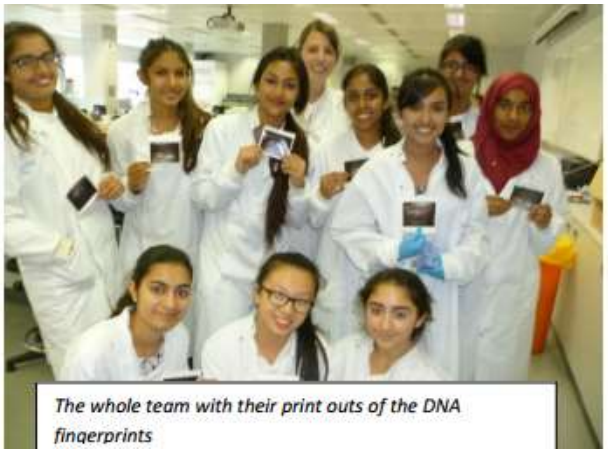
DNA Fingerprinting at Imperial College London

Ever wondered how DNA is used to identify people in forensic science or for paternity tests? Ten Y12 students were lucky enough to have an opportunity to discover just that at the impressive laboratories of Imperial College London. The students were given five samples of bacterial DNA and one unknown. They had to digest each sample of bacterial DNA using enzymes and then separate out the samples using gel electrophoresis. From this they could then compare the pattern of the five bacterial DNA samples to the unknown to identify which bacteria it came from. Can you identify which bacterial sample matches the unknown? The girls were given hands on experience with pieces of equipment that university students and research scientists work with and were taught how to use them with precision ranging from a centrifuge to a Gilson pipette. After experiencing a day in the laboratories the girls were given a tour of the Biology Department. The PhD and academics research space took their breath away a vast open building focused around an atrium of desks and computers all attached to working laboratories. In addition, we had the privilege to see the £million Nuclear Magnetic Resonance (NMR) machine. This machine is used to identify the composition of compounds which can be used to research or medical diagnosis. The students left feeling privileged to have experienced such an exciting and informative day. It has left many wanting to apply to this impressive University.

Zara, Tasnim and Alice's printed DNA fingerprint image.

Picture Above and Right:

Chloe, Zara and Alice measuring exactly 10 µl of restriction enzymes to cut up the bacteria DNA.



The whole team with their print outs of the DNA fingerprints

Ms Katie Estruch Head of Biology