

Senior Seminar: Forensic Science

2005 - 2006

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Course Description

Senior Seminar courses are characterized by six essential elements:

1. A faster paced curriculum, homework will be frequent
2. An emphasis on writing, feedback, editing, and rewriting
3. Clear grading expectations and the use of scoring rubrics
4. Key outcomes of the course can be tested, measured, and evaluated. The outcomes are tied to the Knowledge and Skills for University Success (KSUS) standards.
5. An emphasis on the development of habits of the mind, such as analytical thinking and intellectual curiosity.
6. Frequent evaluation and feedback from the teacher and possibly peers. Evaluation from external sources will also be included.

This course provides students an opportunity to apply acquired knowledge in biology and chemistry and to use the scientific method as they examine crime scenes from fictional and non-fictional literature. Lab investigations will be used heavily throughout this course as it combines forensic science, literature and writing, and law and ethics. Students will conduct research and write technical, expository, argumentative, and thesis papers throughout the course emphasizing credibility of referenced sources and proper scientific processes.

Among the case studies will be the Lindbergh kidnapping and the mystery of Anastasia Romanov. "Sherlock Holmes, the Case of the Speckled Band" and other literature selections will also be referenced for case studies.

Learning Outcomes

Key Prerequisite Knowledge/Skills for Success in This Course:

Mastery Level:

- Students must have completed at least two years of language arts and demonstrate correct usage of basic grammar, punctuation, and spelling.
- Students must have completed at least one year of algebra as labs in this course include algebra. Students will know and apply basic algebra concepts and will use appropriate techniques to solve basic equations and inequalities. They will understand the relationships between equations and graphs.
- Students must have completed two years of science, one **MUST** be biology. Chemistry is highly

recommended.

Familiarity Level:

- Students should have some experience reading and writing technical material.
- Students should be able to write a brief description and interpretation of a data table.
- Students should be able to write a basic essay with an introductory paragraph, supporting paragraphs, and an effective conclusion.

Outcomes of this Course

- SCIENCE KNOWLEDGE AND SKILLS

1. Students will demonstrate knowledge of steps that make up the scientific method. They will observe, hypothesize, test, and revise.
2. Students will demonstrate an ability to problem solve. They use various strategies to approach problem solving and are able to revise solution processes.
3. Students understand that fluency in mathematics requires practice and that mathematics is the language of all scientific pursuit. Students will use algebra as needed in labs.
4. Students will apply concepts of measurement needed to complete labs in forensic science.
5. Students understand the nature of the physical and chemical properties of matter. Students will apply principles that explain chemical reactions related to their forensics instruction.

- WRITING AND RESEARCH

1. Students use writing conventions to write clearly and coherently to communicate ideas, concepts, and descriptions to the reader.
2. Students write, edit, re-write all papers.
3. Students formulate topics for research, refine the topics, develop a research plan and organize what is known about the topic.
4. Students use research to support and develop their own opinions, as opposed to simply restating existing opinions.
5. Students collect information to develop a topic.
6. Students use a variety of print or electronic resources; know how to analyze, evaluate, and use them properly; understand the difference between primary and secondary sources.
7. Students understand rules for quoting, summarizing, and paraphrasing to avoid plagiarism and correctly quote, summarize, and paraphrase as they write.
8. Students select relevant sources and evaluate sources of information, especially from the

internet, to ascertain their credibility, overall bias and quality.

9. Students will organize and present experimental data in various ways, including data presented in tables and graphs and figures. Students can critically examine data others have collected and draw conclusions from the data.

- **HABITS OF THE MIND**

Thinking About Science:

1. Students understand the difference between hypothesis and theory and know and can explain how "scientific theory" differs from the everyday usage of the term theory (for example, speculation or hunch). They will know that all hypotheses must be testable.

2. Students will design testable scientific questions, refine the question, and conduct an experiment to find solutions. They will think creatively as they develop hypotheses and estimate results.

3. Students will persist in their discovery of solutions. They will accept failure and ambiguity as part of the experimentation process. Successful students will act on their curiosity and be willing to take risks.

4. Forensic science labs will require students to choose the best experimentation mode by combining methods and knowledge drawn from more than one discipline--math, chemistry, & biology.

Reading, Writing & Communication:

1. Students will read scientific literature, understanding terminology and the process of science. They also will read & summarize excerpts from legal cases. Students will have a healthy skepticism as they determine validity of articles.

2. Students will construct logical and coherent arguments that demonstrate an understanding of causation and levels of abstraction involved in science.

Students Who Are Successful in This Course are Prepared For the Following Courses

High School Level:

- Physics
AP Biology or AP Chemistry
College Now Biology or Chemistry

College Level:

- Students will be more successful in regular freshmen college Biology or Chemistry, especially college Forensic Chemistry

Textbooks & Reading Materials

Short Story: "A Rose for Emily" by William Faulkner

Poem: "Flannan Isle" by Wilfrid Wilson Gibson

Short Story: "The Cask of Amontillado" by Edgar Allan Poe

Play: "Romeo and Juliet" by William Shakespeare; Poison scene at end of play

Play: "Trifles" by Susan Glaspell

Books

Nash, Robert J.. *Forensic Science Case Studies*.

Science Component Reading

Lee, Henry C.. *Cracking More Cases: The Forensic Science of Solving Crimes*.

Science Component Reading

Evans, Colin. *World's Most Baffling Crimes*.

Science Component Reading

Nickell, Joe. *Crime Scenes: Methods of Forensic Detection*.

Science Component Reading

Owen, David. *Police Lab: How Forensic Scientists Track Down Convicts and Criminals*.

Science Component Reading

Platt, Richard. *Crime Scene: The Ultimate Guide to Forensic Science*.

Science Component Reading

James, Stuart and Nordby, Jon. *Forensic Science: An Introduction to Scientific and Investigative Techniques*.

Science Text

Ramsland, Katherine. *The Forensic Science of CSI*.

Science Component Reading

Genge, N.E.. *The Forensic Casebook*.

Science Component Reading

Kilinger, S.. *The Annotated Sherlock Holmes: The Complete Short Stories*.

Literature Component Reading

Wecht, Cyril. *Forensic Science and the Law: Investigations in Criminal, Civil, and Family Justice*.

Law Component Reading

Kiely, Terrence. *Forensic Evidence: Science and the Criminal Law*.

Law Component Reading

Geiselman, R. Edward. *Intersection of Psychology, Psychiatry, and Law: Readings in Forensic Science*.

Law Component Reading

Conan Doyle, Arthur. *The Adventure of the Speckled Band*.

Fitzgerald, F. Scott. *The Great Gatsby*.

Steinbeck, John. *Of Mice and Men*.

Mammoth Book of Historical Detectives. New York: Carroll & Graf Publishers, Inc.

Edited by Mike Ashley

Websites

courttv.com

This website has some free teacher materials available. For example, "The Celebration" includes gunshot residue and bullet type demonstration.

www.flinnsci.com

Site for Flinn Scientific materials. Their phone number is 1-800-452-1261.

www.teachersource.com

Good source of fiber material for trace evidence unit.

<http://teacher.deathpenaltyinfo.msu.edu/>

This website guides the teacher in a lesson and debate activity about the death penalty.

Published Articles

Engelhardt, Laura. The Problem With Eyewitness Testimony. *Stanford Journal of Legal Studies*, Frye v US (1923). Admission of Forensic Science in the Courtroom.

Daubert v. Merrill Dow Pharmaceuticals, Inc. U.S. 579 (1993).

Akin, Louis L.. (Summer 2005). Blood: Interpretation at Crime Scenes. *The Forensic Examiner Journal*,

Grading Policies

ASSESSMENTS:

Assessments of course outcomes will include: labs, lab write-ups, written summaries, quizzes & tests, research & mock trial or debates.

Scoring rubrics will be used for labs, literature crime scene analysis, and research papers. Feedback and evaluation will be frequent and students will have an opportunity to receive feedback for a final project not just from their instructor, but from others in the field of forensic science.

There will be frequent homework assignments; it is suggested that students keep a planner to track when assignments are due. Due dates for all work are not negotiable. All writing will be edited and re-written--even short analysis papers. Grades will not be given unless corrected papers are turned in with earlier drafts.

Course Schedule

Week #/ Dates:	Major Topics	Assessment(s) (Quizzes/Exams)
UNIT #1 CRIME SCENE BASICS Week 1-2	<p>This unit will introduce forensic science to students. Unit will include science, literature, and law.</p> <p>Most materials for this unit, including power point slides are available for use.</p>	Project - Papers Guided Questions Exam
Day 1	<p>Crime Scene Analysis overview. Teacher sets up "crime scene". See teacher suggestions.</p> <p>Crime scene observation by students. Students turn in observations taken from the crime scene and a "conjecture" of what they believed happened supported by their observations.</p> <p>Note: this is an opportunity to help the students understand the difference between a "hunch" and later a hypothesis that might be proved.</p>	Project - Students complete list of items they thought might be related to the crime. This will be compared to a list they make the next day when the scene is revisited and instruction on crime scene processing is taught.

<p>Day 2</p>	<p>PowerPoint on Processing a Crime Scene with guided notes.</p> <p>Revisit the crime scene with yesterday's notes.</p> <p>Homework: Reading: Daubert v Merrill Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993) & completion of guided reading worksheet.</p>	<p>Paper - Students will compare their first view of the crime scene with the second view after instruction. They will note differences in their first view with their second. They will write a short analysis comparing the two views of the crime scene.</p> <p>Note: Papers, although short, will be edited and re-written. This expectation will occur throughout this course. All students will learn that writing is a process and a corrected essay is expected.</p>
<p>Day 3</p>	<p>Review Daubert (homework assignment)</p> <p>Introduction to Attractive Nuisance--powerpoint</p> <p>Homework: Read <u>Sherlock Holmes, Adventure of the Speckled Band</u> ; process this scene using expectations from Crime Science Investigation notes.</p>	<p>Paper - After reading Sherlock Holmes "Adventure of the Speckled Band" students will write-up how they would process the scene if they were the investigator.</p> <p>Literature Crime Scene Analysis Scoring Rubric will be used to grade analysis.</p>

<p>Day #4-6 (or more if needed)</p>	<p>Note: Science teacher will consult with their English department so they are reinforcing expectations for research report writing. Science teachers will review expectations to prevent plagiarism. Students may need review instruction on note-taking, and the differences between quoting, summarizing, and paraphrasing. The writing process will be emphasized--write, edit, re-write. Review of writing standards may make this part of unit take longer.</p> <p>Assignments are included to teach these skills if review or instruction is needed. These skills will be practiced in class and examples shared as needed.</p> <p>Homework: Research paper on Attractive Nuisance 2-3 pages long, MLA format Include the following: What is attractive nuisance? What in our initial crime scene could be considered an attractive nuisance? Analyze legal issues around attractive nuisance. Include an effective conclusion.</p>	<p>Paper - Essay scoring rubric will be used to grade papers.</p>
<p>Day 7</p>	<p>Witness Recollection Teacher stages an event--person unknown to students runs through the classroom and "steals" an object. After the person runs out the teacher asks the students to silently write their recollection of the person as if they were giving a description to the police.</p> <p>PowerPoint presentation and discussion including reading the following: "The Problem with Eyewitness Testimony" from the <u>Stanford Journal of Legal Studies</u> (with study questions) & BBC News article</p> <p>Homework: <u>The Great Gatsby</u> scene and write up how this scene would be processed.</p>	<p>Paper - Students will write how they would process the scene in the <u>The Great Gatsby</u>. Literature Crime Scene Analysis rubric will be used to score writing. Students will write, edit, re-write short essays.</p>

Day 8	<p>End of Unit Evaluation</p> <p>Case Study: The Bill McLeavey Murder</p> <p>Students will read case study and complete exam questions.</p>	Exam
UNIT #2 TRACE EVIDENCE Weeks 3-4	<p>This Unit will emphasize the collection and analysis of trace evidence such as hair, fiber, glass, and gunshot residue. Processing techniques and observational skills taught in Unit 1 will be utilized again.</p> <p>Most materials for this unit, including power point slides are available for use.</p>	Lab - Papers Final assessment
Day 1-2	<p>Trace Evidence Powerpoint & Worksheet Notes for student Lab: Glass Density (Flinn Lab #AP 6386)</p> <p>Homework:</p> <p>1. CSI Assignment--Over the next week students must watch one CIS program and take notes on any trace evidence used to solve the crime. They must compare what was learned about trace evidence and how CSI investigated using trace evidence. Must include the show title.</p> <p>2. Read "Frye v. US" (use Internet to find case) Note: the "Frye" case was superseded by the "Daubert" ruling for the general acceptance test. This case is interesting in comparison to "Daubert" to see what path the Supreme Court has taken regarding admissibility of evidence. A condensed version of this case is preferable to having students read the entire script.</p>	<p>Paper - Students will write a short paper for both of these assignments. Writing rubric will be used to grade them. Short essays will be edited and rewritten.</p> <p>Lab will be evaluated using lab rubric.</p>

Day 3	<p>Discussion of "Frye" Ballistics Powerpoint</p> <p>Celebration Case (download from courttv.com; includes gunshot residue and bullet type demonstration OR Flinn Lab #FB1645 (Gunshot Residue Demonstration)</p> <p>Homework: Read "Winston v. Lee" In this case the Supreme Court denied the prosecutor's appeal for a court order to surgically remove a potentially incriminating bullet from a suspect.</p>	Lab - or reaction paper depending on assignment chosen.
Day 4	<p>Discuss "Winston"</p> <p>Hair powerpoint & Worksheet Notes for student Hair Analysis lab</p> <p>Homework: Read "Wayne Williams" Case</p> <p>Answer the questions and be prepared to discuss this case in class. This case is about a string of murders in the early 1980's in Atlanta. A black man was convicted by an all white jury based solely on fiber evidence. There was a great deal of controversy about whether Williams was innocent or guilty and about the use of class evidence to convict someone of murder.</p>	Lab - Hair Analysis Lab Graded using Lab Rubric
Day 5	<p>Discuss "Wayne Wilson" Case Lab: Trace Evidence Microscope Lab (Teacher Note: Use fibers and dyes you gather on own or get fiber material from www.teachersource.com; also biological supply companies have great trace evidence slides)</p> <p>Trace Evidence Review - Review handout and complete review questions.</p>	Lab - Graded using lab scoring rubric.

Day 5-6	<p>Review skills in writing a quality paper and how to take notes (quoting, paraphrasing, and summarizing).</p> <p>Students will write a paper that applies the rulings in "Daubert" and "Frye" to the Wayne Williams case. Citing examples from the two cases, students must decide if Williams was wrongfully convicted or not.</p>	Paper - Essay scoring rubric will be used to grade paper.
Day 7	<p>Read & Discuss "A Rose for Emily". How would you process this crime scene? Write it up.</p> <p>Homework: finish paper on "Daubert" and "Frye" analysis.</p>	<p>Paper - After reading Sherlock Holmes "Rose for Emily" students will write-up how they would process the scene if they were the investigator.</p> <p>Literature Crime Scene Analysis Scoring Rubric will be used to grade analysis.</p>
Day 8	<p>Review and discuss paper on "Daubert" and "Frye"</p> <p>Practice and review for the test.</p>	Paper - If needed use the time for revising and rewriting.
Day 9	<p>Unit assessment: Students solve a case that includes all of the trace evidence labs. A sample assessment (Francisco Smith Case) is available for use.</p> <p>Student hand in CSI assignment if they haven't already.</p>	Project - Graded using the scoring guide included in the Francisco Smith case assessment.
UNIT #3 BLOOD Weeks 5-6	<p>This unit will emphasize the collection and analysis of blood evidence. Lessons on processing techniques and observational skills from Unit 1 will be utilized again in this Unit.</p> <p>Most materials for this unit, including power point slides are available for use.</p>	Lab - Papers Final assessment

Day 1	<p>Powerpoint: Blood type</p> <p>Lab: ABO Blood typing lab & "Who done It?"--blood typing exercise</p> <p>Homework: Read case study "Answers in Blood" (from Platt's <u>Crime Scene: the Ultimate Guide to Forensic Science</u>)</p>	Lab - Lab will be evaluated using lab rubric.
Day 2	<p>Powerpoint: Identification and characteristics of blood stains & notes outline.</p> <p>Lab: Presumption of Blood Flinn Catalog No. FB1646 or Flinn Catalog No. AP6502 or an easy home made lab is to use a solution of sodium hydroxide and the simulated blood and phenolphthalein solution as the indicator.</p> <p>Homework: Read Chapter #7, "Recognition of Blood Stain Patterns" from James & Nordby text & answer questions.</p>	Lab - Lab will be evaluated using lab rubric.
Day 3	<p>Powerpoint: Bloodstain Patterns</p> <p>Lab: Bloodstain pattern Analysis Kit from Flinn, #FB1643 or others found on the internet.</p> <p>Homework: Read "Blood: Interpretation at Crime Scenes" from <u>The Forensic Examiner Journal</u>, Summer 2005; author Louis L. Akin and complete the questions.</p>	Lab - Lab will be evaluated using lab rubric.
Day 4	<p>Blood Evidence and the Law--Research and summarizing paper. Use "Schmerber v. California" (1966).</p> <p>In the paper, students should explore how taking physical (blood) evidence from a suspect or defendant related to the IV and V Amendments of the Constitution and to Schmerber v. California.</p> <p>See the assignment sheet for clarification.</p>	Paper - paper will be graded using essay scoring rubric.

Day 5	<p>Day #5 Case Study Labs (Teacher Note: set out simulated blood samples & students will collect data themselves. Simulated ABO blood can be purchased through a supply company)</p> <ol style="list-style-type: none"> 1. "Who's Your Daddy" paternity scenario 2. Robbery Mystery 	Lab - Graded using lab scoring rubric.
Day 6	<p>Blood Study Guide</p> <p>Blood Spatter Lab</p>	Lab - Graded using lab scoring rubric.
Day 7 (Optional Activity)	Blood and Blood Spatter Computer Tutorial & worksheet to accompany the activity.	Paper - Grading of web-based activity.
Day 8	<p>Jose Smith Case - Final Assessment</p> <p>Note: (For part 1-teacher will create evidence bags for each of the 3 suspects with knives in them. One of the suspects knives should be treated with sodium hydroxide solution. Students will use phenolphthalien to test for the presumption of blood by taking a cotton swab, wetting it with distilled water, running it over the knife, then putting one or two drops of phenolph. It will turn pink if blood is present. For the second part the teacher will just need to set up simulated blood for the students to test.)</p>	Exam - Final evaluation will include the lab for the presumption of blood test and the data table and essay on who is guilty and why.
UNIT #4 FINGERPRINTING	<p>FINGERPRINTING</p> <p>Unit 4 will emphasize the techniques used in fingerprinting. It will involve a variety of processes designed to extract fingerprints from a host of surfaces. the stage for this unit will focus on Foundation skills such as observation, hypothesizing, data collection, and analysis.</p>	

DAY 1	<p>Powerpoint: Fingerprinting Students take notes on lecture.</p> <p>Students practice taking and identifying their own prints.</p> <p>Ink blot and ID to basic type Practice lifting own print off a glass slide & transfer to a mounting card.</p> <p>Homework: Fingerprint practice sheet</p>	- Fingerprinting Homework
Day 2	<p>Review Homework</p> <p>Lab: Analysis of Fingerprints</p>	Lab - Lab rubric will be used to grade lab.
UNIT #5 DNA	<p>Unit 5 will emphasize the science of DNA fingerprinting and its affect on the justice system with an examination of the death penalty. Students will be asked to examine DNA techniques and participate in labs that highlight their use. In addition, students will learn about the death penalty and the connection to DNA analysis. From this discussion, students will engage in research concerning the death penalty and be asked to choose a side to be debated in a subsequent class. A written paper concerning their initial thoughts and research as well as their post debate conclusions will be required.</p>	
Day 1	DNA Fingerprinting Powerpoint	- Students take notes on powerpoint/lecture
Day 2	<p>Lab on Extracting Human DNA - Students extract their own DNA</p> <p>Homework: Read DNA Frees Death Row Inmate - write a one paragraph response to article</p>	<p>Lab - Lab rubric will be used to assess.</p> <p>Homework: Response paragraph to article</p>
Day 3	Electrophoresis Lab	Lab - Lab rubric will be used to grade lab.

Day 4	<p>Introduce the Death Penalty</p> <p>See this website:</p> <p>http://teacher.deathpenaltyinfo.msu.edu/</p>	<p>- Research: Students will be assigned one side of the debate. Research notes will be reviewed.</p>
Day 5-8	<p>Death Penalty Debate</p> <p>See this website for details on running an effective debate.</p> <p>http://teacher.deathpenaltyinfo.msu.edu/</p>	<p>- Debate evaluation will include research & student participation.</p>
UNIT #6 DETECTION OF UNKNOWNNS	<p>DETECTION OF UNKNOWNNS</p> <p>Unit 6 will emphasize the process that can be undertaken to identify unknown solids found at a crime scene. Students will be asked to participate in a laboratory experience in which they must identify unknowns and solve a crime. Students will also be required to complete a lab-write up on their experience.</p>	
Day 1	<p>Toxicology PowerPoint</p> <p>Toxicology Lab--this lab can be any unknowns that a teacher crated using "white powders" (salt, sugar, citric acid, baking soda, baking powder, etc) and common indicator tests</p> <p>OR</p> <p>Use pre-made lab by Flinn: Identification of Unknown Substances I - Forensic investigation Kit Catalog # FB1644 (\$52.95)</p>	<p>Lab - Lab rubric will be ussed to assess.</p>

<p>Day 2</p>	<p>Urinalysis Powerpoint</p> <p>Urinalysis Lab: See Urinalysis lab "Urine Trouble". A famous rapper was killed, there are 3 female suspects and urine was found at the crime scene. You can create your own urine using water, yellow food coloring, and changing the specific gravity, pH, sugar and protein content,</p> <p>OR</p> <p>Purchase simulated urinalysis kit: Flinn - Urinalysis Kit Simulated Catalog # FB0438/\$49.30</p>	<p>Lab - Lab rubric will be used to assess lab.</p>
<p>UNIT #7 FORENSIC PSYCHOLOGY</p>	<p>FORENSIC PSYCHOLOGY</p> <p>Unit 7 will emphasize the basics of forensic psychology. Topics such as profiling, modus operandi, and serial killers will be explored. The unit consists primarily of lecture, discussion, and research. Students will be expected to research a specific serial killer, produce a 1000-word paper, and present their findings to the class.</p>	
<p>Day 1</p>	<p>Forensic Psychology - serial killer powerpoint & discussion</p> <p>Students will choose one of the top 30 most notorious serial killers (see list) to research for presentation.</p> <p>Homework:</p> <p>Read chapters 1 & 2 in Serial Killers article (from courttv.com). Complete questions 1-8.</p>	<p>- Assessment of completed questions.</p>

Day 2	<p>Students will spend time researching for their serial killer report.</p> <p>Courttv.com is an excellent cite for information.</p> <p>Instruction in class will focus on research skills--summarizing, paraphrasing, and quoting.</p> <p>Homework: Serial Killer Reading Chapters 3-5 and questions 9-13.</p>	- Assessment of completed questions.
Day 3	<p>Continue with research and instruction on completing quality research--spend time on teaching how to be a skeptic of the internet and how to assess quality sites.</p> <p>Homework: Read chapters 6-10 and complete questions 14-21.</p>	- Assessment of completed questions
Day 4	<p>Presentations of Research</p> <p>Students will complete a 3-5 minute oral presentation on their serial killer.</p> <p>Research paper is due.</p>	<p>Oral Presentation - Students will be graded on their oral presentation using a rubric designed to assess oral presentation skills.</p> <p>Students research papers will be assessed.</p>
UNIT #8 FORENSIC ANTHROPOLOGY	<p>FORENSIC ANTHROPOLOGY</p> <p>Unit 8 will emphasize the collection and analysis of anthropological evidence, such bone, skull, and entomological evidence. Students will participate in crime scene investigations that require observation and analysis. Furthermore, students will study the Kennewick Man discovery and the legal battle that has ensued. From this study, students will write a short paper.</p>	

Day 1	<p>Teach using the Forensic Anthropology Powerpoint</p> <p>LAB: Forensic Anthropology-Radioactivity and Half-Life</p>	Lab - Include an evaluation of the data table students create.
Day 2	<p>PowerPoint on Human Variation and Adaption</p> <p>This PowerPoint can be an enrichment or an alternate to the original PowerPoint. Students could use this PowerPoint in a note-taking exercise. Because the students begin their research paper next including this information can help reinforce the concepts of forensic anthropology.</p>	<p>- Options for assessment could include:</p> <p>Check of note taking skills Quiz on concepts</p>
Day 3	<p>Kennewick man Research Day</p> <p>Students will read and take research notes from a series of informational website about Kennewick Man.</p> <p>Prior to beginning the teacher will review basic research note taking skills--emphasizing the difference between summarizing, quoting, and paraphrasing.</p>	- Teacher will check notes.
Day 4	<p>Continue on Kennewick Man Research and begin writing paper. Paper must include:</p> <p>Brief history of discovery of Kennewick Man Argument for study of Kennewick man by anthropologists Argument against study of Kennewick Man by Native Groups Brief summary of court case-findings and rulings Your opinion of the situation</p>	Paper

Day 5	<p>Kennewick Man--Writing Continued</p> <p>It is suggested that the writing process be emphasized and that the teacher have the students turn in rough drafts (or do peer editing).</p> <p>Students would then take the rough drafts, edit, and re-write.</p>	- Evaluation of writing process
Day 6	Last day for writing or editing. Students will complete final drafts as homework.	Paper - Assessed using writing rubric.
UNIT #9 CHROMATOGRAPHY, HANDWRITING ANALYSIS & FOR	<p>CHROMATOGRAPHY, HANDWRITING ANALYSIS & FORGERY</p> <p>Unit 9 will emphasize the collection and analysis of ink and handwriting evidence. Students will participate in a crime scene laboratory experience and produce a lab write-up.</p>	
Day 1	<p>Document Analysis Powerpoint</p> <p>Chromatography Lab--Who Done It??</p>	Lab - Lab rubric will be used to assess lab.
Day 2	<p>Legal Aspects of Handwriting Analysis</p> <p>Review of Issues</p> <p>Students will examine Gilbert v. California (1967) and U.S. v. Tanoue (1996) and apply them to their laboratory experience.</p>	