



Head of Department Welcome

Thank you for your interest in Glebelands School and the Science department. I am pleased that you are considering applying for the advertised position and hope that the department brochure will provide you with the information you require to give you an insight into the department.

The Science Department is a team of eight hard-working and talented staff, two of whom are technicians. All the team contribute to produce a curriculum for students at Glebelands that gets our students to think hard, which has resulted in excellent progress over a number of years.

We are a close knit department who frequently meet and collaborate in order to design as an engaging subject as possible to inspire the future generation to see the magnitude of opportunities that Science has to offer as a career. Whether an experienced teacher or an ECT you will be encouraged to take an active role in the day to day life of the department.

We deliver Science in a number of ways to ensure that all the student have the curriculum that most suits their needs. Pupils who show a high level of aptitude for the subject will be selected to take Accelerated Triple science which will allow them to gain an extra GCSE, increasing their breadth of curriculum. For those student who have not made the Accelerated group they can still use an option choice to take Triple Science ,or they can choose to stay on the Combined Science pathway.

Accommodation is located on two floors with six fully equipped laboratories and two large preparation rooms. All laboratories are furnished to a high standard and are fitted with interactive whiteboards and desktop computers.

This is an exceptional opportunity for a dynamic teacher to become part of the team. The successful candidate will align to both the school's and the department strategic vision, have a drive and energy to help shape the curriculum and ensure the learning environment is one in which all of our students will thrive.

Mr Stefan Radwanski

Head of Department



Glebelands
Respect and Achieve



Science Department Vision Statement

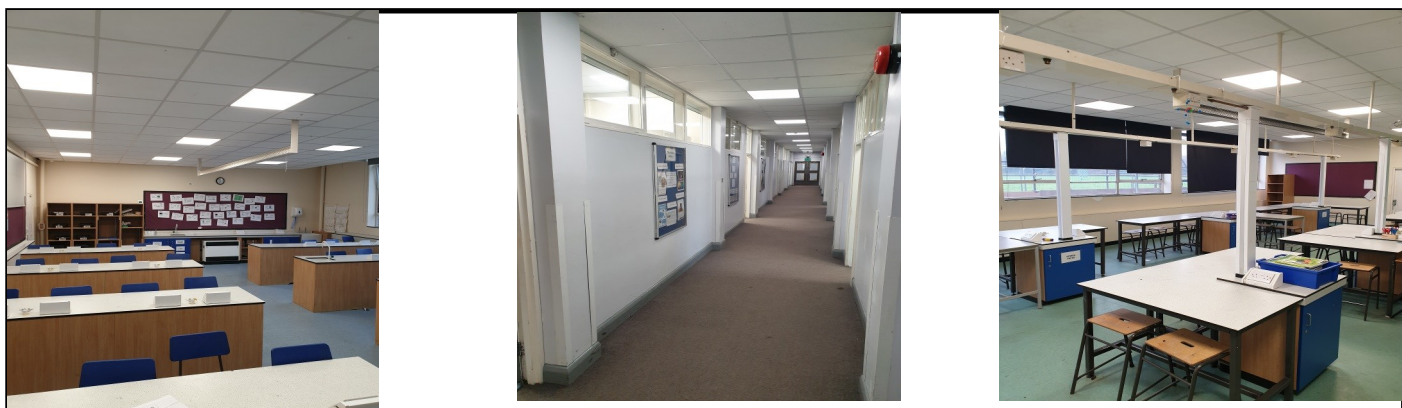
We believe we have a responsibility to produce active members of society and having a strong foundation in the sciences in this ever-changing global environment is key to this. Along with this, we are looking to prepare the scientists of the future, and therefore have a stretching and challenging curriculum to ensure that those students have the correct depth of understanding to progress into a career that is scientifically based. In our science curriculum, we place an equal importance on the development of scientific knowledge and skills. We do this as we believe scientists require a broad-based knowledge of science but alone that's not sufficient because science is dynamic; that knowledge base changes as researchers learn new things. So, to be competitive, you need to be able to critically evaluate the scientific literature, integrate new information into your existing knowledge base, and identify gaps that are ripe for new investigation. In short we believe the delivery of knowledge is important as it underpins many other areas of the curriculum and enables a strong foundation for the future study of science, whether academically or vocationally. The development of scientific skill and literacy are fundamental to our curriculum, as we have to prepare our students to be able to participate in an ever advancing and evolving workplace.

We have made a decision to start the delivery of GCSE material in Year 9. Far from narrowing the curriculum experience for students the rationale is quite the opposite. This process enables our top students to study the science curriculum in depth through taking triple science and have a very broad curriculum overall due to having increased options choices as a result. It also enables all of our students the opportunity access to triple science if they choose and continue with a broader curriculum overall.

The Science curriculum at Glebelands is ambitious and aspirational having been designed to give all learners, particularly the most disadvantaged and those with SEND, the knowledge and cultural capital they need to succeed in life. We will achieve this by giving our students explicit opportunities to develop their depth of understanding and scientific literacy; for example, teaching students about risk with use of the EM spectrum, or dangers of communicable diseases. This allows them to be active members of society that can make informed decisions about their future. Our intent is that building science capital will have a positive effect on our student's lives – not just in terms of encouraging more into STEM jobs, but more importantly to help improve our student's lives and life chances.

It is our purpose in teaching Science to ensure students leave Glebelands being able to:

- Draw upon a breadth of experience and knowledge in all three sciences, which enables them to develop their depth of understanding and relate this to real life applications.
- Have a key knowledge of the fundamental principles and processes in Science, so they can progress in future science qualifications, or in a workplace requiring scientific knowledge.
- Ask questions of the world around them, developing their independence of thought, which has resulted from an engaging and thought provoking curriculum.
- Truly enjoy and be engaged in the subject, which has been fostered by opportunities provided for them in lessons and extracurricular activities.
- Strive for personal excellence and become the best scientists that they can be as we have provided challenging thought provoking lessons that allow this
- Reference to terminology in the school curriculum intent statement
- Key terminology from the school intent statement
- Clear reference and justification as to how the science curriculum aims to develop both knowledge and skill
- The mechanics of curriculum delivery are talked about here. For science this is very important but each subject will have made choices in terms of delivery that will need justifying.
- Clear rationale behind how the science curriculum has an intent to improve the cultural capital of students and how this is achieved.
- Key aims put what we want students to be able to achieve first and then how we achieve this rather than saying what we do and hoping that students then develop as a result. Terminology from the school intent statement forms a fundamental part of the aims.



About the Science Department

The Science Department is over two floors in the North Block building of the school site. We have 6 fully equipped labs with a wealth of equipment and resources available. All labs are fitted with an interactive whiteboard and desktop PC.

The science labs are supported by two prep rooms (1 on each floor).

We offer GCSE's in Science in a number of different ways, Accelerated Triple Science, Option Triple Science and Combined Science; all through the OCR 21st Century Specification.

We also have access to a department staff room where we regularly have meetings or get together for tea and coffee at break and lunchtime.

Department Staff

Teaching:

Mr. Stefan Radwanski (Head Of Department)

Miss Hannah Campbell (PT/ Lead Physics)

Mrs Louise Auty (Lead Biology)

Mr Peter Childs (Chemistry)

Ms Cardia Spence (Biology)

Miss Alexandra Lee-Cardoso (Biology)

Mrs Wendy Ashton (Chemistry)

Technician:

Mrs Cathy Wilson (Lead Technician) Mon, Tues, Thurs, Fri

Facilities

6 fully equipped labs over two storeys., all with desktop PC and Interactive SMART Board.

2 prep rooms (one per storey)





Biology Key Stage 3 and 4 Curriculum

Biology at Glebelands School builds on the fundamental models of Cells and Interdependence as pupils move through the curriculum from year 7 to year 11.

The KS3 curriculum is designed to give pupils a thorough basis of the Biological principles in preparation for the routes taken at GCSE. We have built the KS3 curriculum around the national curriculum and is taken over two years (7 and 8). We have designed the curriculum ourselves however also have a subscription to Kerboodle and Activate resources to support in the delivery.

In KS4 Pupils can take Biology as a separate GCSE along with Chemistry and Physics or as part of the Combined Science GCSE course.

We use the OCR 21st Century Science specification as we feel that this course underpins the principles of our curriculum, in being both an engaging curriculum that is contextualised to make sense of the world around allowing us to prepare our students to be active members of society, as well as develop a thorough understanding of the key concepts in Biology needed to take the course further academically.

Key Stage 4 2022 Results:

Biology

4+ - 95%

5+ - 84%

7+ - 63%

Combined Science

4+ - 67%

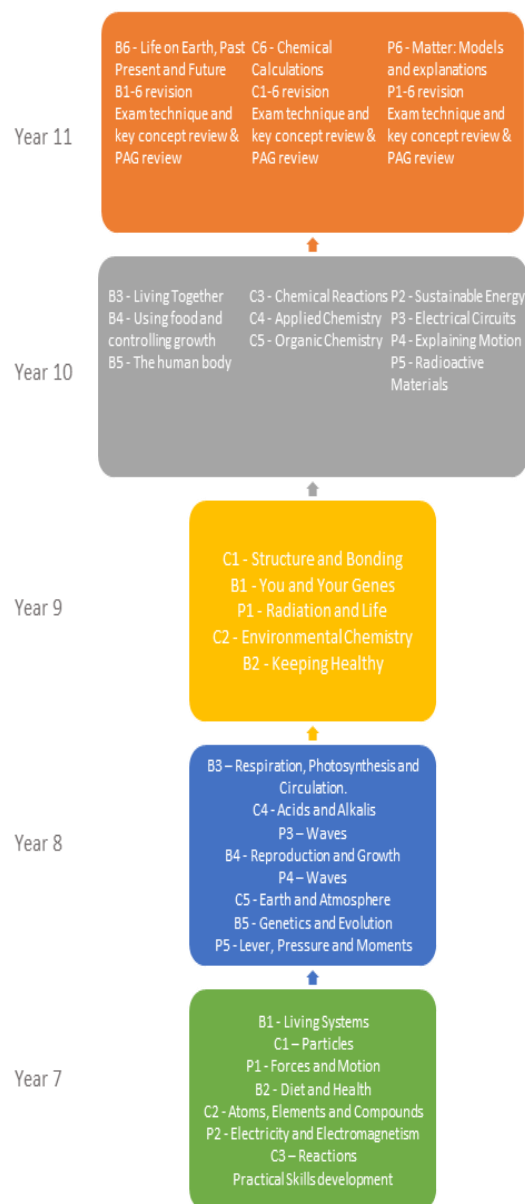
5+ - 44%

7+ - 11%

As most of the top students take Triple science in the school we have a larger difference between the top grades in Triple Science compared to Combined Science. The Triple option however is non selective so we do have a wide ability range of pupils taking this course.



Curriculum Map

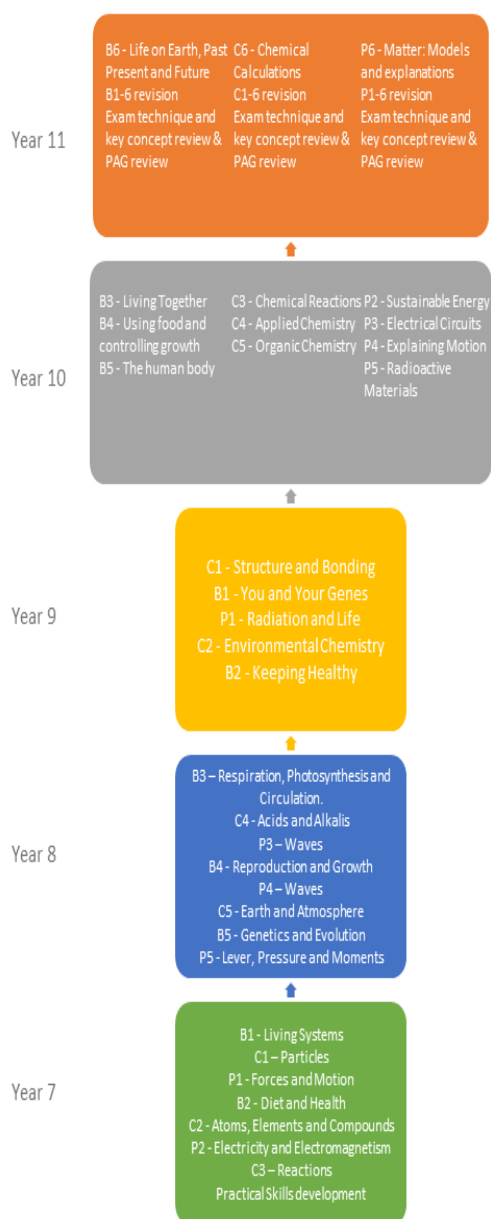




Chemistry Key Stage 3 and 4 Curriculum



Curriculum Map



Chemistry at Glebelands School builds on the fundamental model of Particles as pupils move through the curriculum from year 7 to year 11.

The KS3 curriculum is designed to give pupils a thorough basis of the Chemical principles in preparation for the routes taken at GCSE. We have built the KS3 curriculum around the national curriculum and is taken over two year (7 and 8). We have designed the curriculum ourselves however also have a subscription to Kerboodle and Activate resources to support in the delivery.

In KS4 Pupils can take Chemistry as a separate GCSE along with Biology and Physics or as part of the Combined Science GCSE course.

We use the OCR 21st Century Science specification as we feel that this course underpins the principles of our curriculum, in being both an engaging curriculum that is contextualised to make sense of the world around allowing us to prepare our students to be active members of society, as well as develop a thorough understanding of the key concepts in Chemistry needed to take the course further academically.

Key Stage 4 2021 Results:

Chemistry

4+ - 93%

5+ - 84%

7+ - 54%

Combined Science

4+ - 67%

5+ - 44%

7+ - 11%

As most of the top students take Triple science in the school we have a larger difference between the top grades in Triple Science compared to Combined Science. The Triple option however is non selective so we do have a wide ability range of pupils taking this course.





Physics Key 3 and 4 Curriculum

Physics at Glebelands School builds on the fundamental models of Energy and Forces as pupils move through the curriculum from year 7 to year 11.

The KS3 curriculum is designed to give pupils a thorough basis of the Physical principles in preparation for the routes taken at GCSE. We have built the KS3 curriculum around the national curriculum and is taken over two years (7 and 8). We have designed the curriculum ourselves however also have a subscription to Kerboodle and Activate resources to support in the delivery.

In KS4 Pupils can take Physics as a separate GCSE along with Chemistry and Biology or as part of the Combined Science GCSE course.

We use the OCR 21st Century Science specification as we feel that this course underpins the principles of our curriculum, in being both an engaging curriculum that is contextualised to make sense of the world around allowing us to prepare our students to be active members of society, as well as develop a thorough understanding of the key concepts in Physics needed to take the course further academically.

Key Stage 4 2021 Results:

Physics

4+ - 95%

5+ - 81%

7+ - 54%

Combined Science

4+ - 67%

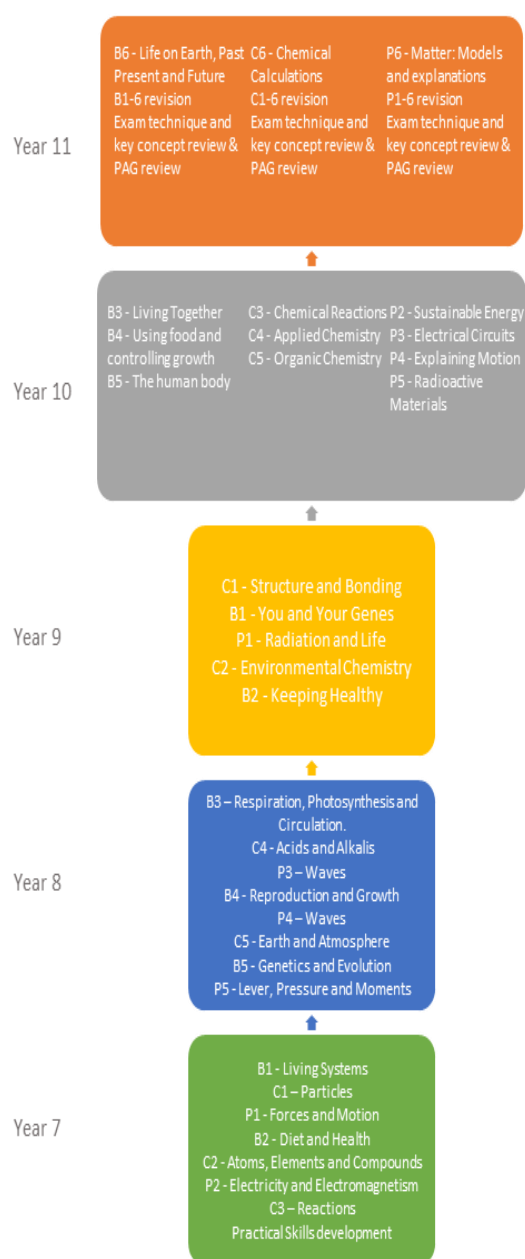
5+ - 44%

7+ - 11%

As most of the top students take Triple science in the school we have a larger difference between the top grades in Triple Science compared to Combined Science. The Triple option however is non selective so we do have a wide ability range of pupils taking this course.



Curriculum Map





What our students said when asked to finish the sentence 'I like Science because....'

'Of the skills we learn from the practicals help to me understand the theory.'

'Science club keeps me entertained and also offers me time to work with new people.'

'There is freedom to explore and discuss topical issues.'

'I love the thinking challenge Science gives me.'

'Science is always fun.'

'Homeworks are set which are creative so I can experience with how to present it. Such as a cake bake cell structure!'

'I am given support when needed to help me understand key concepts.'

'I like Science because of the teachers!'

'I love learning about Science and lessons are always well structured.'

'It is fun and interesting and you learn new things.'

'It lets me learn skills that I wouldn't usually learn in other lessons. It also offers more options for future jobs.'





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