**Trace Evidence Notes
(Chapter 16)**

1. **Trace Evidence**
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ evidence found at a crime scene in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ amounts
* Examples:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Examination of Trace Evidence uses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* Microanalysis= application of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, collection, and analysis of trace evidence
* Purpose= To determine if an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of persons, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and things can be made AND the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of that association
1. **Instruments of Microanalysis**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (x) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

= (x)

* Amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_seen/revealed is related to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of the microscope . . . which is the ability to distinguish \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in \_\_\_\_\_\_\_\_\_ structure.



* Types of light microscopes

A. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_microscope

* + - * Used in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ evaluation of trace evidence
			* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
			* Utilize \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light
			* View has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_appearance

B. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light microscope

* + - * Most often employed with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_illumination
			* Allows to see details of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of evidence

C. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light microscope

* + - * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to light microscope that allows for plain polarized light
			* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of normal light are in \_\_\_\_\_\_\_\_\_\_\_\_directions (360 degrees),

but if restrict vibration to one direction,

you get plain polarized light

* + - * Can give better \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ data

(\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can be made more easily)

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (SEM)

* beams of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_bounced off surface of specimen

 to produce image

* can magnify much \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_light microscope

SEM has possible range of \_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Combines \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ so that light absorption properties of a very small sample can be recorded
* Helps experts to determine \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a sample. . . such as with fibers, hair, and painted surfaces