

## Forensic Science Review Sheet 2017----DNA Fingerprinting

Define the following vocabulary words: (Complete your vocabulary foldable!)

DNA	Nucleotide	Nucleus
Polymerase Chain Reaction	Restrictive Enzyme	Polymer
Gel Electrophoresis	DNA probe	RFLP
DNA primer	Autoradiograph (Autorad)	Base
Polymorphism	Locus / Loci	Individual Evidence

1. What shape does nuclear DNA have? What type of bonds are holding the backbone together? The bases together? Draw and label a diagram of DNA.
2. Which two scientists discovered the structure of DNA?
3. What are the 4 bases that make up DNA? What is the complementary rule of base pairing?
4. What is the complement to the following fragment of DNA bases?  
AATTGGGGGCCCATCGATCGAACCGGTGCATCGATAACTCG
5. What are the steps involved in RFLP?
6. Describe what happens during gel electrophoresis.
7. The smaller fragments move \_\_\_\_\_ through the gel, while the larger pieces \_\_\_\_\_.
8. What charge does DNA have? How is this used during electrophoresis?
9. What is the purpose of PCR? Under what conditions is PCR used?
10. What are the steps involved in the PCR process?
11. What does CODIS stand for? For what is it used?
12. What type of evidence is DNA evidence? Why? What is the exception to everyone having unique DNA?

**\*\*\*Can you analyze an autoradiograph (bands) to determine if a suspect was at a crime scene, or if a child belongs to a parent? Can you back up what you are saying with evidence?\*\*\* This would be a GREAT short answer question!!!! You have a worksheet that we practiced this with...**