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SCIENCE

YEAR 8 Curriculum Newsletter

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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. We aim to spark a lifelong passion for science by cultivating a sense of wonder and awe about the natural world.

Our curriculum intends to foster a spirit of curiosity and inquiry, encouraging students to ask questions and seek answer and connect science to their everyday lives, demonstrating its relevance and importance. Throughout the science curriculum we aim to equip students with essential scientific skills, including observation, data collection, analysis, and critical thinking. Students will be provided with opportunities for engaging in hands-on practical work, encouraging exploration and experimentation.

The Science curriculum also provides opportunities for students to explore the ethical and societal implications of scientific advancements. It encourages critical thinking about global challenges, such as climate change and sustainability, and helps nurture responsible attitudes towards the environment and living organisms.

Year 8 Curriculum

Get ready to unravel the mysteries of the Universe and dive into the burning questions that ignite scientific discovery. Be the master of observation, measurement, and data analysis. We'll explore the tools of the scientific trade and learn how to interpret the clues they reveal. Get ready to conduct thrilling experiments, build your own scientific models, and turn data into dazzling discoveries!

In Year 8 you will study 6 topics in science linked to the 12 big ideas, click the topics below to explore BBC Bitesize information on these KS3 Science units...

Waves

Get ready to surf the thrilling waves of science in this KS3 unit! You'll become a wave whisperer, a master of motion, and an underwater detective as we plunge into the world of these fascinating physical phenomena. Waves everywhere: Discover waves in all their glorious forms, from the crashing ocean surf to the rhythmic ripples in a pond. We'll explore sound waves that rock your world, light waves that paint the rainbow, and even seismic waves that shake the Earth!

The Periodic Table

Ready to crack the code of the universe's ultimate cheat sheet? Buckle up, because this KS3 unit will transform you into an elemental explorer, a periodic table party animal, and a master of material magic! Get ready to unleash the power of the Periodic Table. See how understanding the Periodic Table unlocks the secrets of our world! We'll explore how elements are used in everything from medicine and technology to cooking and cleaning. Discover how scientists use the Periodic Table to create new materials, solve environmental challenges, and even send rockets to Mars!

Organ Systems: The Grand Tour

Embark on a whirlwind journey through your own body, exploring each organ system like a unique wonderland! From the brain's control center to the heart's pumping power station, from the lungs' air filtration factory to the digestive system's recycling plant, each system has a vital role to play in the grand symphony of life.

Matter

Discover how the same tiny building blocks, called atoms, can arrange themselves in countless ways to create materials with totally different properties! We'll explore the fascinating world of solids, liquids, and gases, seeing how they can bend, flow, and even change state, defying your expectations of reality!

Acids and Alkalis

This KS3 unit will transform you into an acid alchemist, a pH detective, and a fizz-tastic force of nature! Get ready to explore the exciting world of acids and alkalis, the invisible forces that can make things bubble, change colour, and even dissolve your lunch! Meet the fizzy duo of acids and alkalis, the chemical opposites that create an electrifying world of reactions!

Plants and Photosynthesis

All life on Earth need plants to live. Discover the incredible inner workings of plants, from their root systems that drink like tiny straws to their leaves that act as solar panels. We'll peek inside plant cells and meet the chloroplasts, the tiny green factories where the magic of photosynthesis happens

Big Questions in Year 8 Science

- How do elements form the Periodic Table? Is there a hidden pattern, and can we predict the properties of undiscovered elements?
- Can chemistry solve real-world problems? Can we use chemistry to clean up pollution, purify water, or develop new medicines?
- How does the human body work? Unravel the mysteries of cells, organs, and tissues, and witness the symphony of processes that keeps us alive.

Assessment Points

Students are assessed at the end of each topic, roughly once per half term. Assessments are online and include short and long answer written questions and multiple choice questions. Students will also sit two written summative assessments during the year, assessing accumulative knowledge.

Immerse Yourself

BBC Bitesize Science

- Videos
- Quizzes
- Revision Tools

Educake Science Platform

- Interactive Homework
- Study Guides
- Independent Study

Students also have access to the online quizzing platform Educake. Every question is auto-marked, and students get instant feedback. Students can set themselves quizzes for more practice. They can see how they are doing on every topic and can identify areas to revise based on their progress.

Test Your Knowledge...

EducationQuizzes KS3 Science quizzes are a fantastic way to memorise relevant scientific terms to help you with your studies. Click the computer to start!

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.

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.

Students can also develop their science skills and knowledge further by visiting Science Museums and half term events with family or friends. There are lots of Science Museums all across the UK you can visit, click on their logos to find out what science experiences they can offer you!

Thinktank Science Museum - Birmingham

Thinktank offers an exciting day out for all the family, whatever your age. Whether it's discovering the history behind Birmingham's very own Spitfire, learning more about giant prehistoric sea monsters or exploring the outer reaches of space, there is something for everyone in our hands on science museum. Click on the logo for more information!

thinktank
Birmingham science museum

Thackray Museum of Medicine - Leeds

Immerse yourself in our imaginative and exciting galleries, from the history of healthcare to the advances that have shaped the way we look after ourselves, and each other. Click on the logo to find out more!

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. In Year 8, we start to look more in depth at careers in science including unsual careers that students might not expect are career options.

Check out our 'Careers in the Curriculum' section on our website by clicking the flask...

Why Choose a Career in Science?

Many students struggle to think of more than a handful of scientific careers so this animation from the Royal Society, aimed at students aged 11 to 16, demonstrates the wealth of scientific subjects that can be accessed beyond school, and the excitement that a career in science can bring.

Click on their logo below to watch the clip now.

THE ROYAL SOCIETY

Get Interactive

Wonderlab+ from the Science Museum group is a fantastic interactive resource for all science lovers! Watch videos and test your knowledge, get creative with their make and do activities or learn more about space and our world with their fun interactive website. Click on their logo to visit their website now.

WONDERLAB+

Science Study Lounge

Ditch the dull and dive into the Wickersley Partnership Trust Science wormhole! Buckle up for a science safari where you'll blast off to the Galapagos, crack museum mysteries, and become a science superhero, all without leaving your seat!

- Snorkel with sea iguanas on a VR mission to the Galapagos? We're talking 360° views of volcanoes, giant tortoises chilling, and Darwin's finches chirping your way to epic discoveries!
- Crack the code at the National History Museum? Hunt for missing dino bones, decipher ancient scrolls, and solve scientific puzzles like a real-life Indiana Jones!
- Become a citizen scientist with weekly challenges? Build the greatest bridge ever, whip up erupting volcanoes in your kitchen, and win bragging rights (and maybe even prizes!) as the top science sleuth!

Keep an eye out for guest appearances from real-life scientists who'll spill the beans on their mind-blowing research and answer your burning questions. Access by clicking on the Science Study Lounge title!

The Science Way

Our subject has a 'Subject Way' at the heart of it. Our Subject Way is designed to help students become young subject specialists. The Subject Way has two main purposes:

Firstly, to teach students the vital skills they need to achieve their full potential and gain the very best grades they can. Secondly, to teach students how each subject relates to the wider world, incorporating the life skills they will learn. 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.

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.