COURTWOOD PRIMARY SCHOOL
Nurturing Knowledge; Learning for Life.
Respect Resilience Aspiration Kindness

Curriculum Statement: Science

"Scientists have become the bearers of the torch of discovery in our quest for knowledge." Stephen Hawking
'The important thing is to never stop questioning' Albert Einstein

The Courtwood Curriculum Intent and Offer					
National Curriculum: Pupils learn the knowledge and skills required of them to be academically successful, building on their individual starting points.	**Inclusion:** Pupils value diversity and demonstrate tolerance, compassion and mutual respect to all members of the school and wider community, whilst developing the life-skills needed to unlock their potential.	**Nurture:** Pupils build their confidence, self-esteem and resilience, developing strategies which enable them to effectively safeguard their well-being.	**Outdoor Learning:** Pupils understand and take responsibility for their influence in living healthy lifestyles, and supporting the planet to be sustainable, both now and in the future.	**Responsibility:** Pupils have an awareness of their own impact on their future and how they can contribute positively to wider society.	**Enrichment:** Pupils access experiences and opportunities which develop aspirations and broaden the horizons of life-long learning.

Intent, Implementation and Impact in Science

Intent **(What will take place before teaching in the classroom? What do we want our children to know and be able to do?)**	**Implementation** **(What will this look like in the classroom?)** ***school focus – retrieval & vocabulary***	**Impact** **(How will this be measured?)**
• It is our intention for science to develop in all children a lifelong curiosity and interest in the sciences, which contributes to their personal development and ability to contribute in the future to the advancement of the sciences. • Children are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. The	• **A Science Programme of Study** is used to deliver learning in line with the National Curriculum expectations for Science. • The **school grounds** are used to support the delivery of science lessons, in all year groups. • All children develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics. • Children develop **understanding of the nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them.	• Progress in science is measured through a child's ability to know more, remember more and explain more. This includes both subject specific knowledge and scientific enquiry skills. • Children will be able to speak confidently about their learning in science and use their books to support explanations of what they have learned.

acquisition of key scientific knowledge is an integral part of our science lessons. • When planning our science curriculum, we intend for children to have the opportunity, wherever possible, to learn through varied investigations, leading to them being equipped for life to ask and answer scientific questions about the world around them. • As children progress through the year groups, they build on their skills in working scientifically, as well as on their scientific knowledge, as they develop greater independence in planning and carrying out fair and comparative tests to answer a range of scientific questions. • Each science unit taught, has an accompanying knowledge organiser which can be used to help reinforce the key knowledge for each unit as set out in the science national curriculum, as well as additional vocabulary. • Our science roadmap ensures children have a varied,	• **Key vocabulary*** is explicitly taught to children as part of quality- first teaching. Specialist scientific vocabulary is clearly modelled on knowledge organisers. • **Knowledge Organisers*** enable children to learn and retain the key vocabulary and basis of expected knowledge contained within each unit and are used throughout lessons, guided and independently, at home and at school. • The **progression of skills for working scientifically** are developed through the year groups and scientific enquiry skills are of key importance within lessons. Specifically identified are the skills of observing over time, pattern-seeking, identifying, classifying and grouping, comparative testing and research using secondary sources. • **Scientific knowledge and enquiry skills** are developed with increasing depth and challenge as children move through the year groups. They complete investigations and hands-on activities while gaining the scientific knowledge for each scientific unit. • **Sequences of lessons** help to embed scientific knowledge and skills, with each lesson building on previous learning. There is also the opportunity to regularly review and evaluate children's understanding. Learning will be recorded in science books. • Authentic learning links are made to the **wider curriculum**, that revisit and help secure knowledge in the long-term memory, for example making electrical circuits in DT. • **Foundational knowledge** is planned for, to fill gaps in children's cultural capital and ensure children have a	• Children who feel confident in their science knowledge and enquiry skills will be excited about science, show that they are actively curious to learn • more and will see the relevance of what they learn in science lessons to real-life situations and also the • importance of science in the real world. • Children will speak about science lessons and learning with enthusiasm and more will leave primary school with a positive experience of and enthusiasm to continue studying science at secondary school. • Whole-school and parental engagement with science as a subject discipline, will be improved through the use of science-specific home learning tasks and shared use of knowledge organisers. • Pre and Post Learning Challenges (progress from a baseline activity at the start of the unit of learning) will reflect

progressive and well- designed science curriculum that provides the opportunity for progression across the full breadth of the Science National Curriculum for EYFS, KS1 and KS2.	broad range of experiences of the world, to be able to make sense of new learning and build existing schema. • **Displays** in classrooms and around the school reinforce learning from the science curriculum.	progression of knowledge, skills and understanding.

Key Stage Coverage Summary, including Discipline

	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Reception						
Year 1	Animals including Humans *(Biology)*		Everyday Materials *(Chemistry)*		Plants *(Biology)*	Seasonal Changes (across the year) *(Physics)*
Year 2	Living Things and Habitats *(Biology)*	Everyday Materials *(Chemistry)*	Animals including Humans *(Biology)*		Plants *(Biology)*	
Year 3	Plants *(Biology)*		Rocks *(Chemistry)*	Light *(Physics)*	Forces and Magnets *(Physics)*	Animals including Humans *(Biology)*
Year 4		Animals including Humans *(Biology)*	States of Matter *(Chemistry)*		Living Things and Habitats *(Biology)*	Electricity *(Physics)* Sound *(Physics)*
Year 5	Properties and Changes of Materials *(Chemistry)*	Forces *(Physics)*		Earth and Space *(Physics)*	Living Things and Habitats *(Biology)*	Animals including Humans *(Biology)*

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Year 6	Animals including Humans *(Biology)*	Electricity *(Physics)*	Evolution and Inheritance *(Biology)*	Living Things and Habitats *(Biology)*		Light *(Physics)*