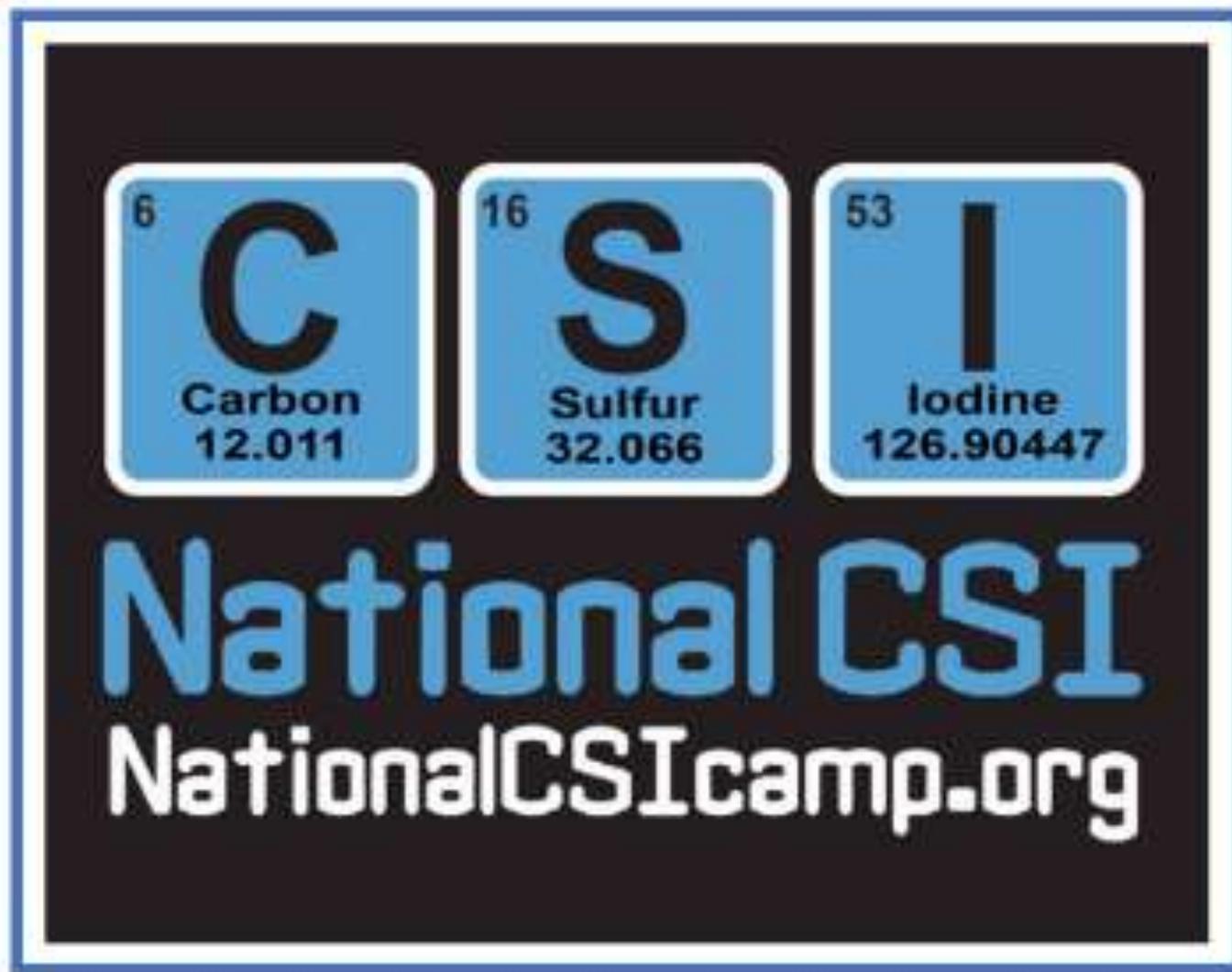


National CSI Class 1-day Curriculum



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● Law Enforcement Intro, Court Systems and Degrees of Crimes: (0900am-1000am)

Students will be introduced to the history of the legal system, the overall criminal justice system, crimes types and law enforcement pioneers.

What to expect in this Course

Types of crime scenes, specifically homicides

This is a science based course with related topics in Law Enforcement

We will cover:

- Forensic DNA
- Ballistics
- Latent Fingerprint Analysis
- Blood Spatter
- Physics
- Evidence Collection
- Bullet Velocity

Law Enforcement History, Sir Robert Peele

In Britain today all policemen are commonly referred to as 'Bobbies'. Originally though, they were known as 'Peelers' in reference to one Sir Robert Peel (1788 – 1850).

Today it is hard to believe that Britain in the 18th century did not have a professional police force. Scotland had established a number of police forces following the introduction of the City of Glasgow Police in 1800 and the Royal Irish Constabulary was established in 1822, in large part because of the Peace Preservation Act of 1814 which Peel was heavily involved with. However, London was sadly lacking in any form of protective presence and crime prevention for its people as we entered the 19th century.

Following the success of the Royal Irish Constabulary it became obvious that something similar was needed in London, so in 1829 when Sir Robert was Home Secretary in Lord Liverpool's Tory Cabinet, the Metropolitan Police Act was passed, providing permanently appointed and paid Constables to protect the capital as part of the Metropolitan Police Force.



The Criminal Justice System



Primary Goal: reducing and preventing criminal*

Sentencing determines degree of crime

1	2	3	4
First degree – imprisonment shall be between 10 to 20 years	Second degree- imprisonment shall be between 5 to 10 years	Third degree- imprisonment shall be between 3 to 5 years	Fourth degree – imprisonment shall not exceed 18 months

Trial Phase



● Science Pioneers, Physics and Laws of Motion, the science of Triangles, Pythagorean Theorem as it relates to Forensics: (1000am-1100am)

This is the second block of instruction incorporates and introductory background of the essential sciences and basic theories as they relate to crimes scenes. The math of triangles, the pathagorem theorem and importance in proving evidence based crime scenes with respect to both bullet path trajectory and the origin of the bullet, as well as the providing the importance of the angle of a drop of blood left behind at the crimes scene.

Laws of Motion

There are three basic laws of motion:

- 1) A stationary body will stay stationary unless an external force is applied to it.
- 2) Force is equal to mass times acceleration, and a change in motion (i.e., change in speed) is proportional to the force applied.
- 3) For every action, there is an equal and opposite reaction.

Law Enforcement and Science Pioneers

Newton made discoveries in optics, motion and mathematics. Newton theorized that white light was a composite of all colors of the spectrum, and that light was composed of particles.

Isaac Newton (January 4, 1643 to March 31, 1727) was a physicist and mathematician who developed the principles of modern physics, including the laws of motion.

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Real life applications of Triangles

Crime Scene applications of Triangles?

The Math of Triangles

Pythagorean Theorem

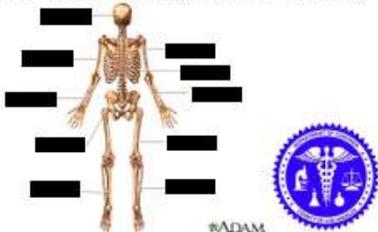
Example B

$A^2 + B^2 = C^2$

(Add up to 180°)

● Medical Examiners Role, Biology, Time of Death Calculation, Entomology, Rigor/Livor Mortis: (1100-1200)

This is the third block of instruction covers the Medical Examiners role in a Forensics investigation, Methodologies and importance of 'Time of Death' calculation, and Entomology as it relates to a 'Time of Death' part of an investigation.

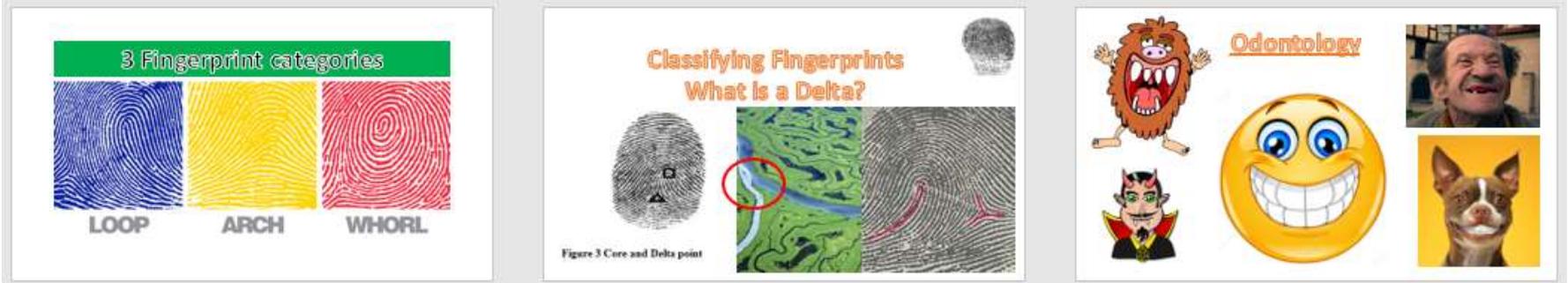
<p>Be Familiar with Biology and anatomy</p> <p>Name them</p> 	<p><u>Methods of Determining TOD</u></p> 	<p>Why is Time of Death (TOD) so important???</p>  <p>How do we determine TOD if we aren't there?</p>
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Lunch (1200-1230)

Students are asked to bring their own lunches.

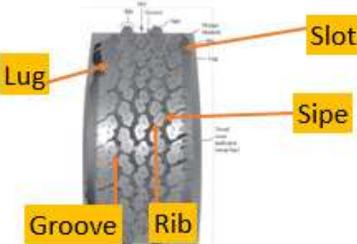
● Fingerprinting, Odontology, DNA, Fingerprint lifting (1230pm-130pm)

This is the fourth block of instruction covers the types of fingerprints. Students will self-print each of their fingers and identify each fingerprint pattern. The Odontology drill requires the matching of molded teeth impressions to bite marks in a clay medium. Each student will also lift a latent fingerprint from a surface within the classroom.



● Footprints and Tire Tracks and Footprint Casting (130pm-230pm)

This is the Fifth block of instruction introduces students to type of footprints, foot strike patterns as well as tire tracks. The students will break into smaller groups and cast a foot print somewhere outside, near the classroom.

<p style="text-align: center;">Casting and Track Impressions</p> 	<p style="text-align: center;">Anatomy of a tire</p> 	<p style="text-align: center;">Arch Types</p> <p style="text-align: center;">Foot Arch Types</p>  <p style="text-align: center;">Which are you?</p>
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● Blood Splatter analysis (230pm-300pm)

This is the Sixth block of lecture covers blood types, frequency of blood types in a population base including the analysis of blood patterns. Each student will analyze simulated blood droplets using simple Geometry of SIN/COSINE that measures the angle of occurrence and why that is important at a crime scene.

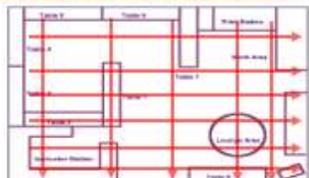
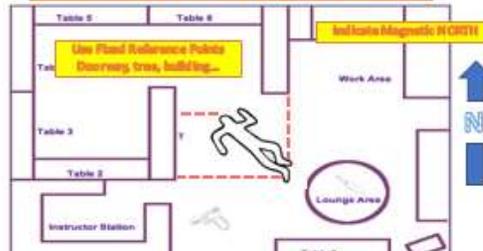
● Guns, Bullets, Trajectory (230pm-300pm)

This is the Seventh block of instruction cover simple nomenclature of guns and bullets; as and the laws of science of how a bullet behaves in flight and what evidence can be procured from a gun and bullet, left behind at a crime scene.

Caliber	Bullet Caliber and Type	Bullet Image (to zoom)	Bullet Weight (grains)	Impact Velocity (ft/s)	Impact Velocity (m/s)
9A	How to identify a bullet, read this		124	1120	341
9A	How to identify a bullet, read this		148	1061	323
9	How to identify a bullet, read this		124	1090	332
9	How to identify a bullet, read this		118	1420	432
9A	How to identify a bullet, read this		124	1420	432
9A	How to identify a bullet, read this		148	1420	432
9	How to identify a bullet, read this		118	1390	423
9	How to identify a bullet, read this		118	2060	628

● Evidence Collecting and Crime Scene Processing Responsibilities (300pm-400pm)

This is the Eighth block of instruction covers the Crime Scene Officers/Detective's responsibility at a crime scene. Search methods at a crime scene and the importance of documentation of potential evidence is highlighted. Roles and responsibilities of each Detective crime scene are covered. Students are then asked to volunteer for one of those positions covered in lecture.

<p><u>Once Scene is secure and safe, what do you do?</u></p> <p>Take immediate action and secure scene...How?</p>  <p style="text-align: right;">TL</p>	<p><u>Search Team's Responsibilities</u></p> <p>Establish systematic approach to search room</p> <p>What type of search is appropriate?</p> 	<p><u>Crime Scene Sketch Responsibilities</u></p> 
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- Processing a mock crime scene (300pm-400pm)

This Final block of instruction require the students to process a mock crime scene. Each student will be paired with another student to work with each other on their task they have been given. The information collected from each pair will be funneled to the Team Leader. After all of the evidence is collected and each team member communicates with the other teams, the group, as a whole, will therorize on what happened at the crime scene based on the clues left behind.

