Heathfield Schools' Curriculum Overview

Science

Subject	Intent	Implementation	Impact
Science	The science curriculum (through the specific disciplines of biology, chemistry and physics) will ensure that children will be able to: • Acquire scientific knowledge through a practical based curriculum. • Develop their understanding of the different types of scientific enquiry approaches. • Independently use and apply scientific enquiry skills. • Understand and use scientific vocabulary accurately. • Explore scientists from different time periods and countries and be inspired by their work.	The schools' science progression documents outline the substantive and disciplinary knowledge that will be covered in each year group. In KS1 and KS2 at the start of each topic a knowledge organiser is shared with children and circulated to parents to help them support their child's learning. **EYFS** Planning in the moment invites children to be inquisitive and experience awe and wonder. They are encouraged to comment and ask questions about the natural world and things that they have observed within the setting (plants, animals, materials, forces etc). Resources to enhance this learning are available daily and planning focuses on children interests, which support scientific investigations. Some specific activities are planned to support children's developing scientific understanding, such as planting seeds or seeing if a biscuit will dissolve in water. This allows for more explicit teaching of early scientific skills. **Key Stage 1** Science is taught once a week in KS1. The emphasis of the curriculum is on children acquiring substantive knowledge through a range of different scientific enquiries. Learning objectives are in the form of a question, which will then be explored and answered by the end of the lesson, reflecting how a scientist works. Within every lesson, a recap introduction is used at the start to prompt and link to knowledge from previous lessons. At the end of each lesson, an AfL plenary is used to assess the key knowledge and skills that should have been acquired.	**Assessment:** In Nursery and Reception, teachers and Early Years Practitioners use a range of on-going assessment for learning techniques to gather information about children's development within the associated strands. In Reception, assessments are made within the moment and inform progress towards the Early Learning Goals. In Key Stages 1 and 2 high quality AfL during lessons (including the recap introduction (KS1) and the WHALA (KS2)), the AfL plenary and marking enables teachers to adapt planning and address misconceptions with individuals as required. As well as this in KS2, a mid-topic quiz is carried out halfway through a topic to assess children's understanding of the key concepts covered so far. This again enables teachers to adapt planning and address any misconceptions with individuals as required.

		Key Stage 2 Science is taught at least once a week in KS2. The substantive and disciplinary knowledge progression documents provide the starting points for year group planning and are adapted where appropriate for the current needs of the pupils. The emphasis of the curriculum is on children acquiring scientific substantive knowledge through a range of different scientific enquires that enable the pupils to use and apply their scientific skills, including in a 'Big Investigation' each topic. Learning objectives are in the form of a question, which will then be explored and answered by the end of the lesson, therefore reflecting how a scientist works. Within every lesson, a WHALA is used at the start to prompt and link to knowledge from previous lessons. A mid-topic quiz is carried out halfway through a topic to assess children's understanding of the key concepts covered so far. This enables teachers to adapt planning and address any misconceptions with individuals as required. At the end of each lesson, an AfL plenary is used to assess the key knowledge and skills that should have been acquired. In order to learn about different scientists, children read a book about a scientist linked to this topic. The scientists chosen reflect both famous scientists to everyday scientists that reflect both genders and different ethnicities.	In Year 2 and KS2, information gathered from books and verbal responses within lessons informs end of topic assessments for each child. This is tracked on a whole class summary sheet at the end of each topic for both working scientifically and scientific knowledge. As well as this in KS2, one child in each class is tracked in detail to provide additional benchmark information. **<u>Monitoring</u>:** Members of the Senior Strategy Team, Year Group leaders and Phase specific subject leaders undertake a range of monitoring activities across a year that include: • "Pop ins"/learning walks • Book and planning scrutinies • Pupil interviews • Staff interviews • Review of assessment sheets.