Lower Heath CE Primary School
Part of the Marches Academy Trust

church curriculum community

# Science at Lower Heath CE Primary School

| Intent | |
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| **Our science philosophy is…** | We aim to provide children with a science education that supports them in developing scientific knowledge and conceptual understanding, through the subject disciplines of biology, chemistry and physics.<br>We promote understanding of the nature, processes and methods of science through different types of scientific enquiry; encouraging pupils to ask and answer questions about the world around them.<br>At Lower Heath, we consider it crucial that children are equipped with the scientific knowledge to support them in the future. |
| **Implementation** | |
| **The curriculum for this subject area is designed using…** | The National Curriculum Programmes of Study, alongside our 2-year planning cycle. The 'Working Scientifically' element is supported through the use of colour-coded planning boards that can be used from Year 1 upwards. These colours should be used in each investigation carried out by the children. |
| **Curriculum coverage in this area is progressive. We ensure this by…** | We use our school-specific Science Progression Framework to ensure that each area of learning is progressive from EYFS to Year 6.<br>We also use knowledge organisers, to ensure that pupils build upon prior learning and vocabulary throughout their science journey. |
| **If a topic is repeated in various year groups, we ensure that learning builds on prior knowledge by…** | The Science Progression Framework outlines the skills, vocabulary and materials to be built upon by each year group. This enables learning to be progressive and ensures that children consistently learn new skills appropriate to their ability and potential.<br>Staff also make effective use of knowledge organisers. For example, the knowledge organiser for the Year 3 Light topic can be used by staff and children in Year 6 to refresh existing knowledge and build upon this. |
| **This subject links with the rest of our curriculum by…** | Making explicit links in teaching with other subjects. Particularly strong links exist for:<br>**Mathematics**<br>o Use of statistics when presenting and analyzing data<br>o Use of place value skills when reading scales on measuring instruments or when interpreting and reading very large numbers such as distances in the solar system<br>o Calculating averages<br>o Accurate use of measures such as time, distance, volume etc.<br>**English**<br>o Reading a range of scientific information and literature<br>o Explaining findings of an investigation in a written form<br>**Geography**<br>o Links with weather, rocks, habitats, materials, longitude and latitude etc.<br>**History**<br>o Study of how science and scientific ideas have developed over time<br>**RE**<br>o Religious dimensions of evolution<br>o Study/discussion of Christian scientists |
| **Different year groups, and different abilities within a class, are catered for by…** | By following the Science Progression Framework, it is possible to ensure that different abilities and age groups are catered for. This may be by |

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| | levels of support, choice of equipment available or by individual choice of project to be completed within the topic to be covered. |
| **Trips, visits and the local community support this subject by…** | Trips to local secondary schools for enrichment activities<br>Visits to museums and centres, such as Techniquest<br>Visiting scientists from local community<br>Science clubs organised as part of extra-curricular clubs offer |
| **The subject is monitored by…** | Scheduled science monitoring sessions; with feedback being used to further improve practice. These sessions involve book scrutinies, learning walks, pupil voice and analysis of data. |
| **The subject is assessed by…** | Assessment takes place through teacher assessment, and children are closely measured against the outcomes expected from each unit, as at/above/below the expected standard.<br>Staff are currently developing use of the 'TAPS' model of Primary Science assessment. Pupil layer - pupils assess their own ideas and work against known criteria (introduction of scientific skills wheel and self-assessment against LOs) Teacher layer - teachers use assessment to advance pupils' learning by adapting the pace, challenge and content of activities (trialling mindmap task). |
| **Staff development in this subject includes…** | Training for foundation subjects continues on a rolling programme of staff meeting sessions, with regular opportunities to liaise with teachers across the trust who deliver the same programme, and with science specialists within the trust secondary schools.<br>Curriculum support network group (current focus on science) attended half-termly by CW, with relevant information and useful ideas being shared with other staff. |
| **Impact** | |
| **In science books, you will see…** | ○ Progressive build up of skills<br>○ Careful presentation of diagrams which are well labelled and explained<br>○ Accurate and clear scientific writing which demonstrates good application of English skills<br>○ Use of agreed format for investigation planning, design and reporting<br>○ Evidence of high expectations of work and pride in work |
| **What is the impact of our science curriculum?** | Pupils at Lower Heath access an engaging, high-quality science education, and are provided with the foundations for understanding the world.<br>Our interaction with the local environment ensures that children learn through varied and first hand experiences of the world around them. So much of science lends itself to outdoor learning and our children speak positively about opportunities to access this. |