



Science Subject Handbook 2022-23

My name is Steve I have been the science teacher at Talbot House for the last 5 years. I am also the staff governor, as the staff governor, I am able to offer an insight to the trustees and other governors what it is like to teach at Talbot House. I am supported by Lynda learning support assistant.

Science offers a mixed approach to learning, practical lessons, equipping pupils with the ability to work scientifically, enquiring minds to question results and formulate conclusions. We follow the national curriculum for Key Stage 3 which is a three year learning cycle. In Key Stage 4 we follow the AQA specification which is a two-year course resulting in a GCSE Combined Science Trilogy qualification, double award.

By the end of year 10 all pupils complete the AQA Entry Level Certificate (this comprises of 3 practical investigations and a 20 question exam in Biology/Physics and Chemistry) before continuing with their GCSE studies if appropriate.

For pupils who are not entered for a GCSE we combine the ELC (Entry Level Certificate) with AQA single award (entry level 1-3) providing certificated evidence of vocational skills and working scientifically based skills.

Our KS3 science syllabus has 10 key topics which shows progression through creating engaging lessons, promoting teaching for understanding. It outlines what our pupils need to know in a logical order of objective. Then apply these skills scientifically allows pupils to be challenged to extend their knowledge. We use the knowledge learnt in years 7, 8 and 9 to reinforce progression in Key Stage 4.

Assessment

We base line test all pupils on entry using AQA transition tests depending on the ability of the pupil..

At the start of each topic, a link to career opportunities is introduced, giving each pupil the knowledge to enquire and develop the thinking skills needed to develop their preparation for adulthood. Through our planning and delivery we are constantly encouraging pupils to meet their social and emotional needs both in class and during social time.

Our aim is to build resilience and prepare every pupil for adulthood, offering support as they mature from teenagers to young adults.

At Key Stage 3 we use summative and formative assessment to support progress, in a variety of ways. We can then identify gaps and enable development towards recognised educational outcomes.

All zones are baselined using the Rising Stars assessments for science. This allows fluidity when transitioning between zones.



We use; Emerging, Secure, Developing or Mastering as an indicator of where the pupil is in the Key stage, this shows us small progression points for each pupil. At KS4, we assess their progress and estimate a predicted GCSE grade the pupil is working towards and capable of achieving.

Half termly assessments are completed and tracked on the PLCs (personalised learning checklists), this allows us to identify gaps, small steps in progress and topics that need revisiting to consolidate.

Whole school marking

we use the whole school marking policy where teachers mark in green pens LSA use a purple pen and pupils respond in red. We carry out live marking as much as possible so pupils can get instant feedback. Deep feedback is completed at the end of a topic or formal assessments.

Subject Mapping

Incorporating ICT into as many lessons as possible gives pupils the opportunity to build further skills. Real world life skills such as research, fact finding will support pupils understanding of the fast-changing world of science.

Leading group discussion with open questions will encourage pupils to think about the world of science. PHSE is a prominent part of human biology and allows preparation for adulthood to be part of science, topics can be expanded on in greater depth at the same time as the key principles are being taught. Below is a snapshot of how we map other skills through science.



Green Zone - Science

Mapping to show evidence of Diversity, Careers, British Values, SMSC (Spiritual, Moral, Social & Culture development), Literacy, Numeracy and Reading in our curriculum area.

Key Stage	Diversity	Careers	British Values	SMSC	Literacy	Numeracy	Reading
KS3 Autumn 1	Animal and plant cells/Classifying materials. We will cover the enormous variation of plants and animals and how they have adapted to living in the environment they do. This shows how species meet their needs and adapt to overcome and survive	The start of every lesson has a learning objective with a signpost to a career associated with that day's subject outcome.	Animal and plant cells/Classifying materials. Have an insight into why we classify living and non-living things. Understand the positive relationship between the living worlds.	Animal and plant cells/Classifying materials. Consider the importance of science discoveries and how they affect our daily lives. What could be the effect of losing types of plants and animals due to human interference?	Animal and plant cells/Classifying materials. Word banks are provided for some worksheets. Key words for topic and lessons highlighted. Miss spelling of scientific words corrected, but a maximum of 2 words (to start with) are written out as corrections	Animal and plant cells/Classifying materials. Prefix terms for size of an object varies from atomic level to universal size. Magnification when using microscopes. Graph work using appropriate scales.	Animal and plant cells/Classifying materials. Comprehension style worksheets making the pupil read a piece of information. Pupils read out aloud information from a power point on the white board