



Edition 4
January
2024

SCIENCE

Curriculum Newsletter

YEAR 7

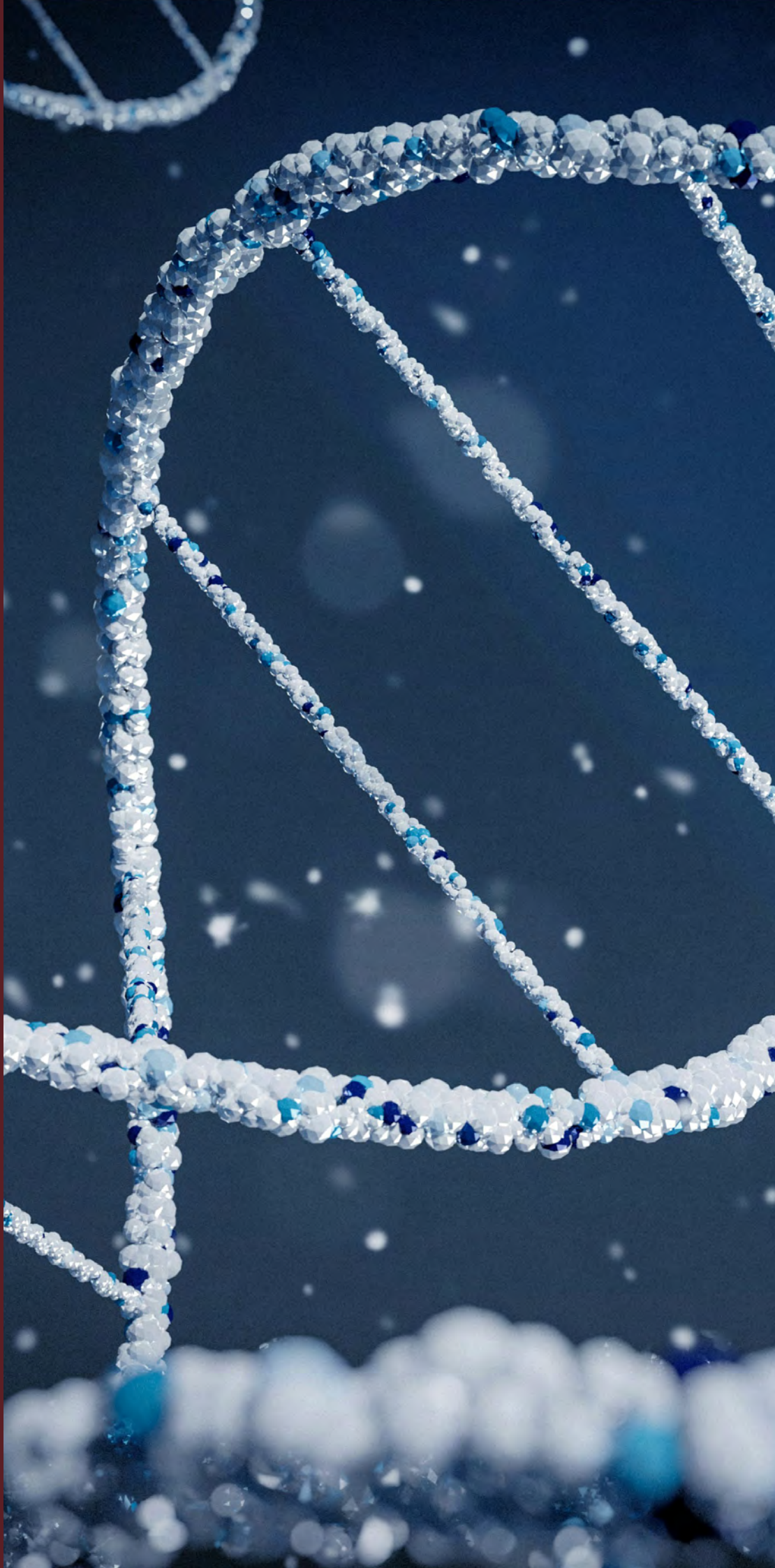
Contact



David Frith
WPT Science
Subject Director
dfrith@wickersley.net



Jonathan Schofield
Clifton Head of Department
jschofield@cliftonschoool.org



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 7 Curriculum

Unleash your inner scientist. Calling all curious minds and budding Einstein's! KS3 Science is your gateway to a world of wonder, discovery, and endless possibilities. But where do you begin? How can you transform from a science student into a confident and thriving scientist?

In Year 7 you will explore 6 topics linked to the big ideas in Science, click the topics below to explore BBC Bitesize information on these KS3 Science units...

Cells and Systems

Get ready to shrink down to the size of a speck of dust and embark on an epic adventure into the world of cells, the building blocks of all living things! In this unit, students become a cellular sleuth, unlocking the mysteries hidden within cells.

Matter and State Changes

Dive into the dazzling world of matter. Witness mind-blowing transformations! You'll become a master of materials, unravelling the secrets of solids, liquids and gases, and witnessing the mind-blowing transformation that happen when they change state.

Forces and Motion

Buckle up, blast off, and uncover the Universe's secrets: Your journey to mastering forces and motion! Ever wondered why rockets soar, skateboards slide and eagles glide in breeze. You'll be a gravity-defying detective, a friction-busting engineer and a speed loving scientist, uncovering the invisible forces that rule our world.

Reproduction and Variation

The miracle of life. Journey through the awe-inspiring world of reproduction, from the fascinating dance of plant pollination to the complex processes of animal fertilization and development discovering how new life springs into existence! We'll peek inside cells, unravelling the mysteries of variation, the spice that makes life so diverse.

Elements, Compounds and Mixtures

Ready to shrink down to the size of an atom and explore the building blocks of everything around you? Buckle up, because this KS3 unit on elements and compounds will transform you into a master chemist, unlocking the secrets of the tiniest titans in the universe!

Energy

Get ready to ignite your curiosity and fuel your imagination with this electrifying KS3 unit on energy, the driving force behind everything in the Universe! From the sparkling glow of a light bulb to the thrilling rush of a rollercoaster ride, energy is everywhere, and in this unit, you'll become a master of its mysteries.

Big Questions in Year 7 Science




1. What defines life? From bacteria to blue whales, what common threads tie together the immense diversity of living things?
2. What is everything made of? From your phone to the air you breathe, how do tiny atoms and molecules build the vast universe?
3. Why do things move? From falling apples to soaring rockets, what forces govern motion, and how can we predict and control them?

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

WPT Y7 Science Study Lounge

-  Videos
-  Quizzes
-  Exam Practice

Educake Science Platform

-  Interactive Homework
-  Study Guides
-  Independent Study

The WPT Science Study Lounge offers students a place to find help, support and opportunities to further develop their understanding of Science. Students can visit by clicking to the left and explore the activities, videos, quizzes and exam questions designed to help them succeed in Science.

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...

Quizlet's Y7 Science revision flashcards 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.

Just some of the things our curriculum includes to broaden our students horizons:

- Science based activity days to engage and enthuse students in STEM subjects, including The Big Bang STEM day. This year's competition will focus on "How can renewable energy solve the energy crisis". Students will be challenge to design and build solutions that could power our planet for generations to come
- KS3 Science Club - A fantastic opportunity for students to get hands on with science. Watching slime erupt, building mini volcanoes, and concocting invisible inks are just some of the activities students can get involved with

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!

RAILWAY MUSEUM

National Railway Museum & Wonderlab - York

Learn more about the science and engineering behind the history of the railways and visit the Wonderlab interactive experience at the Bramall Gallery to explore more exciting scientific engineering experiments.



Magna Science Adventure Centre - Rotherham

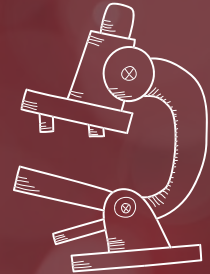
Magna Science Adventure Centre is a hands-on experience. Explore the wonders of Science and Technology in the four pavilions - Air, Earth, Fire & Water! They regularly hold science based workshops during half term, you can find out more by clicking on their logo below.

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 7, we go beyond the stereotypical lab coat image. Showcasing real-life scientists from various fields including environmental scientists analysing ecosystems, marine biologists studying coral reefs, engineers designing prosthetic limbs, or geneticists researching cures for diseases.

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



STEM Careers

Science is the key to unlocking a variety of rich and varied career pathways.

STEM (Science, Technology, Engineering and Maths) education focuses on practical learning, to develop the necessary skills in students so they're prepared for the rapidly-developing real world.

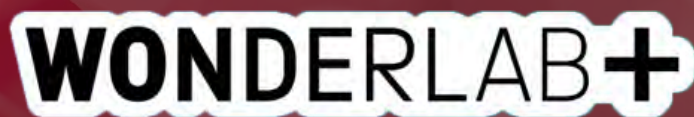
Click on the logo below to find out more about what STEM career paths are available for your future in a career in science.



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.



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.

THE SCIENCE WAY



WE MAKE LINKS BETWEEN BIG IDEAS IN SCIENCE

We can make observations
describe what we see

We work safely & look out for hazards

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

We use scientific vocabulary accurately & talk like a scientist

We can explain everyday things in a scientific way

We can work practically
with people with different skills & knowledge

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

WE EVALUATE EXPERIMENTAL RESULTS IN LIGHT OF THE ORIGINAL PROBLEM



WICKERSLEY 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.