

## Broadening Horizons

Our intent is that all students have a full understanding of how to develop themselves as well rounded citizens, maintain healthy relationships and understand how to keep themselves safe both online and in their day-to-day life. We want all students to know what options are open to them in the future and understand the routes they have in order to progress on their life journey.

Our curriculum includes:

- Links with local industries and national organisations, innovative external speakers, events and resources
- Opportunities for students to visit University Science Departments
- Science based activity days
- First hand fieldwork

## Careers

We run a series of 'Careers in the Curriculum' weeks in our school. For Science, this week takes place in January.

Students take part in a number of activities to encourage them to think about how what they learn in the classroom can be applied in a number of future careers.

## Immerse Yourself



Access with your Google account



The WPT Science Study Lounge website offers students a place to find help, support and opportunities to further develop their understanding of Science.

Students can visit using the link below and explore the activities, videos, quizzes and exam questions designed to help them succeed in Science.



Access with your Google account



Read about Science in the news, latest scientific discoveries and find out more about the possible careers in Science by visiting the WPT digital science magazine 'Science in Focus'.

## Praise and Reward

Our rewards system can be broadly split into four categories: classroom level, subject level, school level and privilege rewards. We'll focus on classroom and subject rewards here - for more information about our rewards schemes, please see our website.

### CLASSROOM LEVEL REWARDS

**Awarded for:** working hard, taking risks and rising to a challenge, making mistakes and learning from them, helping others, and taking pride in the school community.

**Rewarded by:** praise postcards, positive phone calls to parents/carers, positive text messages home, and lesson based prizes.

### SUBJECT LEVEL REWARDS

**Reward scheme:** star of the week, curriculum awards (Subject/School Way, participation, working with pride, embracing the whole curriculum), high flyer, extra mile, most improved.

**Rewarded by:** names displayed on reward boards, certificates, social media posts.

## Contact



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## The Royal Society

Independent Scientific Academy of the UK, dedicated to promoting excellence in Science for the benefit of humanity.



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SCIENCE  
Curriculum Newsletter  
YEAR 11



# Curriculum Intent

The Science curriculum is inclusive and ambitious for all students, designed to engage students and strengthen the memory of what is being learnt.

The curriculum is organised into 12 Big Ideas that are developed through a series of key concepts organised into teaching topics which are revisited throughout the KS3, 4 and 5 programmes of study.

The Science curriculum is planned to build increasingly sophisticated knowledge of the products and practices of Science.

# Year 11 Curriculum

In Year 11 students will learn about the following key ideas delivered in smaller units of study.

## Homeostasis and Response

Students will learn about the control systems that the human body has to achieve these optimal conditions.

## Inheritance, Variation and Evolution

Students will discover how the number of chromosomes are halved during meiosis and then combined with new genes from the sexual partner to produce unique offspring.

## Ecology

Students will look at the delicate interactions between living and non-living things within ecosystems.

## Energy Changes

Energy changes are an important part of chemical reactions. Students will learn about endothermic and exothermic chemical reactions.

## Organic Chemistry

Students will learn about carbon fuels, including how they are extracted and

refined and their uses.

## Chemistry in the Atmosphere

The Earth's atmosphere is dynamic and forever changing. Students will look at the causes of these changes, including man-made and natural cycles.

## Using Resources

Students will explore chemical reactions that are all around us and used in industrial processes and investigate the rate and extent of chemical changes.

## Energy

Students will learn about how industries use the Earth's natural resources to manufacture useful products and how we can minimise the use of limited resources.

## Forces

Students will carry out calculations and investigations involving forces.

## Waves

Students will learn about the structure and properties of waves, including the use of electromagnetic waves.

## Magnetism and Electromagnetism

Students will be learning about the properties of magnets and their uses in electromagnets, including motors.

# Assessment Points

Students are assessed at the end of each unit of study. Students will also complete mini mocks and mock exams covering paper 2 content.

# THE SCIENCE WAY



WE MAKE LINKS BETWEEN BIG IDEAS IN SCIENCE

We can make observations  
**describe what we see &**

We can explain  
everyday things  
in a scientific way

We work safely &  
look out for hazards

We can work practically  
with people  
with different skills  
& knowledge

We can learn from successes & failures  
**and adapt to do things better**

WE EVALUATE EXPERIMENTAL RESULTS IN LIGHT OF THE ORIGINAL PROBLEM

We use scientific  
vocabulary  
accurately &  
talk like a  
scientist

We can use numbers and data to support  
our work and obtain meaningful  
**information**

We can identify key issues in  
a problem and use our  
scientific knowledge to tackle them

WE ALWAYS ASK QUESTIONS AND TRY TO FIGURE OUT WHY



SUBJECT WAYS

# Have your say!

At WPT we're always looking for feedback. If you have any thoughts/opinions on this Curriculum Newsletter, its content or the curriculum in general, please scan the QR code to fill out a short feedback form.



# The Science Way

The Science Way is followed in all of our lessons. It is designed to help students become young subject specialists and has two main purposes: to teach students the vital skills needed to achieve their full potential, and to demonstrate how Science relates to the wider world.