

Challenge: CSI: UK



Content

Sometimes the reason someone goes missing is as a result of a crime, or a missing person is found deceased. In these cases the police need to collect evidence and keep it uncontaminated.

Activities

Scouts and Guides

Attend the crime scene and do at least two of the following:

- Collect finger prints and find the culprit!
- Collect footwear marks.
- Find out which chair the baddie sat on.
- Talk about the types of evidence you might find.
- Bag and tag the evidence.

Senior Section, Explorers and Network

Manage the crime scene and do all of the following:

- Establish a cordon and explain it.
- Identify types of evidence you might find.
- Collect finger prints and find the culprit!
- Bag and tag what you find.
- Maintain the chain of evidence.
- Keep an entry log.
- Create a photo record to substantiate your work.

Equipment

Three different coloured woolly jumpers. Sellotape. Shoes with some sole damage. Camera (on a phone is suitable). Clean nonporous surfaces such as glass or plates or old CDs. Fine powder such as custard powder, dried milk or children's paint. Paper – any colour that contrast with the colour of our fine powder. Ink pad or paint for fingerprinting. Chairs with fabric covering or with a cushion on. Tape or rope to a create cordon. Paper and pen. Rubber or medical gloves. Magnifying glass for spotting fibres!

Setup

Think of a scenario crime scene which you can have patrols investigate. Setup a location, such as your meeting space or car. Meet participants around the corner and set the scene; there's been a crime and they are the CSIs (Crime Scene Investigators) who need to collect evidence.

Background

Crime Scene Investigators

A Crime Scene Investigator is responsible for examining scenes of crime where it is required to prove physical contact has occurred between people, items and locations. They identify, locate, record and retrieve potential evidence from scenes of crime. The materials recovered, if pertinent, can then be used in a court of law.

Before examining a scene they need to gather information from a range of sources, for example from witnesses, police officers or victims of crime. From the questioning, they are able to formulate a forensic strategy that will determine the type of examination that is necessary.

Once onsite, CSIs need to be able to maintain health, safety and welfare throughout their work. They also record all relevant information relating to the scene examination, evidence collection and completion of the examination.

Collecting fingerprints

First of all, someone will need to leave several fingerprints on non-porous surfaces such as CD's, window glass, or plates; make sure the surface doesn't have others' prints on first though. Make a few prints so pairs can all have an area to work. We have reliable information that running your hand through the roots of your hair will provide enough grease to leave a good set of prints!

Now cover the surface with a fine powder; custard powder or dried milk has proved to be a good substitute for the fine substance the CSI use. Then use a strip of clear adhesive tape; lay it over the top of the dusty print so it sticks. Peel it off and stick it to a piece of colour contrasting paper. You should be able to see a beautiful print!

See if a positive identification can now be established by taking finger prints of likely culprits, including of course the person who left the prints. Use a thin layer of paint or an ink pad to coat each finger. In the second resource for this challenge you'll find a finger print record sheet. Roll each individual finger from edge to edge in the appropriate box to show detail. It's important not to use too much ink as fine detail won't show up. Compare the prints with the evidence recovered to find the culprit!

You may like to try this a few times before hand so that it all goes well on the night. To help you with this and to match up the fingerprints visit this webpage from Worsley School in Alberta Canada:

<http://www.worsleyschool.net/science/files/finger/prints.html>.

Collect footwear marks

For this you need a shoe or shoes, preferably with some damage or distinctive sole pattern.

Footwear marks are left in three ways:

- A deposit is left behind, for example a blood, paint, oil, grease or mud print.
- Material is removed with the footwear i.e. dust or powder leaving a negative impression.
- A three dimensional impression is left in soil, sand etc.

Any damage to the bottom of the footwear may be represented in the impression left behind. Only one area of damage is enough for a scientist to compare with a suspect's footwear and conclude the footwear was at the scene.

In your scenario a 3D impression could be left in soil or sand; with some plaster of paris or thistle finish plaster you can take a cast. The soil or sand could be in trays so it can be 'found' indoors.

You could also try taking some photos, colour and black and white, and from different angles with and different lighting to see if this helps bring out tread patterns and damage.

Lifting prints in dust or blood for example is done in the same way as collecting fingerprints but using a larger sheet of sticky material.

This article from America is quite informative and brings up an interesting point right at the beginning. Has the evidence placed the owner of the shoe at the crime scene or just the shoe?! This might be a good question to ask at the end of your scenario: <http://www.forensicscienceresources.com/Shoes.htm>.

Which jumper sat on which chair?

Choose a selection of brightly coloured jumpers (red/ blue/ green) and some chairs or car seats of a different colour. Pre clean the chairs or car seats with tape or a lint brush to get rid of previous material. When clean, rub one brightly coloured garment on each of the three seats so they leave some fibres. Patrols or small groups take turns to use tape to collect fibres from the chairs and examine them to identify who sat where.

What types of evidence might you find?

Contact trace; transferred through contact:

- DNA
- Fibres
- Glass
- Paint
- Wood
- Pollen

Impressions:

- Finger marks
- Tool marks
- Palm marks
- Tyre marks
- Footwear marks
- Bite marks

Mechanical Fit:

When something is broken the parts can be put back together like a jigsaw. Their break pattern is unique. This can be demonstrated by tearing paper and

putting it back together.

Evidence could be the tip of screwdriver found in a window frame for example.

Everyone should find an object or surface and decide what evidence could potentially be found on it using the suggestions above and other ideas. Participants can choose any object they like, for example:

A note torn from a pad might allow finger marks, ink analysis, handwriting analysis, mechanical fit back to the pad and indented writing (from pages above).

Other items you choose could be broken glass, the floor, the doorway, car foot well, a shoe etc.

Manage a crime scene

Once a crime scene has been identified it needs to be managed so that any evidence collected can be used in a court of law. Cordon off the area and record everyone entering and exiting the area in an entry log. A log should include the name of the person running the log and names and times of people entering and leaving the scene every time they enter or leave.

Collect and record evidence

This is often referred to as “bag and tag”. All clues or evidence must be recorded in situ by taking photos, making diagrams and packaging items to prevent contamination. Diagrams must show the location of items so if required evidence can be precisely re-located. It should include measurements showing the items location from two fixed points, such as walls.

Once photographed, complete an evidence tag (see second resource documents) so everyone knows what’s inside a package. Detailed descriptions are needed, such as sizes, colours, markings, damage, contents, materials etc. The detail is important to confirm that the evidence in the bag is original if it comes to a trial.

Then, select the right packaging to ‘bag it’. To collect any evidence you must wear gloves to prevent contamination. Bagging materials include:

- Paper evidence is bagged in plastic, e.g. lifted fingerprints or written notes.
- Plastic items are kept in paper, e.g. pill bottles.
- Fragile items go in rigid containers, e.g. paint flakes.
- Clothing goes in paper so it can breathe.
- Sharp items go in rigid containers.

Use your imagination when setting your crime scene. A butter knife could be ‘found’ instead of a cleaver and packed in a washing up liquid tube or plastic pipe.

As finding a missing person (misper) is the prime objective of search and rescue, in the majority of real searches, teams finding a clue, such as a coat matching the misper's description will be told to "mark it and move on". This is a much quicker process than "bag and tag" but the location must be recorded and clearly marked so a recovery team can locate it easily later on.

Maintain the chain of evidence

From the moment of seizure a record is kept of all evidence movements and storage locations. As the package passes between people towards an evidence locker, signatures must be added to the evidence bag page in order to maintain continuity.

Create a photo record to evidence your work

Each photograph is given a reference, your Initials/1 and an accompanying description known as the photographic index. Every photo taken must be listed, even if it's rubbish, in which case it's labelled as a 'misfire', for example:

- TJ/1 View showing front elevation of premises, right
- TJ/2 View showing front elevation of premises, left
- X Misfire
- TJ/3 View showing front elevation of premises, centre
- TJ/4 View towards front door, closed
- TJ/5 View towards front door, open

A floor plan view should support the photos; see below. It shows the layout of the area, where the photographer was standing and what direction the camera was pointing. This is especially helpful when photographing outdoor scenes. Overlapping the images slightly can assist the viewer with continuity and ensures they still know where is reference within the scene. Include close ups of pertinent items.

Thanks go to Richard Hunt FSSocDip, CSI Trainer at Kent Police Training School for his time, assistance, and guidance in putting this information together.

Not to Scale
Plan View showing external N° 2 Street Scene

Note:
Corner's 1-4
are denoted
with a square
e.g. 1

