

INTERNATIONAL COLLABORATION

For several decades, we have seen our society evolve and globalize continuously. We have seen technologies evolve in many ways. One of these advancements is the internet, which is also one of most used technological tools in the world today

Due to these innovations, we have seen many changes in the professional lives of people. Communication has never been easier, with one click, you can be connected with people from the other side of the world.

Consequently, we can say that there is a challenge for schools to adapt to this current world that we are living in. As the years go by, students must be equipped with not only the knowledge of these innovative tools, but be able to utilize them as well, so that they can plant their feet firmly in the labour world of tomorrow.

We come up with international projects that aim to open the minds of the students by facilitating their contact with other cultures. These projects allow students to collaborate with other students from different countries, which encourages interrelations and cultural exchange. The ultimate goal is to enrich them anthropologically and academically so that they become individuals who respect, understand and appreciate different cultures. In other words, obtain a truly rich and global perspective.

FORENSIC SCIENCE

CRIME SCENE - DO NOT ENTRY





Virtual Classrooms

Through case Studies, the students learn the basic forensic techniques used in crime investigations.

It's a pioneer project in which students from different schools from all over the world work collaboratively.

It is aimed at students who are studying chemistry in Grades 11 or 12. Students will work on the basis of a forensic case.

There will be groups of 8-10 students. The groups would make up of students from different schools and countries.

The laboratory practices are simple and described clearly.

Each teacher will evaluate their students.

The project starts in September and ends in December 2017.

Introduction

Forensic science is an interdisciplinary field that grew out of the need to apply knowledge from multiple sciences - biology, geology, physics, psychology, and especially chemistry- to analyze evidence from crime scenes. A mayor focus of the modern forensic science crime laboratory is the chemistry of evidence, and the same principles and laws that are taught in a traditional chemistry course apply to the evidence.



Camarena's case



Why do you think forensic science is important?

Soil Analysis

Soil is one of the most common forms of physical evidence found at crime scenes. For example, a vehicle suspected of having been used in an armed robbery may later be found to have soil from the crime scene adhering to its tires or wheel wells, thereby establishing that that vehicle was present at the crime scene. Similarly, a suspected rapist or mugger may have soil adhering to his clothes or shoes. (Soil specimens are often particularly easy to obtain from shoes or boots with deep tread. If soil found on a suspect's shoes or clothing is consistent with soil present at the crime scene, it establishes that the suspect was probably present at that scene.



Laboratory I

Hair and Fiber Analysis

Along with soil, hairs and fibers are the most common forms of trace evidence processed by forensic labs. In nearly all violent crimes, hairs and fibers are transferred from the criminal to the victim or the crime scene, and vice versa. Hairs and fibers are easily transferred from people to people, people to objects, and vice versa, and they often cling tenaciously to the new environment. Hairs and fibers do not degrade quickly, which means that known specimens collected long after the fact can be compared successfully against questioned specimens collected weeks, months, or years before at a crime scene.



Laboratory II

Glass and Plastic Analysis

Analysis of glass and plastic specimens is an important part of the workload of any forensics lab. For example, a forensic scientist may be asked to examine plastic taillight fragments found at the scene of a hit-and-run accident to determine the make and model of vehicle from which those fragments originated, or to match glass fragments found embedded in the clothes or shoes of a suspect against broken glass found at a crime scene.



Laboratory III

Revealing Latent Fingerprints

Even someone who knows nothing else about forensics knows about fingerprints. The individuality of fingerprints had been generally accepted as established by forensic scientists and courts by the early 20th century, and the billions of fingerprint specimens taken since then have confirmed fingerprints as unique individual characteristics.



Laboratory IV

Detecting Blood

Detecting blood, in the field and in the lab, is an important part of forensic work, but it is surprisingly difficult to establish unambiguously that a suspect stain is in fact blood. Even if obvious splatters or pools of blood-like material are found at a crime scene, it can't be assumed that they are blood. More than one investigator has been fooled by paint, hydraulic fluid, or other liquids that resemble blood, sometimes quite closely. Furthermore, bloodstains are by no means always obvious. Bloodstains may have been washed away by the criminal, leaving only invisible traces, or the blood may have been deposited on foliage or other materials that make it difficult to see.



Laboratory V

Forensic Drug Testing

Drug tests are a major part of the workload of most forensics labs. The vast majority of forensic drug testing focuses on recreational drugs rather than pharmaceutical drugs, although, of course, many pharmaceutical drugs are misused for recreational purposes. Recreational drugs include those—such as cocaine, methamphetamine, and heroin—which have few or no legitimate medical uses as well as drugs such as oxycodone, hydrocodone, methylphenidate (Ritalin), numerous opiates, and various steroids, which have legitimate medical uses but are often diverted for recreational use. Finally, recreational drugs include those sometimes referred to as “designer drugs,” street drugs that are manufactured exclusively in underground laboratories and have never been manufactured by legitimate pharmaceutical companies.



Laboratory VI



Spectroscopy Methods

Scientific Police Division

You have to visit the Scientific Police Division of your city.



Describe the visit

Conclusions



Conclusions of the investigation

Username
Password

HOW TO PARTICIPATE

Send an e-mail to ibsc@gaztelueta.com with the following information:

- School
- Country
- Nome of teacher
- E-mail of teacher
- Name of students
- E-mails of students

You'll receive username and password to enter the Moodle platform.