 **Complete and study this packet and you should do well on the final exam!**

Define/describe each of the following branches of forensic science:

|  |  |
| --- | --- |
| **Ballistics** |  |
| **Dactylography** |  |
| **Forensic Anthropology** |  |
| **Forensic Entomology** |  |
| **Forensic Pathology – Medical Examiner** |  |
| **Forensic Serology** |  |
| **Forensic Toxicology** |  |
| **Forensics or Criminalistics** |  |

Describe the forensic science contributions made by each of the following important scientists:

|  |  |
| --- | --- |
| **Carl Landsteiner** |  |
| **Edmund Locard** |  |
| **Alec Jeffreys**  |  |

**Define** each of the following categories of ***evidence*** and give **examples** of each:

|  |  |  |
| --- | --- | --- |
| **Direct or testimonial** |  |  |
| **Circumstantial (indirect)** |  |  |
| **Individual** |  |  |
| **Class** |  |  |
| **Trace** |  |  |

Record descriptions, definitions, and/or any important information about each of the following:

|  |  |
| --- | --- |
| **Securing the crime scene** |  |
| **Innocence Project** |  |
| **Packaging Evidence-**what kind of containers for different types of evidence  |  |
| **Chain of Custody** |  |
| **Locard’s Exchange Principle** |  |

Define and describe each of the following hair topics:

|  |  |
| --- | --- |
| **Follicle** |  |
| **Shaft** |  |
| **Cuticle** |  |
| **Cortex** |  |
| **Medulla** |  |
| **What protein makes up hair?** |  |
| **Primary vs. Secondary Transfer** |  |
| **DNA in hair** |  |
| **Pigments in hair / Colors** |  |

Define and describe each of the following fiber topics:

|  |  |
| --- | --- |
| **Importance of early collection of fiber evidence** |  |
| **First step of matching fiber to location** |  |

For each of the **Natural Fibers** list where they come from and any important facts about each:

|  |  |  |
| --- | --- | --- |
|  | **Where fiber comes from:** | **Important facts:** |
| **Wool** |  |  |
| **Cashmere** |  |  |
| **Angora** |  |  |
| **Silk** |  |  |
| **Cotton** |  |  |
| **Coir** |  |  |
| **Linen** |  |  |
| **Sisal** |  |  |

For each of the **Synthetic Fibers** list any important facts about each:

|  |  |  |
| --- | --- | --- |
| **Regenerated Fibers** | **Rayon** |  |
| **Acetate** |  |
| **Synthetic Polymer Fibers** | **Nylon** |  |
| **Acrylic** |  |
| **Polyester** |  |
| **Spandex** |  |

**Define and describe each of the following fingerprint topics:**

|  |  |
| --- | --- |
| **Patent Prints** |  |
| **Plastic Print** |  |
| **Latent Prints** |  |
| **Fingerprint Database** |  |
| **Ninhydrin** |  |
| **Cyanoacrylate****Vapor (super glue)** |  |
| **Silver** **Nitrate** |  |
| **Iodine** **Fuming** |  |
| **How to match fingerprints** |  |

**Look back to the Fingerprint Notes and study the following pictures:**

1. Core B. Plain arch C. Plain whorl D. Ulnar loop E. Accidental whorl

 F. Delta G. Tented arch H. Central Pocket whorl I. Radial loop J. Double loop whorl

****



**\*All fingerprints are from a right hand**

**Blood and Blood Spatter Evidence -**

|  |  |  |
| --- | --- | --- |
|  | **Scientific Name** | **Function**  |
| **RBC** |  |  |
| **WBC** |  |  |
| **Platelet** |  |  |

Define and describe each of the following blood topics:

|  |  |
| --- | --- |
| **DNA in blood** |  |
| **Blood Types and Blood Typing Test** |  |
| **Testing for blood at a crime scene** |  |
| **Shape of blood drops and blood spatter** |  |
| **Blood from mammal or other animal** |  |

**Define and describe each of the following DNA Fingerprinting topics:**

|  |  |
| --- | --- |
| **Gel Electrophoresis**  |  |
| **PCR** |  |
| **DNA location in cells** |  |
| **Complementary Base Pairing** |  |
| **DNA Database** |  |

**\* Know how to read a DNA Fingerprint to determine paternity, parentage, & matches.** (Pictures in notes)