# Science Policy

**Rationale**

At Wybunbury Delves we aim to 'light the spark for a love of learning and of life' and believe Science is a subject which offers the very best opportunities to achieve this. We work practically wherever possible to foster and maintain children's curiosity in the world around them. '

Wybunbury Delves
C of E Primary School

*Equipped with his five senses, man explores the universe around him and calls the adventure Science.'* **Edwin Powell Hubble**

**Our Curriculum Intent:** At Wybunbury Delves, we follow the National Curriculum statements for Science closely. Therefore our intent for doing so aligns with the rationale behind the Science Curriculum within the National Curriculum itself, which is that: 'A high-quality Science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of Science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse causes.'

Science at Wybunbury Delves aims to develop a fun, practical and engaging high-quality curriculum that inspires the next generation to succeed and excel in science. We do this through fully adhering to the aims of the national curriculum and fostering a healthy curiosity and interest in the sciences. At the heart of our progressive science curriculum is scientific investigation. Wherever possible we intend to deliver lessons where children learn through varied systematic investigations, leading to them being equipped for life to ask and answer scientific questions about the world around them. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills. We ensure that the "Working Scientifically" skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments and investigation, building arguments and explaining concepts confidently, being familiar with scientific terminology and, most importantly, to continue to ask questions and be curious about their surroundings.

**Our Curriculum Implementation:** The acquisition of key scientific knowledge and vocabulary is an integral part of our science lessons. The progression of skills for working scientifically are developed through the year groups and scientific enquiry skills are of key importance within lessons. Our medium term plans allow for carefully planned, progressive units to be taught.. At Wybunbury Delves, teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

• Science will be taught in planned, and arranged, topic blocks by the class teacher. Our strategy is to enable all children to be catered for through adapted planning suited to their abilities


• We plan for problem solving and real life opportunities that enable children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating practical, engaging lessons with opportunities for precise questioning in class to test conceptual knowledge and skills at the start and the end of a unit

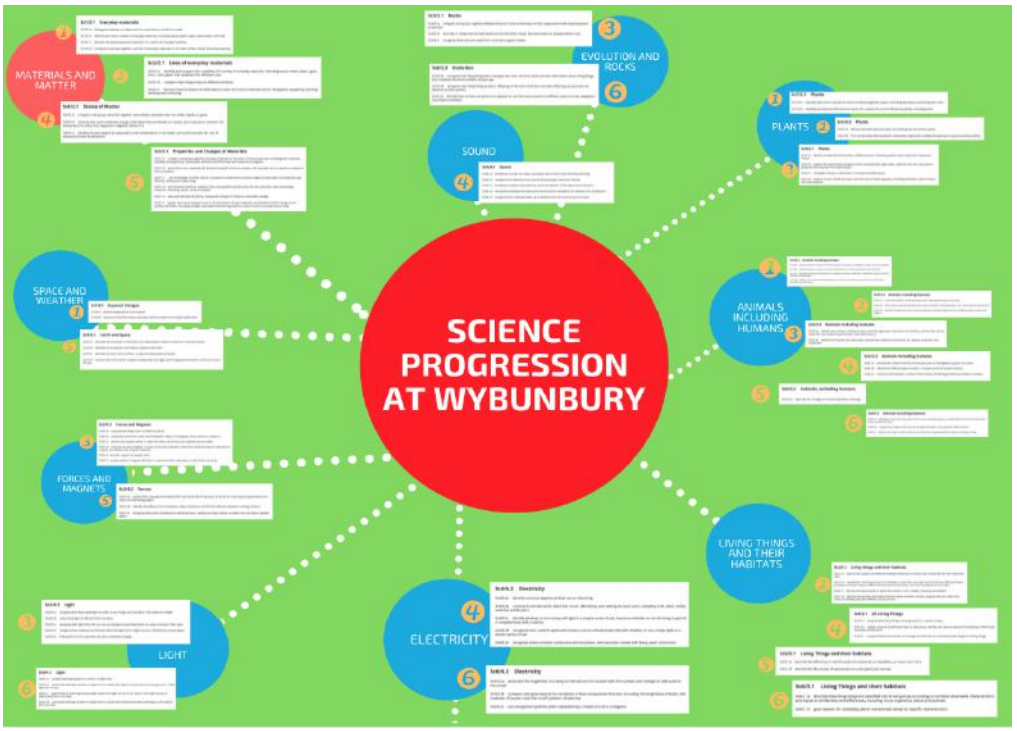
• Our curriculum is progressive. We build upon the learning and skill development of the previous years, which is tested through our ‘pre-learning quizzes/cold tasks’ where teachers can identify misconceptions that need addressing.
• Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children’s school career, and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in keeping with the topics
• Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children’s understanding of their surroundings by accessing outdoor learning and workshops with experts
• Through enrichment days, such as ‘science week’ and Hi-Impact sessions, we promote the profile of Science and allow time for the children to freely explore scientific topics. Science trips, where appropriate to the unit, will also take place.

**Our Curriculum Impact:** The impact and measure of our Science curriculum is to ensure children not only acquire the appropriate age related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

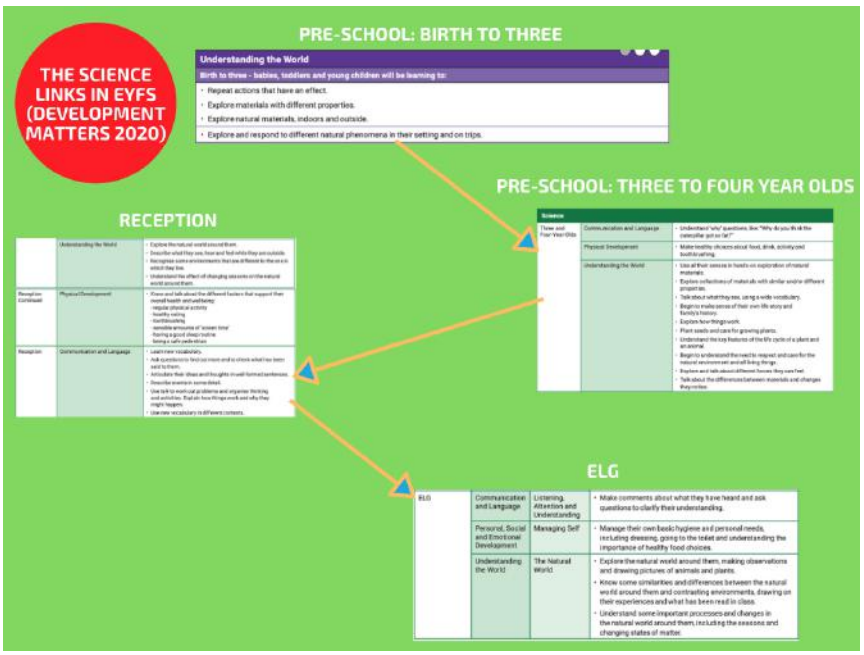
All children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable them to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.

**<u>Curriculum & School Organisation</u>** (including time allocation)




Coverage of Science in each year group is integrated where possible into termly Study Work plans. Medium term planning is incorporated into termly holistic plans. Planning for learning and a sample of learning outcomes can be evidenced through staff planning documentation, smart board files, website news, children's books (including Study Work Books) and the SeeSaw Science folder. We aim to teach Science as part of a broad and balanced curriculum. We seek every opportunity to develop Science with cross curricular links to Maths,English, Computing and Design and Technology and any other subject when suitable. See 'Working Scientifically Skills Progression' document and the 'Science Subject Overview Table' for further detail. We aim to teach the equivalent of one hour of science per week in each key stage (or the equivalent cumulatively during a half term). In addition to this, we seek every opportunity to develop science with cross curricular links, with our Study Work Books exemplifying this *(Science is linked to study work topics where possible. However, where links might be considered tenuous, it will be taught as a discrete subject.)*



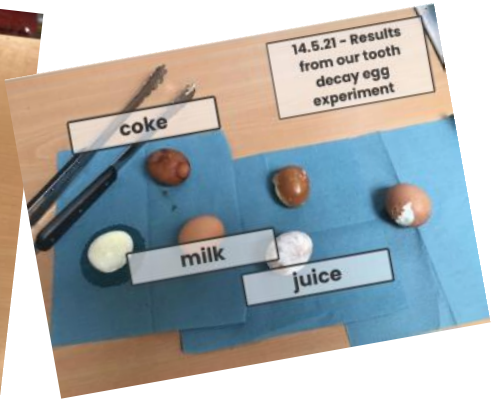
## Equality and Inclusion

All pupils regardless of gender, cultural heritage, race, colour, nationality, ethnic origin, religion or special needs, will be given the opportunity to experience and acquire skills according to the National Curriculum. We believe that we should aim to create an environment in which all children learn to respect and value each other and each other's interests. This can be achieved by employing the following strategies:

- Mixing groups in terms of gender and ability.
- Setting suitable learning challenges.
- Structuring activities so all are fully involved. For instance, all children must have a 'job/role' within an activity to ensure everyone takes part and is involved.
- Responding to the diverse learning needs of pupils.
- Overcoming potential barriers to learning and assessment for individuals and groups.
- Considering the needs of children with physical or learning difficulties and taking the necessary steps (by enlisting extra help, adapting equipment or differentiating tasks) to ensure they have equal access to the curriculum.
- Giving all the children an opportunity to share their work. For instance, allowing time at the end of a lesson for the whole class to perform a role play, share their ideas or work with the class.
- Recognising the need to extend and provide a greater challenge for more able pupils.

## Curriculum Risk Assessment

Staff are asked to use professional judgment with regard to pupil safety in individual lessons. Where it is deemed necessary, individual lesson risk assessments will be completed. The pro forma for this is in the Subject Leader folder on the t:drive. All staff have copies of the CLEAPSS guidance and access to the school Curriculum Health and Safety Guidance in the head teacher's office.

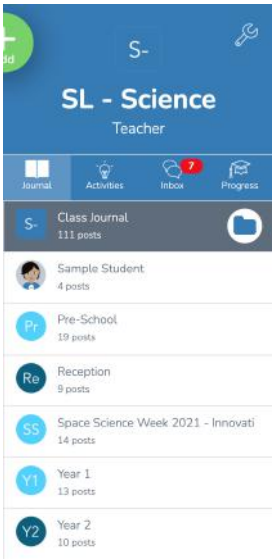




## COVID19 Build

## Upon Curriculum

***March 2020 - July 2020 - Lockdown***

Due to the COVID19 pandemic and the amount of time children had out of school, inevitably some topics within our Science curriculum could not be taught. Through careful planning via our long term plans, we have ensured that no topic will be missed, and that all children will have the opportunity to experience the full science curriculum.
Before a new unit is taught in Science, the class teachers will use the Long Term Plans to check any missed coverage and plan accordingly to ensure any gaps are bridged. Due to the cyclical nature of the Science curriculum, it will take two school years for all areas of Science to be covered.




***January 2021 - March 2021 - Lockdown***

To ensure as little learning was missed as possible. We carefully considered which topics would be covered during the latest lockdown. Each unit of work was selected based upon the needs for a particular class. For example forces and magnets was a unit missed by the current Year 4 class in the previous lockdown, and was delivered through home learning via the Oak Academy lessons and SeeSaw in this latest lockdown. Medium term plans were created for all units “taught” throughout the January 2021 - March 2021 lockdown.

**Date reviewed: June 2021 -** *MDale*