

Name: Justin Barry

Date: 8-12-08

Period: \_\_\_\_\_

Lab Title: DNA Fingerprinting

Focus Question: Can one determine if DNA came from the same individual or if the DNA came from different individuals?

**Word List:**

DNA, adenine, thymine, guanine, cytosine, sugar-phosphate backbone, linear base pair sequence, recombinant DNA, hydrolysis, recognition sites, restriction endonucleases, EcoRI, PstI, agarose gel electrophoresis

Hypothesis: Through the use of recombinant DNA technology, we can determine the suspect of a crime.

Concept Map: (attached)

Procedure (cont.)

**Procedures:**

1. Label reaction tubes
2. Obtain DNA and enzyme
3. Combine and react, mixing contents
4. incubate samples for 45 min.
1. Obtain prepared agarose gel
2. Add 5 microliters of LD to each tube
3. Mix components
4. Pour buffer in to electrophoresis chamber.
5. Obtain DNA marker
6. Load DNA samples into gel
7. Connect leads, turn on power supply for 30-40 min.
8. Turn off, remove gel tray
9. Use Fast Blast DNA stain, rinse gels
10. wash gels twice
11. Record Results

Conclusion: Using restriction nucleases to cut DNA from several suspects into fragments and then put them into agarose gel electrophoresis, one can determine if DNA came from the same individual or from different individuals.

**Data and Analysis:**

Based on the electrophoresis gel, the crime suspect "CS" matches suspect 3 below.

