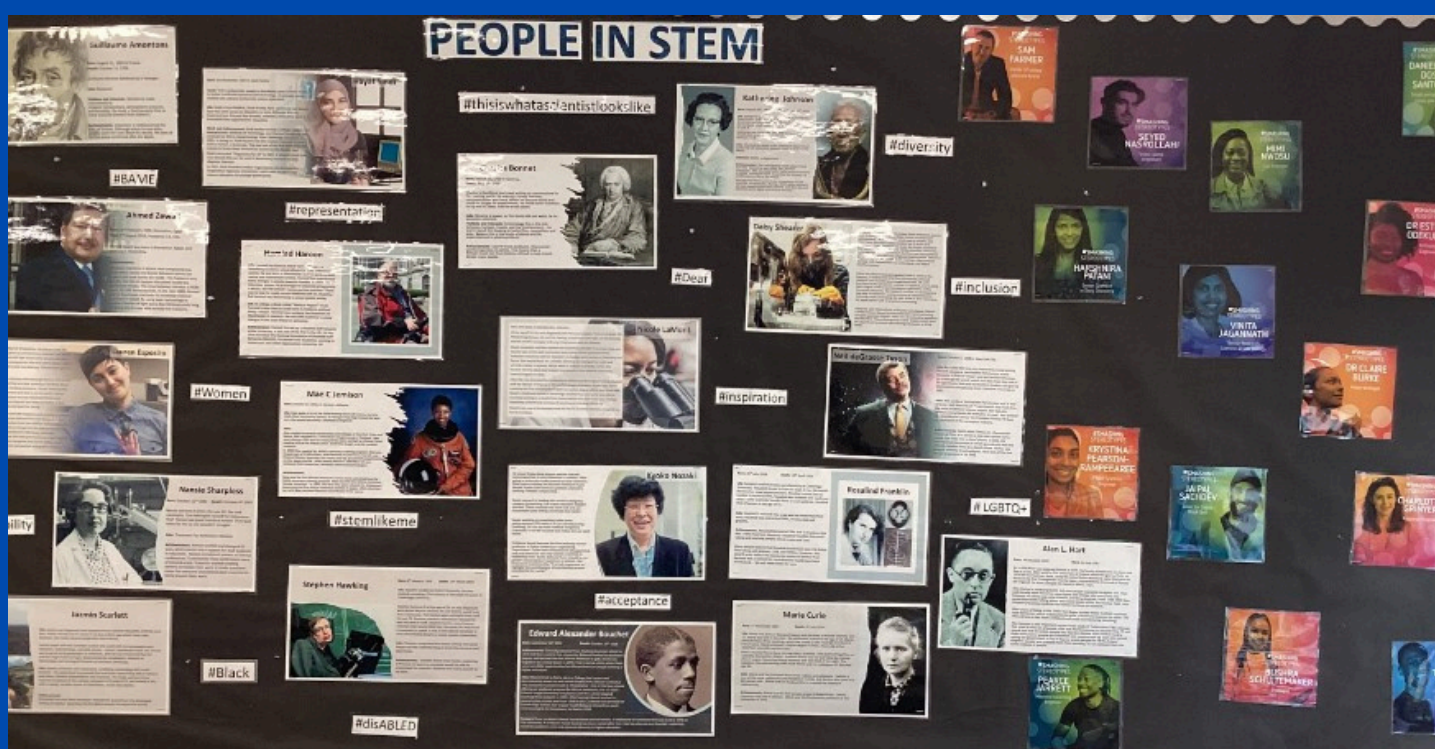




Science Curriculum

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Science at Blanche Neville

"SCIENCE IS AT THE FOREFRONT OF SHAPING AND CHANGING THE WORLD WE LIVE IN."

At Blanche Neville School, our Science curriculum is uniquely designed to meet the needs of deaf learners while developing curiosity, critical thinking, and real-world application. We deliver an ambitious and inclusive science education that enables every student to access, enjoy, and succeed in science, regardless of their starting point.

What sets us apart is our commitment to delivering a fully accessible, language rich, and visually engaging curriculum that empowers deaf students to become confident scientific thinkers. Through careful adaptation, expert teaching, and a deep understanding of our learners, we ensure science is a subject where students can explore, experiment, and excel.

We believe science is for everyone. Deaf learners have the right to explore the natural world, engage with scientific thinking, and gain qualifications that open doors to future learning and careers. But we also recognise that traditional science teaching often relies heavily on spoken explanation, technical vocabulary, and assumed prior knowledge.

At Blanche Neville, we intentionally design our science curriculum to:

- **Bridge the language gap** by using visual, hands-on, and bilingual teaching methods.
- **Build cultural capital** by introducing scientific figures, themes, and issues from a wide range of backgrounds and perspectives.
- **Develop transferable skills** such as enquiry, analysis, communication, and problem-solving.
- **Empower students** to be curious, independent thinkers with the confidence to ask questions and test ideas.

Pathways Through Science

WE OFFER A RANGE OF PATHWAYS TO SUIT OUR LEARNERS' NEEDS AND PROVIDE BOTH BREADTH AND DEPTH

Pathway	Description	Qualification
Foundation Skills Pathway	Long-term progression through Unit Awards	AQA Unit Awards (Y7–11)
Bridge Pathway	Builds from UAs to Entry Level over 3 years	AQA UAs → OCR ELC
Accelerated Bridge Pathway	A faster route to Entry Level for growing independence	AQA UAs → OCR ELC
Supportive Access Pathway	Modified KS3 route with Unit Awards or ELC	Activate → UAs → OCR ELC
Entry Focus Pathway	Activate topics targeted toward AQA ELC	Activate Science → AQA ELC
Stepping Stone to GCSE Pathway	Combines ELC with GCSE preparation	AQA ELC + GCSE Combined
Biology Focus Pathway	For students strongest in biology	AQA ELC + GCSE Biology

Each route is designed with progression in mind, allowing students to build success step by step and move confidently toward higher levels of achievement.

Assessment for Learning and Growth

Assessment for Learning and Growth

We assess students using a combination of:

- **Formative strategies** (e.g. questioning, feedback, practical tasks),
- **Summative tools** (e.g. Unit Awards, end-of-topic reviews, mock exams),
- **Tracking systems** (e.g. BSquared Connecting Steps, internal tracking sheets).

This ensures teachers can:

- Accurately monitor progress,
- Identify and close gaps in knowledge,
- Adapt teaching responsively,
- Guide students along the most appropriate learning pathway.

Students are also encouraged, where appropriate, to reflect on their own learning, make connections, and apply skills across subjects and in everyday life.

At Key Stage 3

At Key Stage 3, students are grouped according to their communication profiles and prior attainment in science. All groups follow a spiral science curriculum built around the KS3 National Curriculum, adapted to meet the needs of deaf learners. Lessons are delivered bilingually in British Sign Language (BSL) and English, with a strong focus on developing scientific vocabulary, visual understanding, and enquiry skills.

Students study key topics across Biology, Chemistry and Physics, such as cells and organisms, chemical changes, energy, forces, and Earth sciences. Learning is broken into manageable steps and concepts are revisited regularly to strengthen memory, understanding, and confidence. Practical investigations, visual models, and real-world examples are used throughout to develop students' ability to think scientifically and apply knowledge to everyday life.

From Year 7 onwards, students begin to follow a bespoke science pathway, matched to their stage of learning. These pathways allow for early accreditation through the AQA Unit Award Scheme, giving students the opportunity to celebrate and record achievements at their own pace. Each pathway is designed to support smooth progression into the right qualification route in Key Stage 4.

The pathways introduced in KS3 include:

- **Foundation Skills Pathway** – long-term development through AQA Unit Awards (Y7–11)
- **Bridge Pathway** – Unit Awards with a view toward OCR Entry Level in KS4
- **Accelerated Bridge Pathway** – faster movement through Unit Awards, preparing for ELC in Year 9
- **Supportive Access Pathway** – based on Activate KS3 content, with flexibility to switch between Unit Awards and ELC
- **Entry Focus Pathway** – students use Activate topics with a view toward Entry Level assessment from Year 9
- **Stepping Stone Pathway** – for students showing early potential to access GCSE-level content in KS4
- **Biology Focus Pathway** – identifies learners with strengths in Biology for future GCSE Biology focus

Each student's pathway is flexible and reviewed regularly to ensure it continues to meet their evolving needs and strengths.

At Key Stage 4

At Key Stage 4, students continue along the science pathway that began in Key Stage 3. These tailored routes ensure that all learners are working toward meaningful accreditation and that they are well-prepared for post-16 study, vocational courses, or further science qualifications.

Students may continue earning AQA Unit Awards as they deepen their knowledge, or move into formal qualifications such as:

- **OCR Entry Level Certificate in Science (Entry Levels 1–3)**
- **AQA Entry Level Certificate (Double Science) (Entry Levels 1–3)**
- **GCSE Combined Science (AQA)**
- **GCSE Biology** (AQA – for students following the Biology Focus Pathway)

All qualifications are carefully scaffolded with bilingual teaching, pre-teaching of vocabulary, and practical science activities to maximise accessibility and engagement. Small class sizes and high adult-to-student ratios allow for highly personalised learning and ongoing assessment of progress through:

- BSquared Connecting Steps
- Internal tracking and review
- Regular formative and summative assessment

Where appropriate, students may complete more than one qualification (e.g. Entry Level and GCSE), giving them the best possible foundation for success beyond Blanche Nevile.

At Key Stage 3

Science Curriculum Map 2025-2026

KS3 Class	Autumn Term		Spring Term		Summer Term	
Year 7A	<u>Physic:</u> Seasonal changes and weather	<u>Chemistry:</u> Rocks	<u>Chemistry:</u> Everyday materials Uses of everyday materials		<u>Biology:</u> Animals	Working Scientifically STEM Focus
Year 7B	<u>Physic:</u> Seasonal changes and weather	<u>Chemistry:</u> Rocks	<u>Chemistry:</u> Everyday materials Uses of everyday materials		<u>Biology:</u> Animals	Working Scientifically STEM Focus
Year 8A	<u>Physic:</u> Light	<u>Biology:</u> Humans	<u>Chemistry:</u> States of matter		<u>Biology:</u> Animals	Working Scientifically STEM Focus
Year 8B	<u>Biology:</u> Animals and Living things and their habitat	<u>Chemistry:</u> Rocks <u>Physics:</u> Seasonal changes and weather	<u>Biology:</u> Evolution and inheritance	<u>Biology:</u> Plants	<u>Chemistry:</u> Properties and changes of materials	<u>Physic:</u> Electricity
Year 8C	Biology Component 1 - The human body Assessment: ESA and TDA	Physic Component 5 - Energy, Forces and Structure of matter Assessment: ESA and TDA	Chemistry Component 3 - Elements, mixtures and compounds Assessment: ESA and TDA	Biology Component 2 - Environment, evolution and inheritance Assessment: ESA and TDA	Physic Component 6 - Electricity, magnetism and waves Assessment: ESA and TDA	Chemistry Component 4 - Chemistry in our world Assessment: ESA and TDA
Year 9A	<u>Physic:</u> Electricity	<u>Physic:</u> Seasonal changes and weather	<u>Physic:</u> Forces and magnets		<u>Chemistry:</u> Everyday materials Uses of everyday materials	Working Scientifically STEM Focus
Year 9B	<u>Physic Component 5</u> - Energy, Forces and Structure of matter Assessment: ESA and TDA	<u>Chemistry Component 3</u> - Elements, mixtures and compounds	<u>Chemistry Component 3</u> - Elements, mixtures and compounds Assessment: ESA and TDA	<u>Biology Component 2</u> - Environment, evolution and inheritance	<u>Biology Component 2</u> - Environment, evolution and inheritance Assessment: ESA and TDA	<u>Physic Component 6</u> - Electricity, magnetism and waves

At Key Stage 4

KS4 & Pathway	Autumn Term		Spring Term		Summer Term	
Year 10A	<u>Physic:</u> Earth and Space	<u>Chemistry:</u> States of matter	<u>Biology:</u> Humans Reproduction: Pants rule		<u>Biology:</u> Animals	<u>Biology:</u> Living things and their habitat
Year 10B	<u>Chemistry</u> Physical or chemical change – using the particle model End-of-item tests	<u>Biology:</u> Fooing your senses – sight, smell, taste, touch and reflex reactions Body wars – human immune system End-of-item tests	<u>Chemistry</u> CSI plus – forensic science PAG C3 – Separating technique <u>Physics</u> Fly me to the moon – rockets and the solar system End-of-item tests	<u>Physics</u> Final frontier – astronomy and astrophysics <u>Biology</u> Babies (reproduction) – human reproduction End-of-item tests	<u>Biology</u> Gasping for breath – human respiration and respiratory diseases Casualty – human circulatory system End-of-item tests	<u>Biology</u> You can only have one life (look after it) – digestive system and drugs PAG B3 – Rates of Enzymes Creepy crawlies – ecosystems and fieldwork PAG B2 – Sampling technique End-of-item tests
Year 11A	<u>Physic:</u> Earth and Space	<u>Chemistry:</u> States of matter	<u>Biology:</u> Humans Reproduction: Pants rule		<u>Biology:</u> Animals	<u>Biology:</u> Living things and their habitat

11B	OCR <u>Chemistry:</u> Sorting out – purifying mixtures <u>Biology:</u> Fooing your senses – sight, smell, taste, touch and reflex reactions End-of-item tests GCSE B3 Organisation and the digestive system B4 Organising animals and plants B5 Communicable diseases B6 Preventing and treating disease	OCR <u>Biology:</u> Body wars – human immune system Babies (reproduction) – human reproduction End-of-item tests GCSE B7 Non-communicable diseases B8 Photosynthesis B9 Respiration B10 The human nervous system B11 Hormonal coordination B12 Homeostasis in	OCR <u>Biology:</u> You can only have one life (look after it) – digestive system and drugs Creepy crawlies – ecosystems and fieldwork End-of-item tests GCSE B13 Reproduction B14 Variation and Evolution B15 Genetics and Evolution B16 Adaptations, Interdependence and competition	OCR <u>Physics:</u> Attractive forces – magnetic fields and electromagnetism <u>Chemistry:</u> Acids and alkalis – acidity and alkalinity in everyday science End-of-item tests GCSE B16 Adaptations, Interdependence and competition B17 Organising an ecosystem B18 Biodiversity and ecosystem	OCR Course completed GCSE Exam Focus 12th May Paper 1 (pm)
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