

## 1. KEY POINTS FROM SCHOOL DEVELOPMENT PLAN (SDP)

- To ensure core skills in English, Maths and Computing underpin all aspects of learning and provide necessary skills to become 'future ready'.
- Ensure that science standards remain high and we are Ofsted ready
- 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.
- To continue to embed equality and diversity into science

## 2. PROGRESS AND IMPACT TO DATE

- New Ipad's are in use and training has been provided on incorporating into science lessons. For example, in Year 3 and Year 5, pupils are (will be) creating an online plant diary and a minibeast digital guide. Digital microscopes are used in most lessons for children to observe closely.

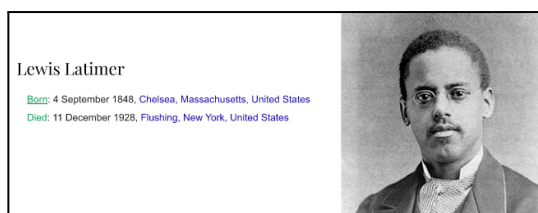
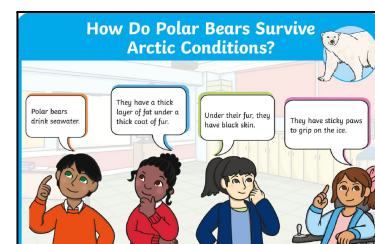


### Science Fair 2023:

The children, parents and governors all had a great time trying out each experiment. What particularly stood out was how well the pupils all spoke about the experiments, and the science behind it.



- Ofsted visited in February this year, and Science was described as outstanding, with no areas for improvement. They were impressed by the skills progression and were particularly impressed by the written outcomes in KS2. Ofsted said:
  - Subject leaders were knowledgeable and ambitious with their curriculum, showing great expertise. Science leader was new, but very knowledgeable,
  - The Medium Term Plan showed all areas of national curriculum, and the Maryland curriculum is well sequenced and ambitious, with leaders continuously reviewing the curriculum.
  - There is a systemic approach to scientific enquiry with plenty of evidence in books, and all scientific skills are taught.
  - Progression was clear across books, for example bar charts in KS1, progressing to line graphs in KS2
  - Pupils spoke about how much they enjoyed science.
- Staff training has been provided on conclusions and Gold Work. Ofsted commented on the conclusions, as referred to above. Monitoring will be planned for the summer term.
- Science is constantly being reviewed, refined and improved. We are ensuring equality is embedded into the Maryland curriculum through the study of a diverse range of scientists in every topic.
- Subject leader has attended CPD meetings, provided by Newham Learning, which have covered topics including: Topic Sequencing, Experiment Accessibility and Physics in Primary Schools. These meetings have also allowed for networking opportunities and the chance to share ideas across the borough. The subject lead, along with the Computing lead, will attend the London STEM conference at UCL in July.
- Further to this, we have reestablished our role within the Enthuse Partnership, a STEM partnership between schools in Newham. This will allow for a sharing of expertise, ideas and knowledge to enhance Science teaching within the school, and borough.



- g. A Sustainability Corner has been created in the hall, promoting the importance of combating climate change and living more sustainably as part of the headteacher's vision.
- h. Summer monitoring of learning through book looks and learning walks has shown **consistently good** pupil understanding in drawing conclusions. Pupil interviews will be conducted in the late summer term to evaluate this further.



### 3. LOOKING AHEAD

- a) Incorporating more technology into experiments
- b) Continue to investigate funding opportunities for the garden and chickens. (consider more living eggs projects)
- c) To promote greater independence when planning and conducting experiments

## Science and Sustainability at Maryland

Educating, and combating climate change, is a key part of our headteacher's vision for this year. We ensure this is done in a variety of ways, through whole school awareness, and within the taught curriculum.

Whole school awareness:

- Assemblies, led by Mr Watson and the eco-warriors, have covered single use plastics, energy usage, food waste, recycling.
- Staff and governor updates and newsletters contain information about the eco-warriors' work on sustainability, and raising awareness amongst staff on sustainability.
- Maryland's website is regularly updated to ensure awareness of sustainability.
- The Eco-warrior impact statement will be updated by June, and will be published on the Maryland website.
- The Eco-warriors have conducted biodiversity research into the local area, and the effect urbanisation has had on the local environment. Their research will be published on the impact statement.



The Maryland curriculum:

- In Year 6 there is the Climate Change Unit which teaches the children: to understand and describe the main aspects of climate change and how it affects the planet and to understand the threats to the health of our planet and some possible solutions.
- In Year 6 they also compare different types of energy, analysing their advantages and disadvantages. They discuss the importance of protecting the ocean, the purpose and benefits of Fairtrade, and positives and negatives of multinational companies.
- As part of our Art4Change project Year 6 researched, and created art, focussing on the clean air act and how pollution impacts on air quality.
- Year 5 have a Amazon Rainforest Unit, which covers: deforestation in the Amazon, Human Impact on the Climate and the importance of looking after our environment.



- Year 4's Water Cycle and Rivers Unit covers Pollution in the Rivers, and they recently went on a trip to Cody Dock, a local hub for community work around sustainability.
- In EYFS and KS1 Science the children are imbued with an understanding of nature through the Caring, and understanding our world topics.

#### Looking to the Future:

- Opportunities are still being investigated to take part in research projects to find ways to be more sustainable, for example partnering with Aveea (STEM club) to use technology to be more green.
- All lighting in the school will be updated to LED, which allows to us to save money and energy
- Home project on sustainability and climate change is planned for next year, giving families opportunities to research how to live sustainably at home.
- Eco-warriors to conduct an experiment on microplastics from scourers, and compare them to natural equivalents. Will write to Juniper (our cleaning company) to source natural alternatives.
- The eco-warriors will write a letter to Newham's Mayor about single use plastic bags in Newham.
- The Eco-Warriors are to take part in the Food Prevention Programme with Newham, to reduce food wastage in the school.
- A £2,500 grant has been awarded to Maryland, allowing for a polytunnel to be built, meaning we can grow food all year round.
- Adult eco-warrior team will be established, to help to maintain and improve the garden.