At Priory, we flourish in Science by working TOGETHER!

Our Christian Vision and Values underpin everything that we do: they help to guide us in our learning and our life, both now and beyond!

Priory CE Academy Science – Design, Delivery and Outcome Statement

Design (Intent)

We believe 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, as well as teaching working scientifically skills, 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, raise questions and analyse causes. The Hive**,** our C&I specialist provision, follows the full National Curriculum in step with whole-school long-term plans and adapts teaching to EHCP targets so every pupil can 'be the best that they can be!'

Underpinned by:

High expectations: At Priory, children are encouraged to 'be the best that they can be' and we expect children to live this in science, as in all areas of school life. This is supported through the secrets of success and recognising children's efforts through the use of positive reinforcement and praise, resulting in dojos.	**Questioning:** Learning at Priory, is rooted in questioning that the children build upon to further their understanding. Children are encouraged to ask questions, which can be further investigated and fuel their love of learning, and understanding of the world.	**Knowledge:** Pupils will explore, develop and understand a range of scientific knowledge based upon biology, chemistry and physics, through to the national curriculum making purposeful links and connections. In **The Hive**, the same content is taught with structured routines, visual supports and small-step objectives aligned to EHCPs.
Science Capital: At Priory, the pupils will develop a strong understanding of 'science capital' by showing an understanding of how science links to the real world. This is encouraged through effective teaching and understanding how the science they learn today, links to their jobs of the future.	**Topic specific vocabulary:** Children will be exposed to and taught specific scientific vocabulary in line with the national curriculum and Grammasaurus Science curriculum. This curriculum has been selected due to its structure, which allows children to develop and embed their knowledge.	**Working scientifically and enquiry types:** Pupils at Priory are further exposed to a range of enquiry types and working scientifically skills. These are ensured though tasks designed in the Grammasaurus curriculum, and are taught alongside subject content objectives. In The Hive, enquiry is retained (observing, predicting, testing, concluding) with sensory investigation, simplified recording and repeated key vocabulary.

Delivery (Implementation)	**Lesson sequencing:** Lessons are designed sequentially, with each lesson building on prior knowledge and understanding. This is designed through the use of the Grammasaurus curriculum. The Hive mirrors whole-school sequences, with small steps explicitly mapped to EHCP next steps.	**Subject specific resources:** High quality resources are sourced and found in order to deliver engaging and purposeful lessons with scientific knowledge, questioning and investigation at the heart. Resources in **The Hive** include sensory-friendly equipment, visual supports and clearly defined workspaces to reduce cognitive load.	**Curriculum enrichment:** Learning in science is extended through trips, visitors and chances to extend their learning outside of the classroom. Enrichment is planned with sensory considerations so The Hive pupils participate confidently alongside peers.
	Ipad learning (KS2): Digital learning through the use of Ipads has been developed this year, enabling children to access learning in a variety of ways. At Priory, we are keen to explore the use of Ipads and integrating them to allow all children to access and talk and think like scientists. In The Hive, iPads also enable alternative recording (photos/audio/symbols) and vocabulary rehearsal.	**Enhancement and digging deeper:** Children are given the opportunity to access all tasks at a variety of levels and extend their learning further through a range of extension tasks, to further their knowledge and ensure that learning is secure.	**Building on previous knowledge:** As with the sequence of lessons, children will have the opportunity to discuss and build upon learning from previous years and explore where their previous learning fits in with their new learning and further learning.
	Opportunities for discussion: Thinking and talking like a scientist is key when developing further concepts, and this is embedded all the way through the school from EYFS, into KS1 and then through to KS2.	**Pre-topic assessments:** Children take part in purposeful Pre-topic assessments to assess children's prior learning and understanding before a sequence of learning takes place. These questions are linked to the questions that the children will answer during their sequence of learning, and objectives. The Hive uses oral/visual pre-assessments linked to EHCP targets to inform adaptation.	**Science celebrated:** Science Week and competitions are planned inclusively so The Hive pupils can access and celebrate science with their peers. The school will then take part in science activities through the week and competitions to raise the profile of science across Priory.
	Post topic assessments: Through the development of the use of the cumulative assessments to assess the learning of the children, staff will have a more informed view of the children's knowledge.	**Vocabulary progression:** Through the use of the progression document, staff can be informed of what language the children understand and remember once they have been taught it within their year group.	

Outcome (Impact)		
	The science curriculum at Priory is based upon the Grammarsaurus curriculum, which encompasses all the science national curriculum objectives, rooted in a working scientifically approach. The skills and knowledge that are taught through the curriculum, allow for scientific thinking to take place in a meaningful and inspiring setting. Pupils are taught the content of biology, chemistry and physics and allowed to explore this through their learning. Questioning and investigation runs as a golden thread throughout our school from early years, through to Y6, and it is through this that children are able to draw their own conclusions, investigate, question further and think deeper. For The Hive, progress is evidenced through adapted assessments, practical enquiry outcomes and increasing independence with key vocabulary.	
	Outcomes: We all aim for the children to be at the expected level based upon the cumulative assessment charts from Grammarsaurus; with some children achieving greater depth knowledge and being able to discuss key learning with confidence and understanding. Targets for The Hive pupils align with EHCP objectives while maintaining equality of ambition.	**Monitoring:** Monitoring includes Showbie/books, pupil and staff voice, and **termly** reviews between the Science Lead, SENCO and The Hive team to quality-assure planning, teaching and assessment. Monitoring is also done through pupil voice and staff voice through the use of forms termly and allows the science lead to see where science is being taught well and the concepts that are being covered and what staff need to achieve positive outcomes in their lessons. Coaching is also provided to ensure that staff are delivering science lessons that improve outcomes, engage learners, promote scientific thinking and inspire future scientists.
	Creating scientific thinkers: At Priory, we believe in in the power of questioning, and with children who question, we create children who have the ability to think. Therefore, in the subject of science we believe in creating scientific thinkers, by allowing children to question, answer, and access learning at their level and through a variety of engaging and inspiring lessons.	**Scientific knowledge and skills:** Through following the progressive Grammarsaurus planning, pupils are able to build upon their scientific knowledge and demonstrate this through discussion and evidence in the work that is produced. Pupils are given multiple opportunities to demonstrate their scientific skills by completing a range of different investigations and experiments. These will address all of the different enquiry types and working scientifically skills.

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TOGETHER!