06-Medical Examiner and Cause of Death

Content Area: **Science**
Course(s):
Time Period: **Full Year**
Length: **1 week**
Status: **Published**

General Overview, Course Description or Course Philosophy

In this course, you will apply the science you've learned throughout your high school years in a variety of ways to analyze and solve cases. Various aspects of chemistry, physics, biology and physiology, to name a few, will be utilized with this course. Many of the activities will be lab-base, as this course is an applied science course. This course should prove to be intriguing, through provoking and have a "gross-factor" that should keep you entertained!

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

Students will understand that: the coroner, medical examiner or forensic pathologist have specific goals. They must determine the medical cause of death, the mechanism of death and the manner or means of death. The condition of the body can give clues to this as well as the time from death. An autopsy conducted by the medical examiner can help in this process.

CONTENT AREA STANDARDS

G-MG.A.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

S-ID.B.6 Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.

LA.RH.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, qualitatively, as well as in words) in order to address a question or solve a problem.
LA.RH.11-12.8	Evaluate an author's claims, reasoning, and evidence by corroborating or challenging them with other sources.
LA.RH.11-12.9	Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
LA.RST.11-12.1	Accurately cite strong and thorough evidence from the text to support analysis of science and technical texts, attending to precise details for explanations or descriptions.
LA.RST.11-12.2	Determine the central ideas, themes, or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler

	but still accurate terms.
LA.RST.11-12.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
SCI.HS-LS1-1	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

TECH.9.4.12.CT.1	Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).
TECH.9.4.12.CT.2	Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
TECH.9.4.12.CT.3	Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).

STUDENT LEARNING TARGETS

Refer to the 'Declarative Knowledge' and 'Procedural Knowledge sections.

Declarative Knowledge

Students will understand that:

- determine the roles of coroner, medical examiner and forensic pathologist
- identify examples of the medical cause, mechanism and manner or means of death
- compare how rigor mortis, livor mortis and algor mortis can give clues to the PMI

Procedural Knowledge

Students will be able to:

- describe the stages of decomposition that a body goes through
- explain the physiological causse of rigor mortis

EVIDENCE OF LEARNING

Refer to the 'Formative Assessments' and 'Summative Assessments' sections.

Formative Assessments

observation exercises

do know

exit/entrance tickets

quizzes

homework

Summative Assessments

- Benchmarks – departmental benchmark given at the end of MP1, MP2, and MP3 based on lab practices
- Alternative Assessments
    - Lab inquiries and investigations
    - Lab Practicals
    - Exploratory activities based on phenomenon
    - Gallery walks of student work
    - Creative Extension Projects
    - Build a model of a proposed solution
    - Let students design their own flashcards to test each other
    - Keynote presentations made by students on a topic
    - Portfolio

RESOURCES (Instructional, Supplemental, Intervention Materials)

American Academy of Forensic Science (aafs.org/students/choosing-a-career/)
American Forensic Association (americanforensics.org/what.html)

NY Times Forensics Articles (nytimes.com/topic/subject/forensic-science)
Forensic Files (youtube.com/user/ForensicFilesChannel)
Forensic Science Experiments
(thehomescientist.com/forensics/Illustrated_Guide_to_Home_Forensic_Science_Experiments.pdf)

INTERDISCIPLINARY CONNECTIONS

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

See link to Accommodations & Modifications document in course folder.