DNA Analysis

How is a blood sample prepared and analyzed to create a DNA analysis?

Why?

You may remember DNA being referred to as the "blueprint of life". Every living thing has a genetic code hidden inside every nucleus of every cell in the organism. Decoding that genetic code is a relatively new technique applied to Forensic Science. The sequencing of that genetic code is unique to individuals and allows a scientist to create an image of that genetic code – an image that is an excellent source of authenticating evidence.

Learning Outcome

- Students will be able to identify the components of a DNA strand and how they interact to create that double helix
- Students will be able to understand the creation of a gel electrophoresis test, as well as read the results of such a test
- Students will be able to understand the creation of a STR test, as well as read the results of such a test

New Concepts

Nucleic Acids, VNTR, PCR, RFLP, Gel Electrophoresis, STR

Prerequisites

- Protein synthesis, transcription of DNA, chromosomes, genes, basic reproduction

Reading Assignment