

IMPACT REPORT TO MARYLAND PRIMARY SCHOOL GOVERNORS

SUBJECT: Science TERM: Autumn 2022

SUBJECT LEADER: H Watson

KEY POINTS FROM SCHOOL DEVELOPMENT PLAN (SDP)

1. Ensure that science standards remain high and we are Ofsted ready
2. To ensure core skills in English, Maths and Computing underpin all aspects of learning and provide necessary skills to become 'future ready'.
3. Teachers are confident with assessment for learning strategies and understand what greater depth looks like in science.
4. To review the quality of conclusions and children's skills at evaluating experiments, which will be achieved through book looks, pupil interviews and review of planning.

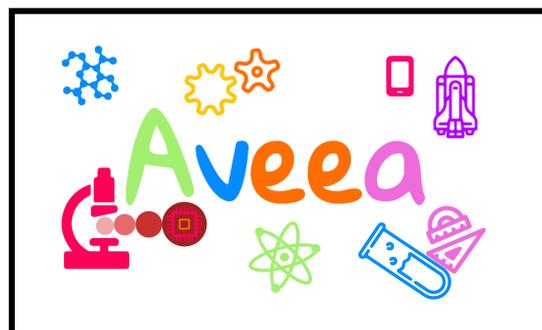
PROGRESS AND IMPACT TO DATE

1. Ensure that science standards remain high and we are Ofsted ready

- a. Book monitoring and pupil conferencing has shown that progression is evident. Standards remain high and learning outcomes are good, for example in September, children are already recording their results in graphs, writing predictions and conclusions.
- b. Topic previews and reviews are now being made by teachers so that they are tailor made to Maryland. The previews allow the children to consider their prior knowledge on a topic, while the review provides children the opportunity to consider all they have learned over that topic.
- c. We continue to use our unique resources at Maryland, with our nature garden an invaluable source of Science learning, particularly in the spring and summer months.

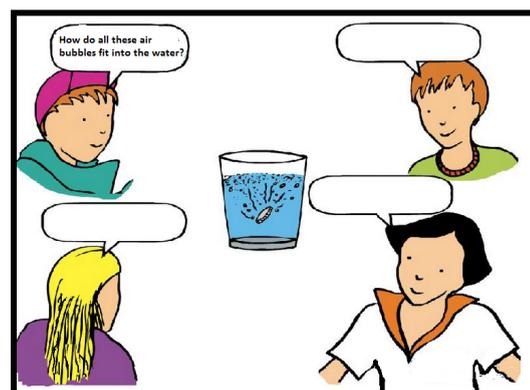
2. To ensure core skills in English, Maths and Computing underpin all aspects of learning and provide necessary skills to become 'future ready'

- a. iPads are being used as data loggers for experiments across the school, giving children skills needed to use technology. Further use for the iPads in science is being planned.
- b. Aveea, an organisation that provides STEM (Science, technology, engineering, and mathematics) classes and training, provides us with our fantastic STEM clubs, for KS1 and KS2, where the students engage in stimulating tasks using technology.
- c. Skills linked to mathematics, such as using tables and drawing graphs are embedded into the curriculum, providing children skills to be used across all of their learning.
- d. Each lesson in KS2 includes a written conclusion, providing children with the chance to use skills they have gained in English in Science.



3. Teachers are confident with assessment for learning strategies and understand what greater depth looks like in science

- a. Teachers are providing questions in books to assess learning and ensure understanding is secure.
- b. Concept cartoons are used for extension tasks, which raises questions about the topic in a real life context. Children are able to discuss the questions raised and



A concept cartoon on the topic of dissolving

write answers to the questions, allowing them to consider their science topic from another perspective.

- c. We continue to use Learning By Questions to assess learning, set in class tasks. Feedback from teachers has stated that it is a useful way of evaluating the children's learning.
 - d. Aveea will also be providing CPD for our staff, enabling all members of staff to work more confidently and creatively in Science, allowing staff the opportunity to create work at a greater depth standard.
- 4. To review the quality of conclusions and children's skills at evaluating experiments, which will be achieved through book looks, pupil interviews and review of planning**
- a. Every lesson includes a learning objective, which is a question that is answered throughout the lesson and specifically answered by the children in their written conclusion.
 - b. Scientific vocabulary is provided and modelled by the teacher which children can use correctly in their writing.
 - c. CPD provided by network leaders and Newham learning. The first session covered Medium Term Plans and how they can be structured to build on prior learning and link to other topics in the curriculum.

Beyond the curriculum

- a. Pupils in Year 5 visited the Royal Observatory for a planetarium show and a workshop, while Year 4 visited the Science Museum to watch the 'It Takes Guts Show'.
- b. Year 3 had a virtual workshop with Geobus, in which they got to wear 3D glasses to enhance their learning of rocks and soils. Our School Improvement Advisor, Judith Wilson, commented on how well these cultural capital experiences link to learning in class.
- c. The Eco-Warriors spoke with a Lord and our local MP about climate change and sustainability, even providing a question that was debated in parliament.
- d. Eco-Warrior's continue to keep Maryland as sustainable as possible, providing student led assemblies on climate change. They are soon to engage in a workshop provided by UEL about recycling.
- e. The Eco-Warriors monitor recycling in the school where we are a local hub for the recycling of crisp packets, pens and batteries.
- f. Years 3 and 4 had a fascinating introduction to their new topics thanks to the visit of the Science Dome. They were able to experience a vivid, 3D view of their new topics, inspiring questions that will be answered over the remainder of the topic.
- g. A parent project focused around sustainability at home will be introduced in the spring or summer term for all our families.
- h. A workshop for Year 6, provided by TTS, a company that provides resources and activities for educational setting, has left the school with many valuable resources for future use such as magnifying glasses and solar panels.
- i. We have applied for funding in partnership with Aveea from the Royal Society to create a project around sustainability, in line with the headteacher's vision.



Eco-Warriors with our local MP, Lyn Brown



Year 3 outside the Science Dome

- e. Aveea have provided a workshop for Year 6, providing some intriguing problems for children to solve, that directly relate to problems in the wider world.

LOOKING AHEAD

- a. Monitoring learning in practical work so that it is carefully sequenced, to make sure that pupils have the necessary prior knowledge and time to be successful.
- b. iPads are being used as data loggers for experiments across the school, giving children skills needed to use technology. Further use for the iPads in science is being planned.
- c. Experiments underpin the teaching of science at Maryland, and each lesson will be monitored to ensure engaging experiments are conducted across the school.
- d. To build on Maryland's strength of cross-curricular links, I will review the when topics are taught so there are better links to enhance learning, for example in Year 3, I will move the "Rocks and Soil" topic so it is taught just prior to the Geography topic of "Volcanoes."