

Electrophoresis Activity



The Crime

- Recently two of Miss Williams' fish have been stolen. DNA has been recovered from the fish tank and will be labeled Evidence (E) in our Electrophoresis Activity. Four science teachers are suspects in the crime and a sample of each of their DNA has been collected for analysis. The suspects include Mr. Petruska (Suspect A), Mrs. Pettigew (Suspect B), Mr. DiGiacomo (Suspect C), and Mr. Hlaudy (Suspect D). We need your help detectives to perform electrophoresis in order to determine which suspect can be placed at the scene of the crime in Miss Williams' classroom. Good Luck!

Electrophoresis Directions

- Measure the length of each segment (cm). Write the length of each segment inside each fragment.
- Cut out all segments.
- **KEEP** all segments for each suspect **SEPARATE** from each other! **DO NOT** mix fragments from different suspects or evidence together!
- Line up all DNA fragments at the end of the table
- Turn on your electrophoresis machine!



Perform Electrophoresis

- 1 cm fragments migrate 60 cm
- 2 cm fragments migrate 44 cm
- 3 cm fragments migrate 28 cm
- 4 cm fragments migrate 15 cm



Which Suspect Can Be Placed at The Crime Scene?



- Suspect A (Petruska)
- Suspect B (Pettigew)
- Suspect C (DiGiacomo)
- Suspect D (Hlaudy)