1. Restate the purpose of this lab.

2. Below is a simple flow chart of the lab. Next to each step, briefly note why you think that step was necessary for the lab.

   Mark your plate with X's and indicate which eye types will be on each X
   ↓

   Use tweezers and paintbrushes to move several of one type of fly on to the appropriate X, then crush
   ↓

   Repeat step 2 with various fly types
   ↓

   Place the TLC plate in the chromatography chamber
   ↓

   Remove TLC plate and dry
   ↓

   Under UV illuminator, circle and label the pigments found
3. What is chromatography?

4. What is the purpose of the filter paper wick that is placed in the chromatography chamber?

5. How does the chromatography paper results reflect the biochemical pathway that determine the phenotype of the eye color?

6. Why must you wear UV goggles when working with the illuminator?

7. How are genes related to enzymes and how are enzymes related to the physical appearance of an organism?

9. Draw and color the results of your TLC plate. Identify each color as it appears when illuminated. Out to the side label the compounds which make up each color (see overhead).

10. Do biochemical pathways only affect eye color in flies? Discuss how these pathways may affect the fly in other ways. Then apply this same concept to human genes and biochemical pathways found in humans (i.e. phenylalanine).