

## Forensic Science Overview

**Instructor:** Mrs. Heupel

**Overview:** The word *forensic* comes from the Latin word *forensis*, which means *of or before the forum*. "During the time of the Romans, a criminal charge meant presenting the case before a group of public individuals in the forum. Both the person accused of the crime and the accuser would give speeches based on their side of the story. The individual with the best argument and delivery would determine the outcome of the case. This origin is the source of the two modern usages of the word "forensic"—as a form of legal evidence and as a category of public presentation" (Wikipedia, 2008). Today, the use of scientific **evidence** is so prevalent in the courtroom that the term *forensics* has become associated with *forensic science*. **Forensic science** is any science that is used in the courts or judicial system and it is extremely vital. The goal of a forensic scientist is to remain impartial and to appraise all of the available evidence in order to determine the truth.

In this class you will learn the basics of many different areas of forensic science, practice some of the procedures used by forensic scientists, and use your data to support your arguments. This class will very easily allow you to see the real-life application of scientific principles. I encourage you to become an investigator, question, analyze and wonder. As an investigator you will be asked to approach all of the work methodically and carefully. One of the most important tools of the forensic scientist is the ability to observe, interpret, and report observations **accurately**.

### **Growth Mindset**

*In all of the things that we do in class each day, we want to keep focuses on learning something new and getting better at a skill each day. Let's take a closer look at some of those things we'll be engaging in.*

**Goals - Vision Boards** At the beginning of the course you, as a learner, will be asked to reflect on your interests and future goals, both in this class and individually. Your vision board goals & your reflections will be a general guide for how we track your success in this class.

### **Attitude and Collaboration**

All students are expected to maintain a positive attitude and participate in activities, labs, and investigations. In some of these, collaboration will be crucial for your success, so we'll track certain behavioral aspects of collaboration in the form of reflection, peer and teacher evaluation.

**Challenge Boards** - Because much of the classwork in Forensics is self-paced, there will be times when you are finished with the assignment or lab and wondering what to do with your time. One of the expectations of the use of this time is the Challenge Board. The purpose of the challenge board is to expand your knowledge in the field of Forensics and up your Google Tech skills. The Challenge board will be displayed on our Forensics website. All items accomplished on the challenge board are tracked with the honor system. People who work in the field of Forensics must have strong integrity. Tracking your own progress honestly will give you the opportunity to test that integrity. What will you do when know one is checking on your or watching you? Let this activity help you practice making good choices.

## **Content / Concepts for study:**

Classifying evidence  
Locard's Exchange principle  
Fingerprinting ink, lift, develop  
Fingerprint Analysis  
Identification of over the counter drugs  
Expert Witness Testimony  
Crime Scene Protocol and Sketching  
Soil Analysis  
Blood Typing  
DNA Analysis PCR, and Electrophoresis

Collecting, Storing, and Processing evidence  
Time of Death approximations  
Entomology  
Anthropology  
General Drug Testing  
Handwriting analysis  
Hair and Fiber Analysis  
Impression Evidence  
Blood spatter Analysis

## **Lab Fee \$3.00**

### **Quizzes**

Quizzes may be used to check on your understanding of the material that has just been presented. Some quizzes are self paced and have the option to be redone to reach mastery level.

### **Assessments**

Assessments for each chapter are in the form of activities, reflection, peer and teacher evaluations. There will be different types of assessments of your learning for each unit.

### **Labs**

Labs make up a large portion of your grade. If you are absent or are planning to be absent, make arrangements to come in before or after school to make up the lab. Many of the labs that are required in forensics are graded solely by results attained. You must have impeccable lab skills, and follow flawless lab procedures to obtain the correct end results. Make sure to follow procedures for the labs carefully, or be prepared to start over.

### **Textbook**

Your instructor will give you handouts for textbook pages.

### **Materials Needed**

Pencils and pens  
Notebook and folder or notebook in a binder  
Calculator (School calculators are available for those who do not have one.)