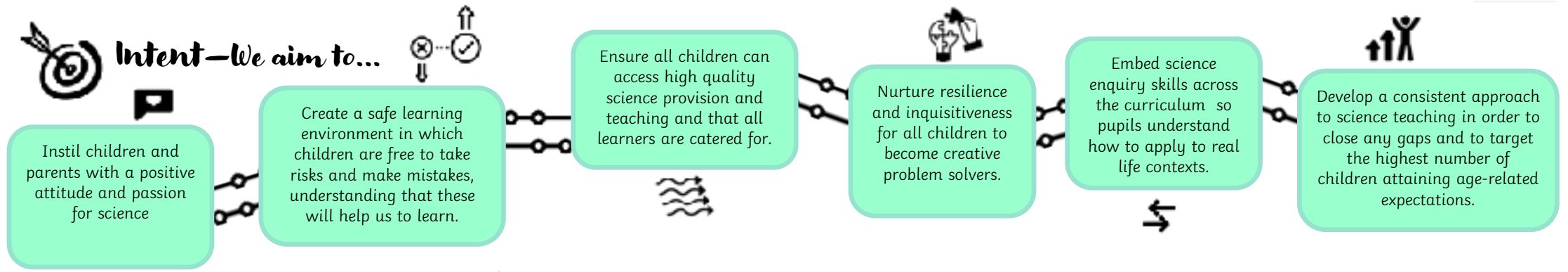
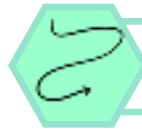


Subject on a page: Science

At Leverington, we believe that science is core to the life skills that our learners will need to be successful in later life. It will help to make them inquisitive and critical thinkers and help them to solve complex problems.



Implementation - How do we achieve our aims?



Our approach

CUSP Science



Investing time



Significant time is spent on ensuring that knowledge recall is strong within our learners. They are encouraged, through lesson quizzes, to link learning and sequences of lessons together to build upon their disciplinary knowledge.

The Four Main Parts: How?



This part of the lesson looks at how the the content will be taught and brings together the disciplinary knowledge of the first part and the enquiry based thinking of the second part. This is traditionally where the 'work' or 'experiment' of the lesson would be modelled and laid out for learners.

The Four Main Parts: What?



Lessons are broken down into four main steps. The first step involves thinking about what the children need to know to answer the learning question. This process begins at the planning stage and ensures that lessons are planned and delivered in a consistent manner across the school. It also helps to ensure that knowledge is at the heart of the curriculum delivery.

The Four Main Parts: Answer?

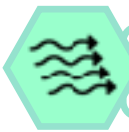


The last part of the lesson, and indeed the planning process, is how the question will be answered and what work or observations will be physically recorded. This involves details/ideas about the work that is done in the books and how the outcomes of investigations or experiments are recorded.

The Four Main Parts: Do?



This part of the lesson looks at what it is that the children need to be able to do to answer the learning question. It focusses mainly on the physical scientific skills that the children need and helps to centre enquiry skills.



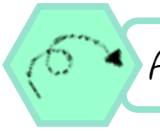
Fluency

Learning facts to automaticity

Why?



Recall of disciplinary knowledge is vital to understanding a range of scientific concepts and ideas. This is why, at the end of every lesson, formative quizzes are used to assess and reinforce the learning that has taken place, not only in that lesson, but those before it as well. Each lesson is designed to answer a number of learning questions and these are reviewed at the end of each session. This is done using the Socrative quiz platform and allows for real-time feedback and digital record keeping of the highest standard.



Application

Making Science Relevant



Science links heavily with other areas of the curriculum. The CUSP curriculum and the four main parts of each science session help to embed scientific skills and understanding. Links are made with computing and maths to help improve the quality of STEM provision as well. Technology plays a big part in the delivery of our science curriculum and we have embraced the possibilities that having devices, such as iPad, allow. Children can now easily capture data, produce graphs and charts and have access to a wide variety of ways in which they can record observations and ideas including videos, presentations and voice notes.

Impact—How will we know we achieved our aims?

Learning environments will reflect the attitudes we have towards science as well as provide the resources children need to learn and answer the learning question.

Pupils' books will contain a range of activities to explore scientific concepts in carefully planned learning sequences.

Pupils will be able to speak about their science work passionately and articulately to demonstrate their level of understanding.

Pupils will make connections between science and other subjects or their own lives. They will be able to discuss how what they are learning may impact on their future careers.

PSQM



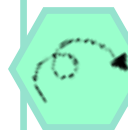
Primary Science Quality Mark (PSQM) is a year-long CPD programme that helps schools to achieve a quality mark, whether science within the school has been a low profile for a while or the school wants to improve the provision further.



It focuses on developing effective, confident science leadership for whole school impact on science teaching and learning.

For each of the three Primary Science Quality Marks, there are 13 criteria that schools must meet. Please be aware that schools have to meet the criteria by the end of the PSQM year and not beforehand. PSQM is a CPD programme. Subject leaders attend training throughout the year and receive online mentoring to help them to meet the criteria in their schools.

At Leverington Primary Academy we have undertaken the PSQM journey to help raise the profile of our science provision outside of school and to improve the quality of our working scientifically teaching. This was highlighted as an area for development at the start of the process.



Principles

Part of the PSQM journey involves making and reviewing scientific principles that we as a school have at the heart of our science teaching.

These principles (renewed at the end of the 21/22 academic year) can be found in classrooms and science books and are as follows...



Assessment



Assessment is at the heart of our science curriculum and is carried out on a lesson-by-lesson basis and on a 'per unit' basis as well. End of unit assessments are carried out through the use of the TAPS materials (Teacher assessment in Primary Science) that explicitly focus on the working scientifically aspect of the science curriculum. There are assessment 'experiments' for each unit of work and this allows teachers and adults to focus purely on scientific thinking over the course of a unit and still maintain high quality lesson-by-lesson assessment as well.