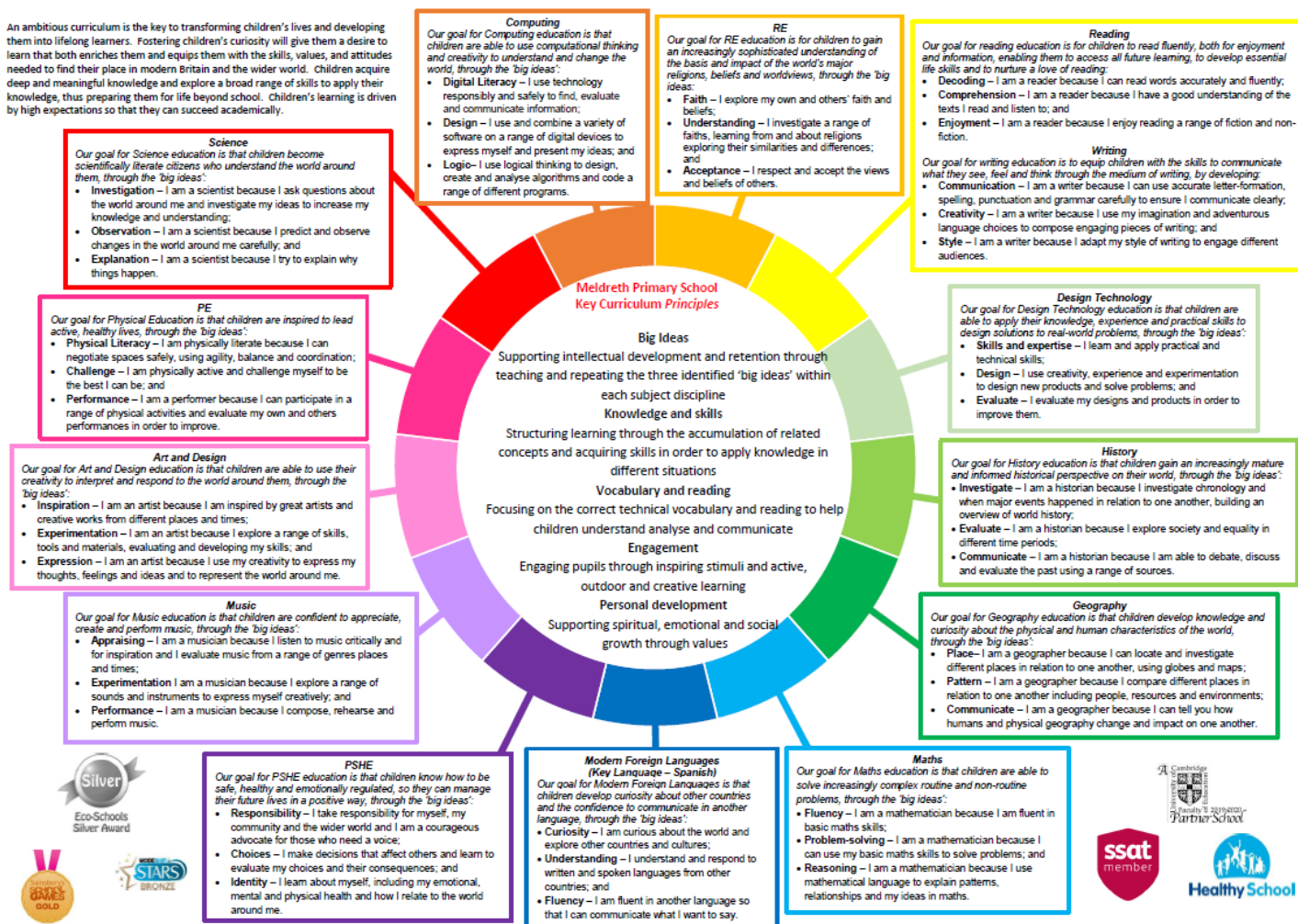


Our Vision for Science and Principles for Good Science Teaching and Learning

An ambitious curriculum is the key to transforming children's lives and developing them into lifelong learners. Fostering children's curiosity will give them a desire to learn that both enriches them and equips them with the skills, values, and attitudes needed to find their place in modern Britain and the wider world. Children acquire deep and meaningful knowledge and explore a broad range of skills to apply their knowledge, thus preparing them for life beyond school. Children's learning is driven by high expectations so that they can succeed academically.



What Science looks like at Meldreth Primary

At the heart of our child-centred curriculum is children's natural curiosity and desire to learn. Our mission is to provide children with the skills, knowledge and understanding of how Science has contributed to the world and how they can use that knowledge to benefit future generations.

Our high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Our curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- 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
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

We encourage pupils' familiarity with, and use of, technical terminology, to help build up an extended specialist vocabulary. Pupils should also apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. The curriculum also links to other areas of learning in the school such as mathematics, geography and history.

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A theme running throughout the whole curriculum is the notion of 'working scientifically' i.e. the understanding of the nature, processes and methods of science. This is not taught as a separate strand but is embedded within the content of biology, chemistry and physics, using the key features of scientific enquiry so that pupils learn to use a variety of approaches to answer relevant scientific questions at an age appropriate level. This includes observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils are encouraged to seek answers to questions through collecting, analysing and presenting data.

By the end of Years 5 and 6, pupils are able to use the following practical scientific methods, processes and skills:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments

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Science

Our goal for Science education is that children become scientifically literate citizens who understand the world around them, through the 'big ideas':

- **Investigation** – I am a scientist because I ask questions about the world around me and investigate my ideas to increase my knowledge and understanding;
- **Observation** – I am a scientist because I predict and observe changes in the world around me carefully; and
- **Explanation** – I am a scientist because I try to explain why things happen.

PE

Our goal for Physical Education is that children are inspired to lead active, healthy lives, through the 'big ideas':

Our goal for children and the world, ...

- Dis...
- De...
- Lo...

Our focus for Science Development this year