Units 10- Bodily fluid and their relationship to a crime

Content Area: **Science**
Course(s): **Forensic Science**
Time Period: **June**
Length: **6 Blocks**
Status: **Published**

Enduring Understandings

Crime scene reconstruction helps to sort out the events surrounding the occurrence of a crime.
Individual blood stains can convey the directionality and of impact of the blood when it impacted a surface.

Essential Questions

How can crime scene reconstruction assist forensic scientists in solving crimes?
What information can be inferred based on blood spatter patterns?

Content

Vocabulary
Deductive reasoning
Incident reconstruction
Event reconstruction
Physical evidence reconstruction
Blood stain pattern analysis

Skills

Define crime scene reconstruction
Discuss the information that can be gained from bloodstain pattern analysis about the events involved in a violent crime
Describe the methods for documenting evidence at a crime scene

Resources

- Teacher's Wraparound Edition for Forensic Science: An Introduction, 2nd Edition

Richard Saferstein, Forensic Science Consultant ©2011 |Prentice Hall

- Instructor's Manual with Lesson Plans for Forensic Science: An Introduction, 2nd Edition

Richard Saferstein, Forensic Science Consultant ©2011 |Prentice Hall

- Basic Laboratory Exercises for Forensic Science: An Introduction, 2nd Edition

Richard Saferstein, Forensic Science Consultant ©2011 |Prentice Hall

- Forensic Science Experiments (Facts on File Science Experiments) Hardcover – October 1, 2009

by Pamela Walker (Author), Elaine Wood (Author)

- Forensic Science Experiments on File (Facts on File Science Library) Ring-bound

- Crime Scene Investigations: Real-Life Science Labs For Grades 6-12

by Pam Walker, Elaine Wood, Christopher Stone (Illustrator)

Assessments

Performance: Lab Assignment
Lab: Presumptive Blood Test Students test to see if a stain is blood using Kastle-Meyer Test

Performance: Lab Assignment
Lab: Where the victim? Students drop blood from different heights and angles to analyze the shape of the spatter.

Performance: Dramatization
Final Performance Assessment: Mock Trial Students will prepare defense or prosecution for a mock trial.

Standards

SCI.9-12.1.2	Classifications or explanations used at one scale may fail or need revision when information from smaller or larger scales is introduced; thus requiring improved investigations and experiments.
SCI.9-12.1.4	Mathematical representations are needed to identify some patterns.
SCI.9-12.CCC.1	Patterns.
SCI.9-12.SEP.1	Asking Questions and Defining Problems
SCI.9-12.SEP.1.a	Ask questions

SCI.9-12.SEP.1.a.1	that arise from careful observation of phenomena, or unexpected results, to clarify and/or seek additional information.
SCI.9-12.SEP.1.a.2	that arise from examining models or a theory, to clarify and/or seek additional information and relationships.
SCI.9-12.SEP.2	Developing and Using Models
SCI.9-12.SEP.2.c	Develop, revise, and/or use a model based on evidence to illustrate and/or predict the relationships between systems or between components of a system.
SCI.9-12.SEP.3	Planning and Carrying Out Investigations
SCI.9-12.SEP.3.d	Select appropriate tools to collect, record, analyze, and evaluate data.
SCI.9-12.SEP.3.e	Make directional hypotheses that specify what happens to a dependent variable when an independent variable is manipulated.
SCI.9-12.SEP.8	Obtaining, Evaluating, and Communicating Information
SCI.9-12.SEP.8.a	Critically read scientific literature adapted for classroom use to determine the central ideas or conclusions and/or to obtain scientific and/or technical information to summarize complex evidence, concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
SCI.9-12.SEP.8.b	Compare, integrate and evaluate sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a scientific question or solve a problem.
SCI.9-12.SEP.8.e	Communicate scientific and/or technical information or ideas (e.g. about phenomena and/or the process of development and the design and performance of a proposed process or system) in multiple formats (i.e., orally, graphically, textually, mathematically).
	Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.