

DNA Forensic Worksheet

Questions

1. Explain the function of each of following components of gel electrophoresis:
 - a. Agarose gel

 - b. Electrophoresis buffer

 - c. Wells in the gel

 - d. Electric current

2. List one important safety precaution that must be followed when performing any type of gel electrophoresis.

Post-Lab Analysis and Conclusions

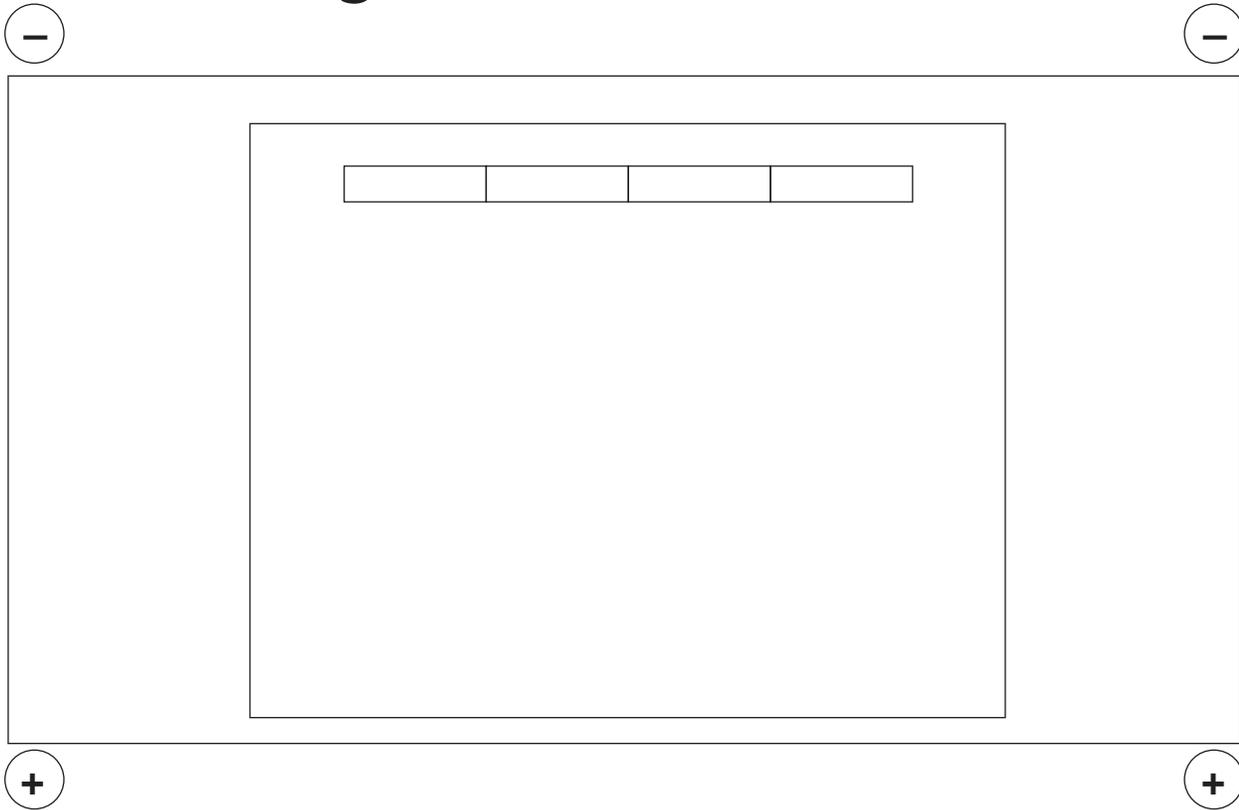
1. Evaluate the resulting banding patterns of the simulated crime scene DNA and the possible suspects. Give your opinion as to the identity of the guilty individual. Justify your opinion.

2. List three errors that could affect the outcome of any gel electrophoresis procedure.

3. Briefly summarize how gel electrophoresis is used to separate molecules.

4. Why would a forensic scientist use the polymerase chain reaction technique to prepare DNA samples for analysis?

DNA Banding Worksheet



Analysis

1. Using a metric ruler, measure the migration distance in millimeters for each band and sketch the observed DNA banding pattern on the DNA Banding Worksheet.
2. Complete Data Table 1.

Data Table 1

DNA Sample 1		DNA Sample 2		DNA Sample 3		DNA Sample 4	
DNA Fragment No.	Migration Distance (mm)						