

Mr. Peter Evans

Room # CC 401

Course Title: Forensic Science

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Course Description:

Forensic Science is the application of scientific principles and techniques to matters of criminal justice especially relating to the collection, examination, and analysis of physical evidence. This course is conceptual and will involve hands-on activities and labs, technology, and classroom discussion. This course will teach you useful information in Math, Chemistry, Physics, and Biology.

Forensic Science is aligned with Arizona College and Career Ready Standards and/or national content standards and supports school-wide efforts to increase student achievement.

Course Objectives:

By the time the student completes this course of study, the student will know or be able to:

Unit 1: Crime Scene and Evidence

Obtain, Evaluate, and Communicate information from criminal investigations to determine the job responsibilities of forensic science personnel.

Engage in an argument regarding the probative value of evidence.

Plan and Carry out a crime scene investigation to obtain, evaluate and communicate evidence from a crime scene.

Unit 2: Hair, Fibers, and Fingerprints

Plan and Carry out an experiment to determine the best fingerprint lifting method for a given surface.

Analyze and Interpret questioned and known fingerprint data to determine a match.

Analyze and Interpret characteristics of hair samples used in forensic analysis to eliminate suspects

Analyze and interpret characteristics of fiber samples used in forensic analysis to eliminate suspects

Engage in an argument about the probative value of fiber evidence

Unit 3: Drugs and Toxicology

Obtain, Evaluate, and Communicate information about how the use of chemistry related technologies have had positive and negative ethical, social, economic, and/or political implications

Construct an explanation about the relationships among the frequency, wavelength, and speed of waves traveling in various media, and their applications to modern technology.

Plan and Carry out investigations to test predictions of the outcomes of various reactions, based on patterns of physical and chemical properties.

Plan and Carry out a presumptive test experiment to determine an unknown drug identity or alcohol/drug impairment.

Analyze and Interpret confirmatory test results for an unknown drug, poison, or BAC level to determine an individual's intoxication level.

Unit 4: Blood and DNA

Obtain, Evaluate, and Communicate information about how the use of chemistry related technologies have had positive and negative ethical, social, economic, and/or political implications.

Collect, Analyze and Interpret data regarding the change in motion of an object or system in one dimension, to construct an explanation using Newton's Laws.

Construct an explanation of how the process of sexual reproduction contributes to genetic variation.

Develop and use mathematical models using Newton's laws, to predict the motion of an object or system in two dimensions (projectile and circular motion).

Engage in argument from evidence regarding the ethical, social, economic, and/or political implications of a current genetic technology.

Analyze and Interpret presumptive blood tests to identify an unknown stain at a crime scene.

Analyze and Interpret blood stains at a crime scene in order to reconstruct the sequence of events.

Obtain, Evaluate and Communicate the results of a DNA Profile to determine the source of a biological sample.

Unit 5: Glass, Firearms, and Impressions

Analyze and explain information about the relationships among the frequency, wavelength, and speed of waves traveling in various media, and their applications to modern technology.

Engage, Analyze and Interpret data regarding the change in motion of an object or system in one dimension, to construct an explanation using Newton's Laws.

Use mathematics and computational thinking to explain

Analyze and Interpret the class and individual characteristics of tool marks, tire marks, and impressions to determine the sequence of events at a crime scene.

Unit 6: Human Remains

Ask Questions, Plan, and Carry Out investigations to explore the cause and effect relationship between reaction rate factors.

Obtain, Evaluate and Communicate information about time of death of a body based on post mortem changes, stages of decomposition, and/or insect activity.

Plan and Carry Out an investigation on a dead body (autopsy-actual or simulated) to determine cause, mechanisms, and manners of death.

Analyze and Interpret skeletal remains to determine the characteristics of the deceased.

Classroom Rules and Consequences:

1. Follow directions
2. Respect others and their property
3. Use appropriate language
4. Be on time and prepared for class
5. Be an active learner

Consequence Step

1. Verbal warning
2. Conference with teacher and parent phone call
3. Referral

Grade Book Category Weighting: (District Wide)

Homework:

Homework will be a crucial part

Make-up Policy:

Absences: After an absence, a student has one school day for each day missed to make up work/tests, regardless of the number of days absent. If many days were missed, please schedule an appointment with me to formulate a plan for the completion of make-up work. Make-up work for extended absences (over 3 days) may be requested through the Counseling Office and picked up there.

Missing Work

An assignment is considered missing work when it is not submitted by the due date.

Missing work will be treated as such:

The assignment will be marked with the “Missing” special code in the gradebook

A **zero (“0”)** will be entered as the score for the assignment in the gradebook

9 Reassessment Plan

The student must initiate contact with the teacher within 5 school days of the assessment score being posted. The student must communicate with the teacher to create a reassessment plan.

- Assignment is not a timed activity (such as a Quick-Write Essay)
- Assignment is not a Long-Term assignment (over multiple weeks)
- Assignment is turned in by the end of the instructional unit.

Daily Device Use (Chromebooks)

Students should come to school with their Chromebooks charged and ready to use in each class every day. Devices may not be used to record or take photos of other people without their consent. Consequences for classroom disruptions and misuse of devices will follow a progressive discipline model, beginning with a phone call home and progressing to office referrals for repeated or more serious offenses. See the Student Rights and Responsibilities consequence chart in the handbook for more specific descriptions of infractions and consequences.

Recommended Supplies for this Course:

A scientific calculator will be used frequently in this course.

AI Statement

In the Deer Valley Unified School District, we are committed to providing our students

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Parents and Students- Please read the following statements:

*** I have read the Syllabus for Forensics 2024-2025 and understand the guidelines set forth and agree to abide by them.

Disclaimer:

As your Forensic Science teacher, I want to make certain that you are informed about the topics you will be learning. Your Forensic Science class will expose you to several controversial subjects. These include the following:

- crime scene situations and evidence
- serial killer videos, facts, methods, and psychology
- fingerprinting and hair analysis
- handgun and bullet analysis
- the effects of a fired bullet on objects and people
- drug use, addiction and analysis (legal and illegal)

- use and detection of blood, other body fluids and poisons
- autopsy procedures, photos, and videos

Not only will you learn about these topics, you may also have guest speakers and labs to gain hands-on experience. Illegal substances and objects will not be available to the students. However, several graphic demonstrations, pictures, videos, and illustrations are included in the class to further the understanding of certain topics. It is important to note that to convict criminals; one must first understand the circumstances of criminals, the crimes they commit, and the tools that are used to commit them. This must be done