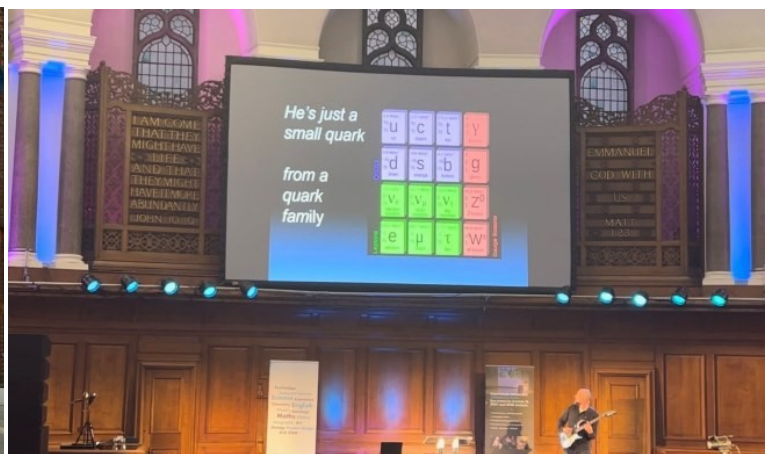


# Physics in Action: Emmanuel Centre

*On Monday the 21st November, 42 Woodford A Level Physicists journeyed to the Emmanuel Centre in Westminster for the 'Physics in Action' lecture day.*

It comprised of five speakers who each discussed their work and interests within the field and was hosted by Lewis Matheson, more commonly known as the 'Physics Online' guy. The day started off with a lecture entitled '**The first stars: Unveiling the first billion years of our Universe.**' Physicist Emma Chapman spoke about the time when the very first stars burst into life and what they can teach us about our universe today.

Our second lecture was led by paleontologist Victoria Egerton and was called '**Shining new light on old fossils.**' She discussed new imaging techniques used to trace fossil specimens and her work with synchrotrons, which produce intense light that scientists can use to study atoms and matter within fossils. Our third lecture was very topical, posing the question '**Is it possible to live a carbon-zero life?**' Here retired physicist Michael de Podesta explained technologies integral in living low-carbon lives such as heat pumps and solar panels and what can be done to reach the net-zero target within our own homes, all contributing to a better world for all.



Our penultimate lecture was led by Leah Morgan (@leahlovesscience) who explained her work in fusion energy research at the UK Atomic Energy Authority. Her lecture '**Fusion Energy: How to Build a Star in a Doughnut,**' discussed the doughnut shaped machine called a tokamak, and its work in creating fusion energy using unimaginably high temperatures. She also spoke about the possibilities surrounding nuclear energy in the future. Our final lecture, without a doubt, hooked all who attended and was presented as more of a concert than a lecture! In it, Mark Lewney discussed the physics behind harmonics, waves and the effect of frequency and wavelength on the sounds created by guitar strings, whilst performing for us with his electric guitar. As an additional bonus, even our lunch and breaks were kept exciting through the thrilling England vs Iran World Cup match, which certainly left us all cheerful. Thank you to Mr Le, Ms Valente and Mrs Greenfield for taking us!

*Simra, 12LPR*