

# Trace Evidence

Name \_\_\_\_\_

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

## 1<sup>st</sup> 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? \_\_\_\_\_  
\_\_\_\_\_

## 2<sup>nd</sup> 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.

### 3<sup>rd</sup> Site: Forensic Science Lab

1. One of the most important principles in a lab is that any item of \_\_\_\_\_ that enters the lab must never come into contact with anything that could \_\_\_\_\_ it.
2. The \_\_\_\_\_ Evidence Unit of a lab is an area where scientists look for clues in evidence such as hair, \_\_\_\_\_, dust, fiber, and \_\_\_\_\_ remains.
3. A chemistry unit in a lab is used to test samples of \_\_\_\_\_ and \_\_\_\_\_ for alcohol, drugs and poisoning. Chemistry is also used in the analysis of synthetic materials such \_\_\_\_\_, dyes and \_\_\_\_\_.
4. The serology unit specializes in the identification and analysis of \_\_\_\_\_ and other bodily \_\_\_\_\_, as well as \_\_\_\_\_ sequencing.
5. Material units are used to identify and analyze \_\_\_\_\_, paints, ceramics, \_\_\_\_\_ and wood in an attempt to trace a \_\_\_\_\_ back to a possible \_\_\_\_\_. The biology unit is in charge of analyzing all biological evidence such a \_\_\_\_\_ and \_\_\_\_\_.
6. Firearms units test \_\_\_\_\_ to see which weapon made the mark on an object or wounded or killed a person. To be able to carry out these tests, firearms specialists study the used bullet \_\_\_\_\_ and use shooting \_\_\_\_\_ to fire weapons, identify the bullet marks and establish the firing \_\_\_\_\_.
7. \_\_\_\_\_ is used to document crime scene evidence. Large labs also have \_\_\_\_\_ and explosives experts as well as specialists in \_\_\_\_\_, computer data, files, documents, audios and \_\_\_\_\_ recordings.
8. Click the link for “Interactive” in the menu at the left side of the page and then choose “Quizzes.” Try at least 3 of the quizzes. List the name of each of the quizzes you tried and your final score for each in the space below.

Quiz: \_\_\_\_\_ Score: \_\_\_\_\_

Quiz: \_\_\_\_\_ Score: \_\_\_\_\_

Quiz: \_\_\_\_\_ Score: \_\_\_\_\_

**You may visit any of the sites listed on the Forensic Science page!**