Cheriton Bishop Primary School
Science Curriculum Plan

Our curriculum statements are designed to be used as a supportive tool to plan teaching and learning across our school. The key skills are derived from the National Curriculum and spilt into individual year groups to support a progressive approach and our mixed age classes.

We believe that Science permeates every aspect of our lives, from the technology we use on a daily basis to the natural world around us that sustains life on earth. Igniting children's curiosity and passion to question and deepen their knowledge and understanding is central to our role as Science leaders. We believe that through Science, we can support the development of problem solving, critical thinking, evaluating and communicating that can be applied to the everyday challenges they face. We believe that igniting a passion in Science will give children the tools they need to discuss and debate global issues that will impact their lives and prepare them for a changing future.

We believe that our lessons should be rooted in exploration and development of ideas from one lesson to the next, so they can build on their previous learning creating a solid foundation of knowledge. We believe practical experiences should be meaningful and rigorous and lead children to question what they have done and where they should go next. We believe that Science should be inclusive and create experiences where everyone can take part.

Vocabulary

Children's command of vocabulary is fundamental to learning and progress across the curriculum. Vocabulary is developed actively, building systematically on pupil's current knowledge and deepening their understanding of etymology and morphology (word origins and structures) to increase their store of words. Simultaneously, pupils make links between known and new vocabulary, and discuss and apply shades of meaning. In this way, children expand the vocabulary choices that are available to them. It is essential to introduce technical vocabulary which define each curriculum subject. Vocabulary development is underpinned by an oracy culture and a tiered approach. High value is placed on the conscious, purposeful selection of well-chosen vocabulary and appropriate sentence structure to enrich access to learning and feed into written work across the curriculum.

Science is taught throughout Key Stage 1 and 2 and this is planned using a 2 year rolling programme in each curriculum phase to ensure complete curriculum coverage and progression of skills. We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.

A positive and encouraging classroom environment can be found across all Key Stages. Children's questions are always welcomed, and they are given the opportunity to explore new ideas as well as test them. They are provided with problem solving opportunities that allow children to find out for themselves by asking their own questions and given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated in the classroom.

We want children to be encouraged to think and talk like scientists and build on their 'science capital'. Each term purposefully-planned 'science days' are planned to celebrate science, the world around us, topical issues such as climate change and to offer opportunities to take part in national events such as 'British Science Week'.

Working Scientifically skills are embedded into lessons, taught alongside the knowledge objectives to ensure these skills are being developed throughout the children's school career. New vocabulary and challenging concepts are continuously introduced through direct teaching. This is developed through the years, in-keeping with the topics.

In order to provide suitable learning opportunities for all children, teachers ensure that they use a variety of strategies to accommodate different learning styles. Links to other curriculum areas

are made, for example the use of data tables and graphing scientific results for maths as well as using measuring equipment and reading scales. When writing in science it is expected to be of high-quality just as it is in English and the science vocabulary taught for each topic are expected to be used in their planning, recording and explaining.

The National Curriculum

Our Science programme delivers the National Curriculum for Key Stages 1 and 2. Full details of the National Curriculum can be found here: Science programmes of study: key stages 1 and 2

Our rolling programme

	Autumn	Spring	Summer
Reception			
	Marvellous Me (TBC)	Animal adventures	Growing and changing
Throughout the year	• Changing seasons		
Year 1 and 2			
Cycle A	Plants – Intro	Living things and their habitats	Plants and growth
	Forces and space	Animals – Life cycles	Making connections
Cycle B	Animals – sensitive bodies	Materials – everyday materials	Living things – microhabitats
	Animals including humans – comparing animals	Materials – uses of everyday materials	Making connections
Year 3 and 4			
Cycle A	Energy – light and shadows	Materials and states of matter	Forces and magnets
	Animals – movement and nutrition	Animals – digestion and food	Making connections
Cycle B	Energy – electricity	Energy and sound/vibrations	Plants – reproduction
	Materials – rocks and soil	Living things – classification and	Making connection s

		change in habitats	
Year 5 and 6			
Cycle A	Materials: Mixture and separation	Forces: Earth and space.	Energy: light and reflection
	Materials: properties and changes	Animals and humans: circulation and health	Making connections
Cycle B	Living things life cycles and reproduction	Forces and unbalanced forces	Living things and their habitats: evolution and inheritance
	Energy: circuits battery and switches	Living things and their habitats: classifying big and small	Animals including humans: evolution and human timeline.

Progression of skills

This document details how the knowledge and skills progress through the year groups: Progression of Skills.pdf

In order to assess impact - a guide

At the beginning of each unit an assessment of prior knowledge is carried out via an elicitation task. This may take the form of an assessment proforma, a discovery activity, a knowledge download page or a video of children talking about what they already know. In many cases, a combination of these methods is used. At the end of each unit of work, assessments are also recorded on the Science Lead's assessment document to enable monitoring of progress against the objectives.

During each teaching unit, teachers use AFL to pick up on misconceptions that occur during the lesson. These are often addressed on the spot and explored through oracy or if marking is after the fact, a silent starter might be used at the start of the next lesson. Teachers also assess children's working Scientifically skills during the lesson and look for areas that require further development. A final judgement for working scientifically is only made at the end of the year when children have had the opportunity to explore all aspects of the investigation cycle and had the opportunity to make these skills more substantive.

The progress of children with SEND who find writing and communication a barrier to completing a written assessment are assessed using a prior knowledge video and end of unit video recording where they have an opportunity to express and explain their knowledge and understanding. From this, the teacher is able to make a judgement of progress achieved from the beginning to the end of the unit.

There is an expectation that work in Science books will be the same quality as that in English books with regard to presentation. Marking of the Science books is at the same standard as marking of other writing across the curriculum. The focus for spelling corrections is on Science vocabulary words and the expectation is that children who are ARE will spell these correctly throughout their Science writing