CRM 231 - Lab Experiment A: Hairs and Fibers

Supplies:
- Several Head Hairs (1-3 strands)
- Several Body Hairs (1-3 strands)
- Several Animal Hairs (1-3 strands)
- Several Fibers --- Colored preferred (1-3 strands)
- 1 – Inexpensive magnifying glass (or microscope, if you have one)

Instructions:

A. When collecting your hair samples, be sure the three of the human hair samples are “plucked” to insure that the root is attached to the hair sample.
B. Then, take an additional sampling of “cut” human hair. If possible, obtain each of the plucked and the cut samples from different donors. This will insure that you have a variety within your sampling group.
C. It is best to place your hair samples on a contrasting background. For example, a black hair should be viewed on a white paper background, and a blonde hair on a dark paper background.
D. Using your magnifying glass (or microscope if you have one), examine each sample closely. Can you identify the following: (1) Cortex; (2) Pigment granules; (3) Cuticle; and (4) Medulla from your sample?
E. Next, take a standard flashlight and turn it on. Place your hair samples on top of the lens as you hold the light upward. Examine the hair sample from a side view with your magnifying glass—does this produce any variances in color or pigment that you did not observe while examining the hair sample on the paper background?
F. Why was it necessary to have both plucked and cut samples of hair? Does the root of the hair have value to your microscopic examination, or will the hair root have value in other related lab testing?

Examiners in the lab are specifically looking at the color and the width, distribution pattern of the medulla, color and distribution pattern of pigment in the cortex, and finally the cuticle pattern. If an examiner finds a match to each of the above characteristics, research has shown that there is a 4,500 to 1 probability that the hair came from the donor/suspect (Royal Canadian Mounted Police, n.d.).

Directions:

Type a one to two page synopsis of your finding(s) and experience. Respond to Questions asked in Steps D (include color and shape of the hair strands), E, and F and describe in layman terms what the sample looked like to YOU. Submit your synopsis to the Assignment box no later than Thursday, 11:59 PM EST/EDT. (This Assignment box maybe linked to Turnitin.)

Optional: Discuss your experience with your classmates in the Lab Discussion board in the Course Home menu.