Unit 3- The Time and Location of Death can be determined

Content Area: **Science**
Course(s): **Forensic Science**
Time Period: **October**
Length: **8 Blocks**
Status: **Published**

Enduring Understandings

A forensic entomologist studies the development of insect larvae in a body to estimate the time of death

Essential Questions

Why is time of death important?

Content

Vocabulary:
Necrophilious insects
Blowfly
Maggots
Larvae
Life Cycle

Skills

Identify different types human teeth
Explain why dental records can be used to identify individuals
Identify the life cycle of a blowfly
Analyze entomological data to determine the time of death
Identify the succession of insects that will provide evidence for time of death

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: Entomology Report Students determine the length of time a rooster has been dead based on the larvae that are present.

Written: Informative
Research Paper: Insects and the Case They Make Using a mock case, students present the time of death, based on insect activity.

Performance: Lab Assignment
Lab: Which Bugs? Teacher rots meat and students collect larvae to analyze how long the meat has been there

Standards

SEP.1	Asking Questions and Defining Problems
CCC.1	Patterns.
	Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.
SEP.1.a	Ask questions
SEP.1.a.1	that arise from careful observation of phenomena, or unexpected results, to clarify and/or seek additional information.
CCC.2	Cause and effect: Mechanism and explanation.

SEP.1.d	Ask and/or evaluate questions that challenge the premise(s) of an argument, the interpretation of a data set, or the suitability of a design.
CCC.7	Stability and change.
SEP.3	Planning and Carrying Out Investigations
CCC.7.1	students understand much of science deals with constructing explanations of how things change and how they remain stable. They quantify and model changes in systems over very short or very long periods of time. They see some changes are irreversible, and negative feedback can stabilize a system, while positive feedback can destabilize it. They recognize systems can be designed for greater or lesser stability.
SEP.3.d	Select appropriate tools to collect, record, analyze, and evaluate data.
SEP.4	Analyzing and Interpreting Data
SEP.4.a	Analyze data using tools, technologies, and/or models (e.g., computational, mathematical) in order to make valid and reliable scientific claims or determine an optimal design solution.
SEP.4.b	Apply concepts of statistics and probability (including determining function fits to data, slope, intercept, and correlation coefficient for linear fits) to scientific and engineering questions and problems, using digital tools when feasible.
SCI.9-12.1.4	Mathematical representations are needed to identify some patterns.
SCI.9-12.2.4	Changes in systems may have various causes that may not have equal effects.
CAEP.9.2.12.C	Career Preparation
CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.