



## SCIENCE

### **Curriculum Intent Statement**

#### **Department of Science**

#### **Ballakermeen High School**

**Curriculum vision: The science curriculum is sequenced where a broad range of knowledge and skills are developed to ensure BHS students become literate in science and employable members of society. Knowledge of each science discipline is built upon so students can succeed regardless of their background, prior primary learning and FSM/ SEND/ EAL needs. All teachers will have high expectations of all student's behaviour and learning.**

Our Science curriculum will provide students with the opportunity to:

- Enjoy science and develop a lifelong love of learning
- Provide regular opportunities for students to take part in and develop practical skills
- Understand the fundamentals of biology, chemistry, and physics
- Develop numeracy and literacy skills so that students can analyse and interpret data
- Achieve their full potential
- Be scientifically literate and be able to argue and debate
- Critically evaluate scientific sources
- Develop curiosity and an interest in the world around them
- Recognise that scientific fact may not be the reality we would choose
- Build resilience and develop a "have-a-go" attitude
- To accept that science isn't just for the elite but useful to all
- Understand scientific method and understand how it can be applied to everyday life

## Curriculum Overview – Science

	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11
<b>AUTUMN 1</b>	Teacher 1: Cells  Teacher 2: Solids, liquids, and gases	Teacher 1: Combustion  Teacher 2: Atoms	Teacher 1: Metals and their uses  Teacher 2: Genetics and evolution	Biology: Topic 1: Enzymes and core practicals  Chemistry: Recap Topic 2 & core practicals. Topic 1: Atomic structure and the periodic table  Physics: Topic 3: Review energy Topic 2: Forces and motion	Biology: Topic 7: Animal co-ordination, control, and homeostasis  Chemistry: Topic 4: Extracting metals and equilibria, obtaining and using metals Topic 7: Rate of reaction part 1  Physics: Topic 9: Forces and their effects
<b>AUTUMN 2</b>	Teacher 1: Reproduction  Teacher 2: Mixtures	Teacher 1: Energy transfers  Teacher 2: Nutrients	Teacher 1: Forces and motion  Teacher 2: Plant growth	Biology: Topic 2: Cells and control  Chemistry: Topic 1: Ionic bonding, covalent bonding, types of substance, 6 mark allotropes  Physics: Topic 2: Forces and motion	Biology: Topic 8: Exchange and transport in animals  Chemistry: Topic 7: Heat energy changes and chemical reactions Topic 4: Equilibria  Physics: Topic 11: Electricity Topic 12: Magnetism Topic 13: Electromagnetic induction

<b>SPRING 1</b>	Teacher 1: Sound  Teacher 2: Energy	Teacher 1: Materials  Teacher 2: Breathing and respirations	Teacher 1: Force fields and electromagnets  Teacher 2: Reactivity	Biology: Topic 3: Genetics Topic 4: Natural selection and GM  Chemistry: Topic 1: Types of substance Topic 3: Chemical changes, acids  Physics: Topic 5: Light and the EM spectrum	Biology: Topic 5: Health, disease, and the development of medicines  Chemistry: Topic 8: Fuels  Physics: Topic 14: Particle model Topic 15: Forces and matter
<b>SPRING 2</b>	Teacher 1: Muscles and breathing  Teacher 2: Electricity	Teacher 1: Earth and Space  Teacher 2: Unicellular organisms	1. Revision for end of Year 9 exam 2. End of Year 9 exam	Biology: Topic 6: Plant structures and their functions  Chemistry: Topic 3: Chemical changes, acids, 6 mark salts  Physics: Topic 4: Waves	1. Biology revision for GCSE exams 2. Chemistry Topic 1 calculations involving masses and revision for GCSE exams
<b>SUMMER 1</b>	Teacher 1: Air that we breathe  Teacher 2: Hazards	Teacher 1: Light on the Move  Teacher 2: Rock Cycles	Teacher 1 GCSE: Topic 1: Key concepts in Biology  Teacher 2 GCSE: Topic 2: States of matter and separating techniques	Biology: Topic 9: Ecosystems and material cycles  Chemistry: Topic 3: Chemical changes, electrolytic processes, 6 mark electrolysis	Exams

				Physics: Topic 6: Radioactivity	
<b>SUMMER 2</b>	Teacher 1: Variation  Teacher 2: Forces and their effects	Teacher 1: Fluids  Teacher 2: Plants and plant reproduction	Teacher 1 GCSE: Topic 3: Energy calculations  Teacher 2 GCSE: Topic 3: Energy transfers, renewable and non- renewable	Biology: Revision for Year 10 mock exams  Chemistry: Topic 3: Finish chemical changes. Year 10 mock exams. Topic 6: Groups in the periodic table  Physics: Year 10 mock exams. Topic 8: Energy forces doing work	Exams