Chapter 8 – Blood and Blood Spatter

SFS1. Students will recognize and classify various types of evidence in relation to the definition and scope of Forensic Science.

a. Compare and contrast the history of scientific forensic techniques used in collecting and submitting evidence for admissibility in court (e.g. Locard’s Exchange Principle, Frye standard, Daubert ruling).
b. Distinguish and categorize physical and trace evidence (e.g. ballistics, drugs, fibers, fingerprints, glass, hair, metal, lip prints, soil, and toxins).
c. Determine the proper techniques to search, isolate, collect, and record physical and trace evidence.
d. Evaluate the relevance of possible evidence at the site of an investigation.

SFS3. Students will analyze the use of toxicology, serology, and DNA technology in forensic investigations.

d. Differentiate the forensic techniques used to distinguish human and animal blood
e. Analyze the physics of blood stain patterns.

Once the chapter is complete, you will be able to:

• 8.1 Describe the forensic significance of the different types of blood cells
• 8.2 Summarize the history of the use of blood and blood-spatter analysis in forensics
• 8.3 Outline the procedure used to determine blood type
• 8.4 Describe how to screen for the presence of human blood
• 8.5 Calculate the probability of a person having a specific blood type, using data from population studies
• 8.6 Describe the proper procedures for handling blood evidence
• 8.7 Analyze blood-spatter evidence using angle of impact, area of convergence, and area of origin
• 8.8 Compare and contrast different types of blood-spatter patterns
• 8.9 Describe how different types of blood-spatter patterns are formed

Vocabulary (Write the definition and include the page number where the definition is located within the chapter – not the first page of the chapter, within the reading):

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Agglutination</td>
<td>The aggregation of particles or cells due to the presence of specific antibodies</td>
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<tr>
<td>Antigen-antibody response</td>
<td>The reaction between an antigen and its specific antibodies</td>
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<td>Passive drop</td>
<td>The small droplets of blood that are cast off from a large splash of blood</td>
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<tr>
<td>Wipe</td>
<td>Karl Landsteiner</td>
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