THE STEM TIMES

The Newsletter for all things STEM at Magna Academy Poole

Issue 1 | January 2021

WELCOME TO OUR WORLD

Mrs Bleeze | Head of Chemistry & Physics
STEM Co-ordinator

Welcome to the world of STEM at Magna Academy. In case you don't know already, STEM stands for science, technology, engineering and mathematics.

In education, it means the study of these subjects, either exclusively or in combination.

In employment, STEM refers to a job requiring the application of science, technology, engineering and mathematics skills or a qualification in a relevant subject, or located in a particular industry or sector.

The demand for STEM skills is growing, particularly for sectors such as engineering, construction and manufacturing. Magna Academy will work to ensure that the young people leaving compulsory education have the skills and qualifications that will enable them to gain meaningful employment and that those people who have left education and wish to improve their skills have access to appropriate up-skilling and reskilling programmes.

The green economy is defined as one in which value and growth are maximised across the whole economy, while natural assets are managed sustainably. STEM based careers will be at the forefront of finding solutions to this global challenge.

Magna Academy will task students to use their knowledge and skills to be part of solving such global issues and through a variety of activities we hope to inspire students to actively play their part in ensuring a sustainable future for many generations.

LAUNCH OF STEM CLUB

STEM club was launched the week beginning 9 November. Students were shown a virtual assembly by a fabulous STEM ambassador from Lockheed Martin in their science lessons.

We asked students interested in joining STEM club to complete a short application form to show their motivation and received back and amazing 62 applications.

Thanks to currently running home based and online activities we were able to accept all students and invited them to join the STEM Google Classroom.

SPOTLIGHT ON...

LOCKHEED MARTIN

Lockheed Martin is a global security and aerospace company who design, develop and manufacture advanced technology systems for aeronautics, military and space exploration.

They employ approximately 110,000 people in the United States and internationally.

Lockheed Martin offers both graduate programmes and apprenticeships so we hope to maintain strong relations with the company to be able to organise trips and guest speakers to show our students the multitude of STEM related opportunities out there.

FEMALE NOBEL PRIZE WINNERS

Since the Nobel Prize was established in 1895, less than 60 women have been honored with the prestigious international award. This year, **Emmanuelle Charpentier** and **Jennifer A. Doudna** won the prize for Chemistry for their 2012 work on a new genetic editing method called Crispr-Cas9, which can be applied to experimental treatments for sickle cell disease and cancer therapies.

Andrea M. Ghez was awarded the Nobel Prize in physics. Ghez was one of the scientists awarded for her decade-long research in collecting conclusive evidence for a super-massive black hole in our galaxy.

Further recognition of the work women achieve in Science goes to **Dr Marta Zlatic** who has been asked to deliver the Francis Crick Lecture at the Royal Society.

This lecture will be broadcast for free live on Zoom webinar on 20 January at 6.30pm GMT. The event will be recorded (including the live Q&A) and the recording will be available on YouTube soon after the event.

MATHS CHALLENGE

Magna Academy is celebrating some fantastic results from this year's UK Maths Challenge. In total 14 students will receive a participation certificate.

Special recognition goes to **Sheila Monera Cabarique** (above, left), **Alexander Lee** for receiving silver awards and **Stefan Anghel** (both above, right) for a bronze award. A big thank you to Mr Stoddart for supporting the students.

THE LABOUR MARKET

As the world of work changes, we will need to change our skills to match. The gap between the knowledge generated in the education system and the skills demanded by employers and individuals is widening.

Overcoming these limitations requires a priority focus on science, technology, engineering and mathematics (STEM), including the development of workplace skills in STEM.

Future careers will also rely heavily on '21st century skills' – for example, critical thinking, creative and adaptive thinking, cross-cultural competency, collaboration and problem-solving. STEM education at Magna Academy will complement the development of 21st century skills.

It's predicted that future workers will spend more than twice as much time on job tasks requiring science, maths and critical thinking than today.

FIRST STEM CHALLENGES

There have been some fabulous submissions for our first challenge, **Women in STEM Top Trumps**. The challenge aimed to develop students' skills in creativity and analysis. It also promoted the women who have played an important role in STEM development while showing students the many facets of the captivating subjects involved.

Olivia, Year 8

Ryan, Year 7

Agnes, Year 10

Liat, Year 8