

## EPCA Analysis

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

### Why?

The way someone's 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, including 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 identifying evidence.

### Learning Outcomes

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

### New Concepts

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

### Prerequisites

- Protein synthesis, translation of DNA, chromosomes, genes, human reproduction

### Reading Assignment