**BIOL 104 Forensic Biology**

**Lab 6 Examination of Hair and Textile Fibers by Microscopy**

1. **Introduction**

Please read p.123 of Experiment 15 in your lab manual and Review FIGURE 15-1 Structure of hair and FIGURE 15-2 Scale patterns of several types of hair. Also read PART A: GENERAL INTERNAL CHARATERISTICS on p.125, PART B: SCALE PATTERNS and PART C: HAIR COLOR, both on p.126. Finally, review FIGURE 15-3 Cross sections of several natural and synthetic fibers.

1. **Materials & Methods**

**Wipe down your lab bench and wash your hands.**

1. Using the Compound Light Microscope
2. Obtain the compound light microscope corresponding to your lab bench number from the cabinet. Always carry the microscope with both hands, one hand supporting the **base** and the other holding the **arm**.
3. Plug in your microscope and turn on the light. Make sure light is passing through the **aperture**. Adjustments may be made using the **diaphragm**.
4. If it is not already, rotate the **nosepiece** so that the **scanning power objective lens** is in place over the **aperture**.
5. Move the stage as far away from the **scanning power objective lens (4x)** as possible using the **course adjustment knob**.
6. Obtain a slide with the letter “e.”
7. Press the clip of the **mechanical stage** so that you can sit your slide flat on the **stage**. Slowly release the clip securing your slide in place.
8. Move the stage as close to the **scanning power objective lens** as possible using the **course adjustment knob**.
9. Look through the binocular **eyepiece**; you may want to adjust these for your own eyes. The ocular lens will magnify objects by 10x.
10. Bring the specimen into focus using the **course adjustment knob**.
11. Rotate the **nosepiece** to bring the **medium power objective lens (10x)** into place.
12. Bring the specimen into focus using the **fine adjustment knob**.
13. Rotate the **nosepiece** to bring the **high power objective lens (40x)** into place.
14. Bring the specimen into focus using the **fine adjustment knob**.
15. To remove the slide, rotate the **nosepiece** to bring the **scanning power objective lens** in place and move the stage as far away as possible using the **course adjustment knob**.
16. Obtain a slide with 3 colored threads.
17. Repeat steps 6-14 to view the slide.
18. Obtain additional slides and repeat steps 6-14 to view the slide.