Science in the Secondary Challenge Pathway

Wilson Stuart School

A Special Academy

Subject Rationale:

A high-quality science curriculum providing the foundations for understanding the world around us. Students will participate in a fun and safe environment to help build up a body of key knowledge and concepts and are encouraged to see how this can be used to explain what they see and experience in everyday life.

Students will work on the working scientifically skills ladder and progress in five main skills:

1. Practical skills
2. Maths skills
3. Demonstrating Knowledge and understanding
4. Applying knowledge and understanding
5. Drawing conclusions

Science in the 'Secondary Challenge' Pathway

Intent	Implementation	Impact
Students will cover a range of topics covering all areas of Science: • Students will cover a range of topics covering all areas of Science: Biology, Chemistry, Physics and working scientifically. • This will help them to develop knowledge and understanding of the world they live in and allow them to link what they learn in the classroom to things that they see and experience in everyday life.	We will achieve our intentions by: • Long-term 'spiral' topic mapping of science content (Biology, chemistry, and physics) with the opportunity to revisit prior learning as students' progress through the different key stages. Students will be assessed on the working scientifically skills ladder and will focus on: • Following and/or writing basic enquiry methods based on phenomena they see. • Making logical predictions supported with their own scientific knowledge (if appropriate). • Collecting, and recording appropriate data, in a range of ways. • Recognising trends in data and forming conclusions using quantitative and qualitative data. • Evaluate investigations and use critical thinking skills to improve enquiry investigations further. • KS3 - Coverage of half-termly topics with a clear 'working scientifically' practical assessment linked to learning that has been taking place in class. • Entry Level Externally set end-of-unit tests and half termly assessment during KS4. • Science enquiry-controlled assessment conducted each academic year. • GCSE end of unit tests and examination paper practice in preparation to sit GCSE exams in Summer of Year 11.	The impact of the Secondary Challenge Pathway provision is demonstrated through the development of pupils who are: • Confident hands-on learners who can demonstrate strong practical and maths skills (with support if needed). • Students who demonstrate curiosity and are eager to learn about the world they live in. • Logical thinkers who are able to draw on life experiences/previous knowledge to form ideas and conclusions and are able to question what they see happen in everyday life. • Students are beginning to apply correct scientific vocabulary fluently. • KS3 students who are able to progress onto accredited Science courses at KS4. • Students in KS4 to be able to achieve Science GCSE double award in Combined Science (AQQ) or an Entry Level qualification in Science (OCR)