

## 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



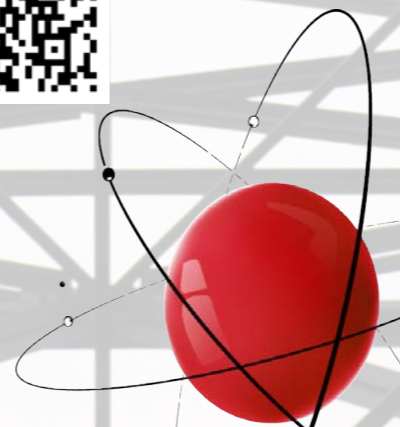
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## The Royal Society

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 10**





# 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 10 Curriculum

In Year 10 students will learn about the following key ideas delivered in smaller units of study.

## Cell Biology

We will explore how structural differences between types of cells enables them to perform specific functions.

## Organ Systems

We will learn about the human digestive system and the respiratory system in more detail.

## Bioenergetics

We will explore how plants harness the Sun's energy in photosynthesis and how both animals and plants use this oxygen.

## Infection and Response

We will learn how we can avoid diseases by reducing contact with them, and how the body uses barriers against pathogens.

## Atomic Structure and the Periodic Table

We will learn about the periodic table and how it aids chemists with the known chemical elements.

## Bonding, Structure and the Properties of Matter

We will learn about how chemists use theories of structure and bonding to explain the physical and chemical properties

## Chemical Changes

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

## Energy

We will learn about energy changes in systems including calculations. We will also look at the use of fossil fuels and global warming.

## Electricity

We will learn about series and parallel circuits and the domestic uses of electricity including the role of the national grid.

## Particle Model of Matter

This is widely used to predict the behaviour of solids, liquids and gases, we will learn about this model and its applications in everyday life.

## Atomic Structure

We will learn about the structure of the atom, the development of the atom and nuclear decay.

# 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



BICKERSLEY  
PARTNERSHIP  
TRUST

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.



# Assessment Points

Students are assessed at the end of each unit of study. Students will also complete mini mocks and mock exams covering paper 1 content.

# 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.