Armfield Academy – Department of Science

Year 8 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
- ✔ The following questions will be explored within the units

Half Term 1	
Date	**Topic**: Forces
Week 1	Introduction to science (expectations, standards, health and safety, introduction of key skills and assessing prior knowledge).
Week 2	What are forces? How can I measure a force? How are scaler and vector quantities different?
Week 3	How do objects behave when forces act on them?
Week 4	How do elastic materials behave when squashed? **Application Time: Knowledge check 1**
Week 5	Is friction a bad thing? How does streamlining help performance?
Week 6	Could you lift an elephant?
Week 7	How do we calculate speed?
	How do we represent speed? **Application Time: Knowledge check 2**
Half Term 2	
Date	**Topic**: Keeping healthy
Week 8	What are the functions of a cell? How are organisms organised? Why do we have a skeleton?
Week 9	How do we move? What joints do we have to help us move? **Application Time: Knowledge check 1**
Week 10	How are the lungs adapted? **Application Time: Knowledge check 2**
Week 11	What is the function of the heart? How do diseases spread? How do drugs affect a person? **Application Time: Knowledge check 3**
Week 12	
Week 13	What is respiration? Do we always need oxygen to respire? How does our body respond to exercise. **Application Time: Knowledge check 4**
Week 14	
Half Term 3	
Date	**Topic**: Electricity and magnetism
Week 15	Why are wires covered in plastic? Why do we use symbols in circuits?
Week 16	Why does the lightbulb light up? **Application Time: Knowledge check 1**
Week 17	How do I measure current? How can I make two bulbs brighter in a circuit?
Week 18	How do series and parallel circuits differ? **Application Time: Knowledge check 2**
Week 19	How does the resistance of a wire change with length? Is static electricity always bad? **Application Time: Knowledge check 3**
Week 20	How do magnets behave? How can we make a magnet? How can we make motors? **Application Time: Knowledge check 4**
Half Term 4	
Date	**Topic**: Chemical reactions.
Week 21	What are atoms, elements and compounds? How is a word equation represented?
Week 22	What is a chemical and physical reaction? What is the conservation of mass? **Application Time: Knowledge check 1**
Week 23	How is atomic structure linked to the periodic table? What are metals and non-metals?
Week 24	What is combustion? **Application Time: Knowledge check 2**
Week 25	**British Science week: Research project**
Week 26	What is thermal decomposition? What is displacement?
	What is meant by endothermic and exothermic? **Application Time: Knowledge check 3**
Half Term 5	
Date	Topic: Ecology, inheritance and variation.
Week 27	How do we group living organisms? How is energy transferred through living things?
Week 28	What is food security? What is pollution? **Application Time: Knowledge check 1**
Week 29	What is genetic information and how is it passed on from one generation to the next?
Week 30	How are things suited to where they live? How do organisms survive in harsh environments?
Week 31	Why did the dinosaurs die out?
Week 32	What is biodiversity and why is it important? How do organisms change over time? **Application Time: Knowledge check 2**
Half Term 6	
Date	**Topic**: Waves
Week 33	What are waves? How do we produce sound?
Week 34	How does sound travel? **Application Time: Knowledge check 1**
Week 35	How can we measure waves?
Week 36	How can we use waves? What is light?
Week 37	How does light travel What happens when light meets a boundary? **Application Time: Knowledge check 2**
Week 38	What is the eye?
Week 39	How can we see colour? **Application Time: Knowledge check 3**