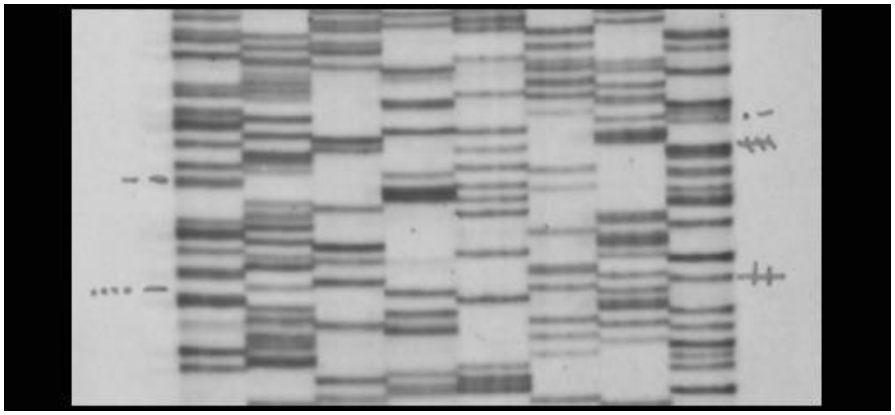
The Royal College of Pathologists
Pathology: the science behind the cure

Object 4: Genetic fingerprinting



What is it?
Genetic fingerprinting is a technique used to identify an individual from their unique DNA pattern.

History
Genetic fingerprinting was discovered by geneticist Sir Alec Jeffreys in Leicester in 1984. Although over 99% of human DNA is the same, he discovered short sequences of DNA called minisatellites that vary from one person to another and are passed on from parent to child.

How is it used?
The most well known use of genetic fingerprinting is in helping to solve crimes. Scientists analyse tiny samples of DNA found at crime scenes and match them to samples obtained from suspects. Matching the suspect with the crime scene provides evidence for the police to charge the suspect with the crime. Genetic fingerprinting also helps scientists identify bodies, by comparing their DNA to those of missing people or their relatives. It can also be used to work out whether people are related to each other, such as paternity testing.

Pathology
Genetics is the pathology specialty involved in the study of genes and how our DNA determines what diseases we develop.

Find out more?
To find out more about genetic fingerprinting please visit The Naked Scientists website or The University of Leicester's website which is where Sir Alec Jefferys conducts his research.

To find out more about what geneticists do see the careers section.