



Science Curriculum Intent

“Science makes people reach unselfishly for truth and objectivity; it teaches people to accept reality, with wonder and admiration, not to mention the deep awe and delight that the natural order of things brings to the true scientist.” Lise Meitner – Austrian-Swedish Physicist.

At Hodgson Academy, we see thinking scientifically as a life skill. The study of science starts long before students arrive at Hodgson and continues long after they have left. From an early age, humans naturally question the world around them. We make observations about the natural world and then try to explain them. We may then carry out simple experiments to test our hypotheses and adjust our explanations based on the results. This natural curiosity, the proclivity to find the right answer is a human trait but is also what science is at its most basic level. Our aim is to cultivate these innate human skills in all our students and allow them to have a greater appreciation for the world around them.

Our vision is to engage all young people in science and develop scientists of the future. We create a stimulating and exciting learning environment where the teaching is both challenging and supportive. By empowering students to learn independently, we allow them to flourish and achieve to the very best of their ability. Practical work is woven seamlessly throughout the curriculum, to develop students’ disciplinary skills and complement the component knowledge.

Science at Hodgson Academy is a 5-year learning journey. We begin in year 7 by introducing the ‘big ideas’ of Science; everything in the visible world is made of matter, matter can store and transfer energy, forces are the interactions between matter. We also introduce the fundamentals of biology with cells being the building blocks of life. We strive to make links between the three pillars of science; biology, chemistry and physics and how they link to the natural world. We discuss scientists who have changed what we know about the world and the universe such as Isaac Newton, Marie Curie, Albert Einstein and Andre-Marie Ampere. As well as Scientists who plied their trade much closer to home, such as Lancashire based scientists John Dalton and Ernest Rutherford who made ground-breaking discoveries in atomic theory.

Our curriculum is designed to spiral and revisit these big ideas with increasing complexity over the years. The year 9 science curriculum has been carefully designed as a ‘building year’, to bridge the transition between KS3 and KS4. This allows the continuing delivery of fundamental substantive knowledge which builds upon the big ideas taught in year 7 and 8. During the options process in Year 9, every student has the choice of studying either combined science or separate science, which offers additional science lessons each week. This gives students the flexibility to delve as deeply as they wish into the fantastic curriculum that we offer. Alongside the curriculum our co-curricular offer is diverse and substantial with KS3 & 4 science clubs, STEM CREST club, the Hodgson Science Fair alongside an array of external visitors and trips on offer across all years.

We also aim to motivate students to consider the social, cultural and moral issues faced by society and science’s role in finding solutions to these issues. Pupils are made aware of the significance of science in society and how it has been used and can be utilised in the future to solve the big issues such as climate change. We encourage students to think about how they can be part of these solutions, be it through their future career or as part of a wider societal effort. Where possible we always try to relate the content on the National curriculum to student’s lived experience and the local context of our setting.

In conclusion, the science department aims to educate our students on the powerful ideas of science. We aim to make every student appreciate the awe and beauty of the science that we already know and allow them to continue to wonder about what we don’t know. We want students to be socially aware and considerate of how their actions can impact on the world and others. In doing so, we aim to make our students the scientists of the future.