A Level Biology (AQA)

What does this course involve?
The course involves a diverse range of topic areas, essentially the study of living things, from minute bacteria to the enormous blue whale and from tiny algae to a gigantic aspen tree, and the changes that take place between them and their environment. You will complete practical work as an integral part of the course.

What will I study?
- Topic 1: Biological molecules
- Topic 2: Cells
- Topic 3: Organisms exchange substances with their environment
- Topic 4: Genetic information, variation and relationships between organisms
- Topic 5: Energy transfer in and between organisms
- Topic 6: Organisms respond to changes in their internal and external environments
- Topic 7: Genetic, populations, evolution and ecosystems
- Topic 8: The control of gene expression

How is the course assessed?
All topics are assessed at the end of year 13 in 3 written exams for the full A level. Practical skills will be assessed within the written exams as well as a practical endorsement with the full A level.

"It's been a pleasure to study biology at St John Fisher with my biology teachers who are always willing to help and encourage us to continue studying no matter what. One of the most enjoyable topics in Year 12 was studying Gas Exchange in insects and their unique structures allowing them to exchange gases."

Year 12 Student

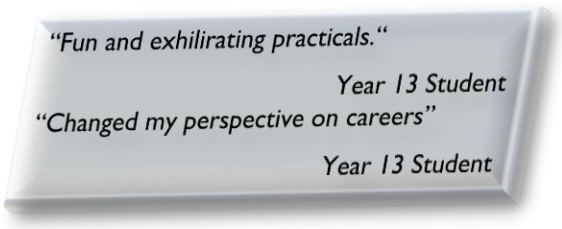
A Level Chemistry (AQA)

What does this course involve?
Chemistry is the study of the properties of the materials in the world around us. The chemist looks at and tries to interpret changes in materials, from the apparently simple, such as the burning of hydrogen, to the more complex, such as reactions in the body. At the same time, the chemist may be interested in energy changes, or how fast a reaction proceeds. Another important aspect is working out the structure of materials and identifying their constituents. The chemist employs his or her skills to use both simple and complex analytical techniques to determine the composition of every kind of substance. Research and development of new materials is a most important part of chemistry. These new materials include drugs, plastics, rubbers and detergents to name but a few. These are just some of the things which chemistry involves; look around you and you will see the work of the chemist everywhere.

What will I study?
The AQA Chemistry course builds upon the principles learnt at GCSE as well as introducing new concepts. Aspects of the three strands of chemistry are studied in year 12 and then developed further in year 13:

- Physical
- Organic
- Inorganic

How is the course assessed?
Students will be assessed by examinations.
There are 3 exams which assess all content, including practical skills.
During the 2 years of study students will also be assessed, in the laboratory, on their practical skill and will have the opportunity to achieve a Practical Endorsement in addition to their A level grade.



A Level Physics (Edexcel) (The King's School)

What does this course involve?
The Physics course at King's is a fantastic opportunity to deepen your understanding of matter, forces and energy. From the ideas behind the Newtons cradle to calculating the age of the universe, you will take part in exciting, interactive lessons where a large proportion of them will be practically based. You will use slow motion tracking software to see how projectiles work, use data loggers to analyse movement, as well using electron deflection tubes to calculate the speed at which the electrons are travelling.

We have a strong team of teachers who are able to use their excellent subject knowledge and experience to deliver engaging and inspiring lessons. Support is not just limited to the classroom as the team are happy to support you both in and out of lessons. Physics is a well-represented A Level in King's with approximately 30-40 students choosing to study it, from a variety of different backgrounds but all with a common interest in finding out about how things work.

Physics is a highly respected A Level. It demonstrates your analytical and mathematical skills which can be applied to real life situations, so studying it opens the door to many different careers from the more traditional routes of Physics, Engineering and Computer Sciences, to Medicine, Mathematics, Finance and Architecture. Even if an eventual career in Physics is not for you the skills you will develop during the course will travel with you to the next stage of your life.

What will I study?

Year 1
- Mechanics
- Electric Circuits
- Materials
- Waves and the particle nature of light

Year 2
- Further Mechanics
- Electric and magnetic fields
- Nuclear and particle physics
- Thermodynamics
- Space
- Nuclear radiation
- Gravitational fields
- Oscillations

How is the course assessed?
2 papers 1¾ hrs and one 2½ hrs.

