



## We are STEM students

In our spring term whole-school topic, pupils of all ages will acquire a broad range of subject knowledge and draw on disciplines from maths, science, engineering, computing and art as we explore the lively world of 'Futuropolis'. Our children will learn how to observe and hypothesise. They will experience robotics and programming, as well as understanding the potential of augmented reality, bionics and drone technology. Through the evaluation of past and present technology, children will develop a critical understanding of how science is shaping daily life and the changes that need to be made to impact on a sustainable future. This knowledge and exploration will equip children to imagine, design and articulate the science behind a brave new world, reclaiming space beneath the waves and creating Aquatropolis – a visionary and exciting Oceanscraper where, perhaps, human life will evolve with the landscape...

## As language specialists

We will be immersed in the art of structuring successful fact-based texts and use fictional thinking to blend the genres. Non-fiction guided reading and research will teach sentence level accuracy and grammatical precision and enable pupils of all ages to pen concise and well-structured futuristic explanation texts and stories. We will learn technical vocabulary and how to use tools such as dictionaries and thesauruses to good effect. Sci-fi facts will ignite stories and poetry and children will use books such as our themed text, 'A Trip to the Future' to develop their understanding of the genre. We will understand and collate topic based vocabulary through age-related glossaries and refine our ability to classify words and use dictionaries, encyclopaedias and search engines to broaden word knowledge.

National Poetry week will encourage pupils to explore and respond to our topic through verse.

## As historians and geographers

We will track the development and design of buildings and spaces through time from a new perspective. We will look at how garden cities impacted on lifestyles and how land use and population has made its mark on global development.

## Knowledge of the World

Understanding the history and current contributions of individuals and nations in the development of science and technology will be an integral part of the topic. Through our weekly 'My World' initiative, classes will share and debate the politics of progress.

## Citizenship and British Values

An underlying principle of our teaching will underline the fact that high-quality design and technology '*makes an essential contribution to the creativity, culture, wealth and well-being of the nation.*' (NC Design Technology)

## Ambitious thinking

Promoting the bond between learning at primary school and work in the world of STEM is a key aim. Further splinter events and national initiatives, for example, International Women's Day and Science Week, will strengthen our message and communicate that there is no gender divide in future careers.

## The Big Idea...

This half term we are launching a STEM focussed project to open up a wealth of knowledge and skills and inspire our young people towards the world of engineering. With funding from Rolls Royce and an agreed whole school project in mind, we will be developing the children's thinking through teaching and practical experience... through watching and making... through creativity and building an understanding of the power of going back to the drawing board to improve and explain. As Steve Jobs once said, the engineers, '*if they worked hard with other creative, smart people, could solve most of humankind's problems.*' Let's start from a small beginning...

## As mathematicians

Along with continued planned mathematical topics, half-yearly assessments and revision, we aim to apply our reasoning skills to develop engineering and science problems. Part of a scientist/engineer's role is to work mathematically and show thinking, data and methodology in tables, charts and graphs. They test shape and structure. We will be doing likewise.

## Across the curriculum

**As expressive artists** we will all be using our creative skills to imagine and design new worlds. Based on the work of architects (including Zaha Hadid and Vincent Callebaut) whose work is already 'future-scaping', we will see how art and science work hand in hand.

**As fitness experts** all children will be involved in a planned programme of fitness and sport. The swimming season begins for Year 4 and Mr. Clarke will be working with our Sports Leaders to enjoy new games and active play, as well as teaching our younger children dance and multi-skills. He will continue to train the Year 5 and 6 rowing squad, and together with Miss Johnston, will involve the school in competitions and sporting events.

**As musicians** we will continue to rehearse, sing and perform songs that build individual and collective confidence, skill and wellbeing. We will investigate song structure and continue to build on our knowledge of notation and rhythm.

**As theologians and philosophers** each year group will be following individual programmes of study. They will include ethical debates and My World responses.