



# SCIENCE

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*Biology*

*Chemistry*

*Physics*

*Applied Science*

*Environmental Science*

*Geology*

## SCIENCE AT WALTON HIGH

### OUR VISION

We aim to develop students who are the foundation of a progressive society leading to future prosperity and security. Therefore, we need to educate a new generation of scientists.

We want our students to learn about the world, to grow intellectually and to build upon the achievements of previous generations. We do this by continually examining what, how, why and who we teach.

We believe that all students can appreciate and that their learning potential is not pre-determined. In order to achieve this, our teachers will develop students as learners by planning inspiring, engaging lessons which set challenging targets for students and support students in reaching those goals. In doing this, students will develop as powerful thinkers and problem solvers, ready to shape and respond to the future.

### OUR TEAM

We are a team of twenty-eight specialists, teaching across two campuses and supported by eight technicians. Our group of enthusiastic professionals is led by a Director of Science assisted by two Leading Teachers and six Subject Leaders.

We work collegiately – sharing ideas, resources and expertise with each other and with trainees, always with a sense of purpose – and good humour.

We aim to promote innovative practice, both in terms of our teaching and our use of practical activities to enhance learning.

### OUR SCIENCE CURRICULUM

#### Key Stage 3

Students are taught essential Science skills which encourage them to ask questions, develop and use models, plan and carry out investigations and analyse and interpret data.



Staff have created a modular approach at Key Stage 3; all teachers teach modules from across the Sciences.

Both year groups are taught in mixed ability groups.

#### **Key Stage 4**

At Key Stage 4 we aim to match subjects taught with staff background and expertise. Students study one of two options, either the GCSE Combined Science or the GCSE Separate Science route.

#### **Post 16**

As would be expected of a thriving and successful Curriculum Area, there is a healthy interest in the Sciences at Post 16. Typically, we have students studying Biology, Chemistry, Physics and Applied Science. All students are expected to continue their studies to Year 13.

Students study the following subjects at Post 16.

Biology:	OCR A
Chemistry:	OCR A
Physics:	OCR A
BTEC Extended Certificate, Diploma and Extended Diploma in Applied Science.	

We aim to also offer A Level Environmental Science.

### **ENRICHMENT OPPORTUNITIES**

The Science team contributes to Walton High's enriched curriculum. Advanced Learning Days involving Whipsnade Zoo, trips to the National Space Centre and a CSI Murder Mystery have been developed. We have well-attended Science Club and STEM club that runs weekly at both campuses and offer students a number of opportunities throughout the year to compete in national competitions; we are past winners of the Tomorrow's Engineers, a competition facilitated by Network Rail and the Amey Cup. This year we are entering students into the Post 16 Olympiads and Top of the Bench.

We also offer Masterclasses led by scientists from the Open University which is nearby, The Royal Air Force, and STEM ambassadors from Oxford University.



## FACILITIES ON OFFER

### Walnut Tree Campus

- There are eleven purpose-built and fully equipped, laboratories on one corridor where all Science teaching is carried out. These are supported by two well-equipped prep rooms, and a separate office.
- There is access (for the whole school) to the well-resourced ICT rooms, with scientific software and data-logging equipment used.
- We have a dedicated ICT room on the Science floor.
- Every laboratory has its own interactive Promethean Smart board and desk top computer.
- Each member of staff is loaned the use of a networked iPad for use at work and at home.

### Brooklands Campus

- There are 12 purpose-built, flexible spacious laboratories all in one corridor, situated either side of a generously proportioned, well-equipped prep room.
- Well-resourced ICT rooms, scientific software and technician support contribute to the learning and teaching of the Sciences.
- Every laboratory has its own interactive Promethean Smart board and desk top computer.
- Each member of staff is loaned the use of an iPad for use at work and at home.