

Our Vision for Science at The Milford Academy

At The Milford Academy, we believe that it is imperative to develop the minds of young scientists by sharing important, key knowledge and vocabulary to our pupils. We aim to deliver a Science curriculum that blends this knowledge alongside the five enquiry types: observation over time, comparative and fair testing, pattern seeking, identification and classification and research. We aim to encourage excitement and curiosity throughout each lesson to encourage each child to understand the world around them from a scientific perspective.

Intent

We encourage pupils to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse their results. The children should be encouraged to develop their own line of enquiry.

All pupils will discover, explain and develop skills of enquiry through the 'Working Scientifically' element of the curriculum. As a school, we are developing links with STEM learning so our pupils can see Science in a range of different contexts.

Each child will leave Milford with the hope that the children have managed to acquire the following skills as Scientists:

- Showing a real love for Science
- Seeing themselves potentially having a job in Science
- Being able to share rich, scientific vocabulary
- Be confident observers
- Be curious, critical thinkers
- Show an ability to develop and test hypotheses
- Be able to ask scientific questions and discuss ways to find solutions
- Be confident to take risks
- Be able to prove, record and explain findings

Implementation

- **Vocabulary** – Each classroom has clear, visual and informative learning environments, catering for specific needs of pupils.
- **Assessment** is conducted both during and at the end of each unit via our assessment grids to ensure children have understood the vocabulary and knowledge for this section of learning.
- **Embedding the five scientific enquiry skills in each unit** – children's skills are revisited as they move up the school – they build on prior learning and commit this to their LTM.
- Pupils explore complex scientific issues and concepts; science within our world – using **Explorify** to support
- Children taking ownership of their own learning; being curious and asking **questions**

Impact

To ensure the Science curriculum is being delivered effectively, the following monitoring procedures take place:

- Regular learning walks
- Book monitoring
- Monitoring of classroom environments

- Pupil voice - interviews
- Observations of how the children are learning in Science
- Comments from external speakers

Evidence gathered from these are then evaluated, analysed and shared with staff to highlight our strengths and identify areas of development for staff continuous professional development (CPD). Where appropriate, additional training is provided, further actions identified and best practice solutions are shared.

Links to Reading and Writing in Science

Science has various links across our whole school curriculum with subjects such as, Maths, Geography and Computing, enhancing each pupils' individual learning experience.

Reading to learn: Pupils use a range of texts, including scientific sources and non-fiction to develop their knowledge and understanding of scientific knowledge and enquiry. Science is linked to the Reading VIPERS sessions in each classroom from Year 1-6 to strengthen Science subject knowledge and to allow the children to make more secure links with their learning. This also reinforces our school intent of embedding knowledge to the long-term memory (LTM).

Use writing as a vehicle to embed: Writing helps pupils organise their thoughts, explain key events, and communicate their understanding of scientific concepts.

Oracy to communicate: Pupils develop their speaking and listening skills through discussion, questioning, investigating, helping them to express their ideas about the focus knowledge or enquiry.