

Science Statement of Intent, Implementation, Impact

In Science we aim to provide a curriculum that is ambitious, enriching, inclusive and enjoyable. This is in line with the school's aim to encourage high aspirations in order to maximise progress and enable students to succeed. Science has an effect on all our lives and not just those who select it as a career. We use Science when we are selecting a new electrical appliance, taking a lateral flow or pregnancy test, colouring our hair or observing the night sky. The study of Science also involves the moral and ethical issues surrounding topics such as climate change, energy resources and stem cell research.

The Science Curriculum is planned and sequenced so that new skills and knowledge build on what has been taught at the previous Key Stage. We offer a three year programme of Science, following the National Curriculum, in Year 7, 8 and 9 to ensure that every student has the opportunity to continue to study Science an appropriate level at GCSE.

Intent

At Balshaw's the intent of our Science Curriculum is to develop scientifically literate citizens who are equipped with scientific skills required to understand the uses and implications of Science. Students are encouraged to see how Biology, Chemistry and Physics interconnect with each other and the outside world. We want to develop their understanding and appreciation of the natural, material and physical world around them and to encourage awe and wonder.

We want students to realise how scientific innovation and advances changes our lives and is vital to the world's future prosperity.

At Balshaw's CE High School we wish to inspire many students to become future scientists and for others to see the applications of Science within our everyday lives.

Science should enable students to:

- Develop an extensive and ambitious tier 3 vocabulary which helps students knowledge and understanding of the topics studied at school and in the wider world.
- Understand how Science can be used to explain what is happening, predict how things will behave and analyse the causes.
- Make sense of the world around them through investigation.
- Develop practical skills, including the ability to measure and record accurately and appropriately using a wide range of Scientific equipment.
- Develop their use of ICT in the study of Science through the use of data loggers and lap tops for research.
- Develop their ability to apply mathematical skills to analyse, evaluate and interpret data
- Consider the backgrounds, faiths and beliefs of others and how this may affect interpretation of scientific explanation.

Implementation

At Key Stage 3 students are all taught by a member of the Science department and most classes will have the same teacher for each of their lessons. Years 7 and 8 have five one hour lessons over two weeks and Year 9 have six one hour lessons over two weeks. At Key Stage 4, students are taught by well qualified subject specialists. In Year 10 students studying Combined Science have ten one hour lessons over two weeks and those studying Triple (Separates) Science have fifteen one hour lessons over two weeks. In Year 11 (for final time in 2021/2022) those studying Combined and Triple Science have eleven hours of Science over two weeks. From 2021/2022 Triple Science is an option for our current Year 10 pupils (up to a maximum of 32 students). These are students with a high ability or strong interest and passion for the subject. For the last time this academic year our Year 11 students were selected on ability based on the fact that they get no additional time to cover the extra content of Triple Science.

All Science lessons are delivered by well qualified Science teachers. All teachers present subject matter clearly, incorporating practicals/ experiments and demonstrations and prompting appropriate discussion at every opportunity. The Science staff create an environment that is safe and inspires, interests and excites students and allows them to be inquisitive.

The Science curriculum is engaging and varied with a wide variety of resources and activities for the students to experience and equipping them for the next stage of their education, training or employment.

As a department we have a clear vision and by working together as a team, in partnership with students and parents we aim to:

- Provide a challenging and engaging curriculum for all students, one that is reviewed annually by the department staff
- Promote high expectations for all students, focusing on their progress.
- Ensure assessment is regular and rigorous and tracked on the department trackers – students are aware of their target grades, current working at grades and receive regular feedback on how to move on from these grades.
- Provide high quality teaching and learning experiences with sharing of resources and good practice

Students are encouraged to:

- Take an active part in lessons
- Take responsibility for their own learning
- Work and think like a scientist
- Use scientific language orally and in written work
- Treat others within the group fairly and with respect
- Reflect and review their learning regularly

Staff are expected to:

- Create a safe and comfortable learning environment in which all students can thrive
- Continually develop resources that allow them to teach in an interesting and exciting manner
- Share success criteria with students to allow them to realise their full potential

Impact

The Science Department continues to foster and enjoyment and curiosity of the subject. Pupils are genuinely in their Science education. Almost all students have high expectations and are prepared to work independently and creatively to solve problems, producing solutions to a high standard. In addition, many are prepared to spend time outside of lesson to research or to complete or improve work to ensure they meet or exceed their targets.

Consistently high quality teaching has resulted in attainment at KS4 which is above national standards. Students on both GCSE pathways make significant progress. Almost all Triple Science students go on to study at least one Science A-level, with at least one in every cohort applying to study medicine.

To enhance the curriculum and enjoyment of Science the department hosts a number of extra-curricular activities including Year 7 and 8 Science club, KS3 visit to London (on hold currently due to Covid restrictions) as well as foreign trips to Geneva and Iceland (again on hold until the end of travel restrictions and in line with guidance from Lancashire County Council). KS4 students act as subject ambassadors and help with Science events such as Science Clubs and open evening. Students are exposed to STEM activities within the department and from outside providers and the department host external speakers on subjects such as Women in Science and Genetics. We also offer some students with a keen interest in Science to attend events and competitions at Runshaw College.