

## Masconomet Regional High School Curriculum Guide

Course Title: Forensic Science  
Department: Science and Technology  
Course Level: College Prep

Course Number: 3021  
Grade Level and Phase: (11, 12)  
Length of Course: Half-Course – 2.5 Cr.

### Course Description:

This semester elective in science will provide an opportunity for students to learn how physical and biological science concepts are applied in investigative settings. Students will analyze various scenarios, collect evidence, and analyze situations from a scientific perspective. The course will build on concepts learned in previous courses in the biological and physical sciences.

### Objectives:

As a result of this course:

- A. Students will become independent thinkers who are capable of using critical-thinking skills to solve problems with real-world application.
- B. Students will understand the role that forensic scientists play in the law enforcement community.
- C. Students will recognize that forensic science is multidisciplinary and includes concepts in chemistry, physical science, genetics, anatomy, biology, physics, mathematics, psychology, law and medicine.
- D. Students will physically manipulate equipment and material in making relevant observations and collecting quantitative data; analyze the data to form conclusions and verify hypotheses and communicate their results to other students and to the teacher both verbally and in a formal written report.
- E. Students will identify questions and concepts that guide scientific investigations, design and conduct scientific investigations, use technology and mathematics to improve investigations and communications, formulate and revise scientific explanations and models using logic and evidence, recognize and analyze alternative explanations and models and communicate and defend a scientific argument.

These objectives support the following **Academic Expectations from the Masconomet High School Mission Statement:**

1. Students will communicate effectively.
2. Students will use problem solving skills.
3. Students will use a variety of technological and informational resources to gather, analyze, and synthesize facts, results, ideas and concepts.
4. Students will participate in decision making and team building activities
5. Students will demonstrate and practice an understanding of the rights and responsibilities of citizenship.

### Materials and Activities:

- You're an Eyewitness
- Locard's Exchange Principle
- Crime Scene Investigation
- Hair and Fiber Analysis
- Fingerprint Identification and Examination.
- DNA Fingerprinting
- Blood Typing and Blood Spatter Analysis
- Identification of Unknown Substances Using Paper Chromatography
- Time of Death Investigation (Flesh Fly Life Cycle Analysis)
- What Bones Can Tell Us

### Assessment:

- Laboratory Activities
- Quizzes and Tests
- Participation
- Blog Entries
- Group and Individual Research Projects