

Trace Evidence

Name _____

Use the websites on the Forensic Science Links (page 2) of the Kid Zone at <http://sciencespot.net/> to complete this worksheet.

1st Site: Wikipedia – Locard's Principle

1. Edmund Locard was the director of the very first _____ laboratory in existence, located in Lyon, _____.
2. His exchange principle states that "with _____ between two items, there will be an _____."
3. _____ is any type of material left at—or taken from—a crime scene, or the result of _____ between two surfaces.
4. Why is evidence placed in a paper bag or envelope rather than a plastic one? _____

2nd Site: AC Trace Evidence

1. Hair is one of the most telling pieces of trace evidence that can be collected from a crime scene. Name two ways hairs may be used to help an investigation.
 1. _____
 2. _____
2. Fibers from _____, carpet, _____ and other sources that are foreign to the crime scene may indicate that the initial attack happened somewhere else, or might point to where the suspect _____ or _____.
3. Shattered _____ might indicate where a victim has been held, such as in a hostage situation, and _____ chips might tell the investigators what kind of _____ the suspect drives.
4. Dirt has different _____ compositions in different areas of the same city and can tell investigators where a _____ or _____ has been. Similarly, certain kinds of dust – such as _____ – can only be found in certain areas.
5. Ballistics is the study of the marks and residue left by _____ and _____. A lot can be determined from the _____ made by a bullet or by the gunshot _____ on a victim's skin.
6. When a criminal uses a _____ to break into a home, the type of tool used leaves tell-tale marks in _____, metal, _____ and other surfaces that can tell the investigators exactly what it was.

Site #3: Hair Detective

1. Read through the story and write a brief description of the crime. _____

2. Click to go to the lab to answer these questions.
 - (A) What is the power of magnification on the scanning electron microscope? _____
 - (B) What other equipment/tools will you use? _____
 - (C) Follow the directions to test each hair.
 - (D) What was the outcome? _____

Done? Explore any of the other sites on the Forensic Science pages of the Science Spot's Kid Zone.