



Phizzi professionals

Dr Mark Richards: Atmospheric physicist

School

I sometimes had quite a lazy attitude to school work but when I was 14 years old, I got top marks in a chemistry test and there were students that weren't pleased – that made me battle the boffins and push back against their sense of entitlement and what they thought was acceptable and right.



What next?

I studied chemistry at university and then did a PhD in atmospheric physics at Imperial College London. I was the only black student in my class, but always felt it important to remain my authentic self, as I knew this would ultimately bring out the best in me. Over the years, my research has evolved from chemistry to physics and now includes lots of maths and computing.



Why physics?

I have a passion for physics and through my research I have managed to develop something real, something useful, but more importantly, something that helps me to improve the quality of life for my family by allowing them to see the air they breathe.



And now?

As well as teaching at Imperial College, I am a founding director of a company that is developing my research so it can be used in the real-world to map air pollution and hopefully make a contribution to our fight against climate change. We are making devices that detect pollutants in the air and we use these as indicators of the quality of air.



Physics in practice

My research and Duvas Technologies (the company I helped to start) have physics at their heart – light, optics, instrumentation. Some of the most important tools, like the internet, were created by physicists. Physics is important to study at school because you will discover the basics of how technologies work and later in your life might be able use this knowledge to create world-changing technologies of your own.



Advice for young scientists

Anybody can be a researcher – what I have found, in my experience, is that they come from all different walks of life. Regardless of background and upbringing – if you have the aptitude and the attitude you should definitely go for it! Different perspectives can shed light onto new solutions.

