

Centre for STEM Education

Sharing ideas, joining up good practice and celebrating teaching and learning in primary science

William Westley C of E Primary School is a one-form entry school set in rural south Cambridgeshire. The school aims to provide a positive ethos and encourages the children to learn with excitement, curiosity and creativity. In this article, Dr Elizabeth Nally, science subject leader and Year 3 class teacher shares some of the work the school have been doing in science to support children's learning during the challenging months of Covid19.

At William Westley, we have maintained a business-as-usual approach for all lessons during the lockdown period. Virtual lessons on Google Classroom have enabled us to teach a science lesson for all year groups each week although they have been modified from the normal class lessons to best suit the children's home learning situation. This has routinely involved giving more detailed explanations and repetitive exposure to new scientific vocabulary to help ensure new concepts are embedded in the children's learning. Practical aspects of the lessons have been altered so that they can be carried out at home and we have found that simple investigations with easily accessible materials have been most effective.

Many children have been enthused by their science learning and have fully embraced opportunities to work scientifically by carrying out suggested investigations at home. For example:



Year 1 created a tally chart for a wild plant hunt in their gardens



Year 3 investigated water transportation in plants using food colouring

Teachers have been thrilled and encouraged by the children's efforts and enthusiasm. It has been an absolute delight receiving additional photos and video clips of their work and investigations, an indication of their great motivation for science. Our parents have been extremely supportive and also enjoyed the opportunity to get hands on!



Year 4 investigated pitch using bottles

The keyworker children have also used Google Classroom to access their learning, supported by the class teacher. I have had the privilege of working a few afternoons each week with these children and have focused on science activities with the aim of developing working scientifically skills. These activities have included sugar rainbows, prism work, skittle diffusion, bug hunts and gardening. Many of the investigations have had an element of awe and wonder which, regardless of age, sparked the children's curiosity and got them all asking questions. This prompted several of the children to carry out further independent investigations. Real scientists at work!





Skittle diffusion

Sugar density rainbow



Paper lilies and tulips marking spring

Strongly influenced by our beautiful grounds and the children's desire to explore, lots of our science learning in school this term has been outdoors. This has been a good environment for maintaining social distance while still feeling like we are working together. The children have made careful observations of the natural world and this environment has been an opportunity to use and promote the development of scientific vocabulary in context. The children have enjoyed recording their findings in a creative way, for example, we captured the optimism of spring by creating paper lilies and tulips. This approach then led on to them making beautiful, colourful flowers from throwaway materials. With a number of recycling initiatives already in place at school, the children are very much aware of their responsibility to reduce plastic waste and this activity was identified by the children as a good way to reuse materials. I was impressed that the children have not only developed working scientifically skills but are working as responsible citizens too. The results were blooming marvellous!

The recycled flower display has produced a permanent happy reminder of the long sunny afternoons of lockdown.

The outdoors is bringing us together as a school community. As well as creating recycled flowers, the keyworker children have been especially pleased to plant over 200 sunflower seeds on behalf of all children in school. Children at home also had the opportunity to collect a seed from school and plant it out in their gardens. So now, in these uncertain times all the children can join together to watch their flowers grow and of course measure the height!



Final paper and plastic flower display



Butterflies made from milk bottles

I am pleased that despite the challenging circumstances, science at William Westley has continued when so many other activities have been abandoned. That said, there is no substitute for teaching children face to face and I await the day when we can once more communicate, support and investigate together.

Our thanks to Elizabeth Nally and all the staff at William Westley Primary School for telling us about their experience of teaching and learning science this term.

If you would be willing to share some of the work you have been doing in your school to support science, computing or wider STEM subjects, please get in touch with us at stem@herts.ac.uk.