

Appendix A

Crime Scene Investigation

Synopsis:

Forensic Science is the application of scientific theories in the resolution of legal disputes. The use of scientific concepts is of value here because of the ability of this subject nature to provide reliable, pertinent and mostly definitive information about a given case. In this module, students will learn to appreciate the basic principles behind forensic science, such as preservation and processing a crime scene, analysis of trace and contact evidence, and an introduction to the legal processes involved in forensic science. Students will also get to go for a learning journey to the Supreme Court of Singapore and take a look at how litigation cases are tried in Singapore.

Outline

Session 1 [2 hours]

Introduction to Forensic Science

- Basic ideas surrounding Forensic Science

- Locard's Exchange Principle

- Basics of processing a crime scene

Analysis of Evidence

- Eyewitness – Facial biometrics

Session 2 [2 hours]

Analysis of Evidence

- Fingerprints

- Forensic Chemistry

 - Indicators

 - Iodine fuming

 - Magnetic and fluorescent powders

Briefing on Project Work Task

Students will research on a particular forensic technique and present on a real case that involved the use of that technique to crack.

Session 3 [2 hours]

Analysis of Evidence

- Blood spatter analysis and blood typing

- Traces of blood

 - Leuco Crystal Violet

 - Luminol

- DNA Analysis

 - DNA extraction and profiling

Session 4 [2 hours]

Analysis of Evidence

- Yaw and skid marks

- Fabric analysis

 - Microscopic examination

Burning test

Staining

Introduction to refractive indices of fabrics

Forensic Law

Introduction to the Evidence Act

Collection of evidence

Hearsay Rule

Corroboration

Opinion evidence

Burden of proof

Session 5 [3 hours]

Forensic Law and Sharing by Scientists

Learning journey with Forensic Experts Group, Singapore

Session 6 [2 hours]

Student Presentations

Each group of 3-4 students will be given 5-7 minutes to present their research findings with peer evaluation (rubrics provided), and 2-3 minutes for Q&A by teachers and peers.

Forensic Science in Singapore

Introduction to Attorney General's Chambers, Health Sciences Authority Forensic Science Division and Singapore Police Force Crime Investigation Department

Examples of real cases in Singapore and the part Forensic Science played in the investigation process

Student survey and reflections

Students will be asked to reflect on the key learning points of the course and provide feedback for future use.