** Reflect and review.
Half Term 4	
Date	**Topic**: Consolidation
Week 21	Why do we need energy? Why is energy transferred? How does energy change in a system?
Week 22	**Required practical: Specific heat capacity.**
Week 23	How are particles arranged? How do we calculate density? How do particles behave in solid, liquid and gas?
Week 24	**Required practical: Density**
Week 25	How do we draw electrical components? How can electricity be supplied?
Week 26	**Required practical: Series and parallel resistors. Required practical: I-V characteristics**

Half Term 5	
Date	**Topic**: Consolidation
Week 27	**Walking talking mocks**
Week 28	Revision and recap of key knowledge and required practicals
Week 29	
Week 30	
Week 31	GCSEs begin, Exam timetable and extra revision for assessments
Week 32	
Half Term 6	
Date	**Topic**: Exam season
Week 33	
Week 34	
Week 35	
Week 36	
Week 37	
Week 38	
Week 39	