

# Chemistry at MSJ Sixth Form



Open a window onto the issues of now and the future... climate change will not be solved by politicians and protests alone, but with research into more energy efficient materials, new catalysts to reduce energy consumption, ways to clean up environmental damage and remove plastics from the ocean and much more.

It is also through understanding Chemistry that new treatments for, not only cancers but also many other conditions including those associated with an older population will be designed and produced. Studying chemistry will help you develop many skills that are highly valued by employers and universities including deduction, logical thinking, communication, applying abstract theory and mathematics to problem solving and practical experimentation.

## **TO STUDY CHEMISTRY AT A LEVEL YOU SHOULD HAVE ACHIEVED:**

Grade 7 or above in Chemistry at GCSE or equivalent and Grade 7 in Mathematics at GCSE. We strongly recommend that A Level students have studied Triple Science or its equivalent. If you wish to study one or more of the sciences at A Level and have taken the Double Science GCSE please discuss this with the relevant Head of Subject.

## WHAT DOES THE COURSE INVOLVE?

You will gain a deeper insight and understanding into topics started at GCSE. You will begin to understand not only what happens in reactions but why it happens and then how can we manipulate what happens to get the desired product, a higher yield, and less waste. The subject is divided into the three main branches of Chemistry, physical, inorganic and organic. In inorganic Chemistry, studying transition metals, you will not only learn about the wonderful range of colours and why these occur but also their power as catalysts and anticancer drugs. In physical chemistry, you will need to bring your mathematical skills to calculations of rates, quantities and energies. In organic chemistry, you will understand how CFCs destroy the ozone layer and make beautiful crystals of aspirin. You will also have the opportunity to complete a STEM Gold Crest Award to carry out original scientific research and enhance your university application.

## IS IT THE RIGHT COURSE FOR ME?

### What skills will I need?

You will need to have a love of learning, an enquiring mind and high expectations of yourself. If you have taken the Double Award Science, you should have an 8-8. Most importantly, you should

love Chemistry, find it interesting and want to learn more.

## WITH WHICH OTHER SUBJECTS DOES IT WORK BEST?

Chemistry is a natural partner with Biology, especially if you wish to study a medically related course in the future. It also works very well with Mathematics, which will support the necessary calculations. Physics is another complimentary A Level.

## WHAT ARE THE POSSIBLE CAREER PATHWAYS?

Chemistry facilitates almost any course at University from Law to Mathematics, but careers in medically related areas, Veterinary Science, Pharmacy, Materials, Chemical Engineering, Environmental Science and Forensics and research are some of the more popular.

Students with A Level Chemistry are highly sought after and recent leavers have followed courses in Medicine, Biomedical Engineering, Biomedical Sciences, Biochemistry, Mathematics, Psychology, Geography and Environmental Sciences.

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## HEAD OF SUBJECT

**Miss T Phillips**

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## TWITTER

**@MSJ\_STEM**

## EXAM BOARD

**AQA**

## HOW IS IT ASSESSED?

This is an A Level only course.

The external examinations take place at the end of Y13. There are three written two-hour papers.

Practical work will be assessed in the written papers. 15% of the total A Level marks will be for practical knowledge and understanding.

A separate, ungraded endorsement of practical work will be assessed by teachers.