

## Hair Examination Lab

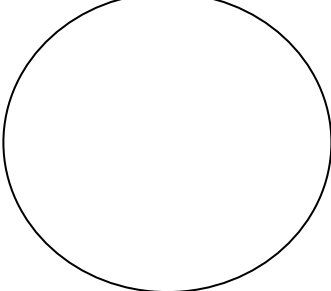
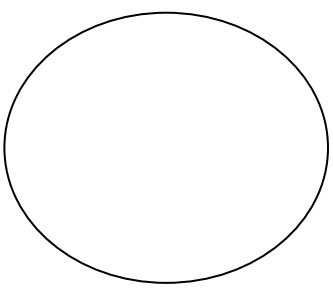
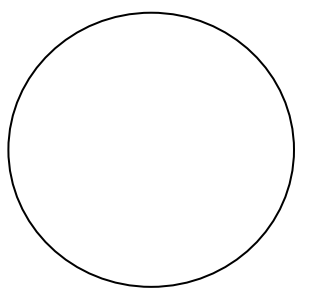
### Forensics

Hair evidence is considered class evidence. Each and every person sheds many strands of hair per day and it is very common to find hair evidence at a crime scene. In this lab you will look at your own hair and compare it to that of different species of animals.

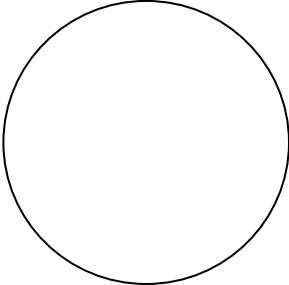
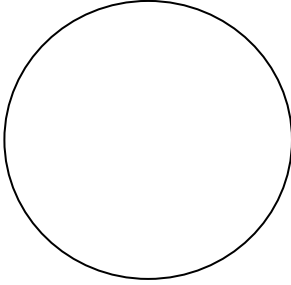
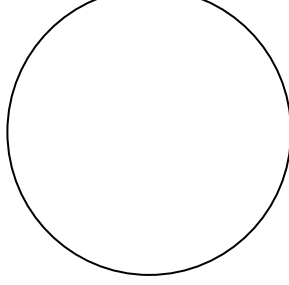
#### Part A:

Pull out a strand of your own hair and examine it with a hand lens. You may need to use different backgrounds to make it easier to see.

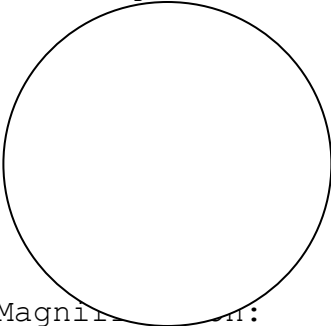
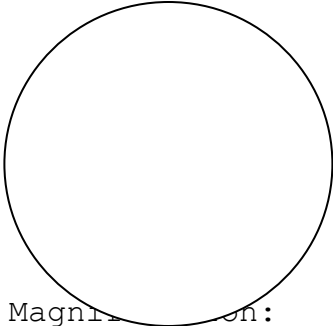
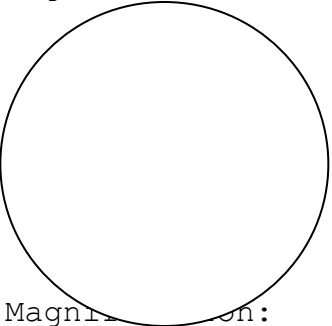
1. What does the root look like? Describe its shape and accompany your description with a sketch.
2. What does the tip or end look like? Describe it and accompany your description with a sketch.
3. Prepare a wet mount of your own hair and view the shaft of the hair on scanning, low and high powers. Include your sketches below (use color to help define you sketches):

Scanning Power	Low-Power	High-Power
		
Magnification:	Magnification:	Magnification:

4. Reposition your hair to view the root and view it on scanning, low and high powers. Include your sketches below:

Scanning Power	Low-Power	High-Power
		
Magnification: _____	Magnification: _____	Magnification: _____

5. Reposition your hair again to view the tip or end and view it on scanning, low and high powers. Include your sketches below:

Scanning Power	Low-Power	High-Power
		
Magnification: _____	Magnification: _____	Magnification: _____

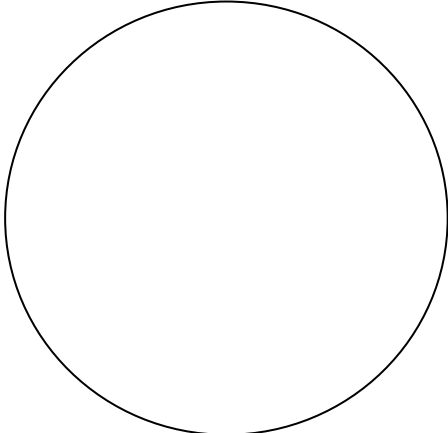
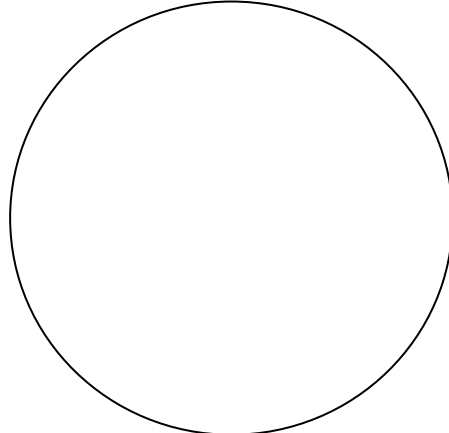
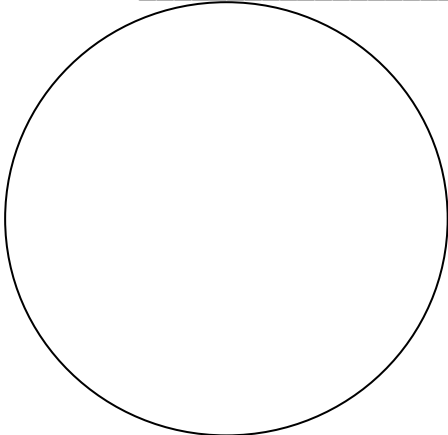
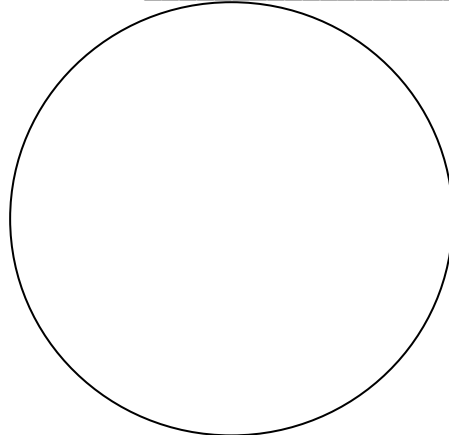
6. Locate the three primary structures of your hair and choose the best descriptions for each feature:

- Cuticle Scales       Flat and smooth       Protruding or spiky       Other: \_\_\_\_\_
- Cortex Thickness       Thick       Thin
- Cortex Color       Same color throughout       Different colors – Explain: \_\_\_\_\_
- Medulla Style       Broken       Continuous
- Medulla Thickness       Thick       Thin
- Medulla Transparency       Transparent       Semi-transparent       Opaque

7. Compare your hair sample to that of your partner. How is it similar and how is it different? Describe each in the space below:

**Part B:**

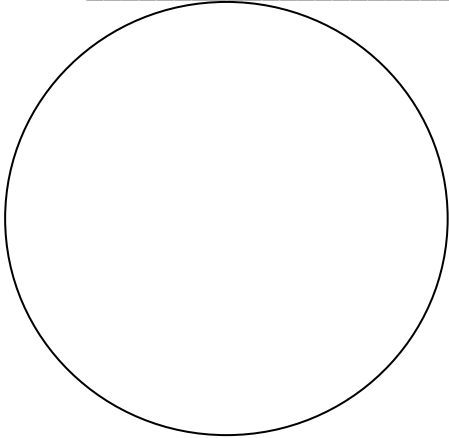
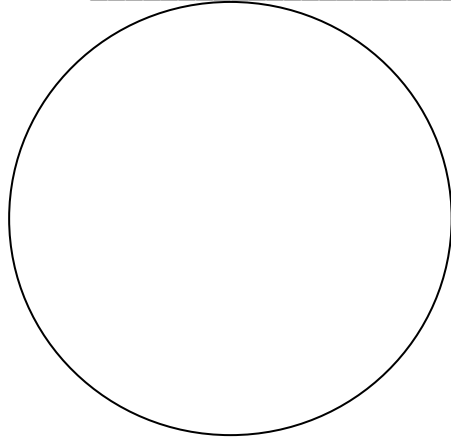
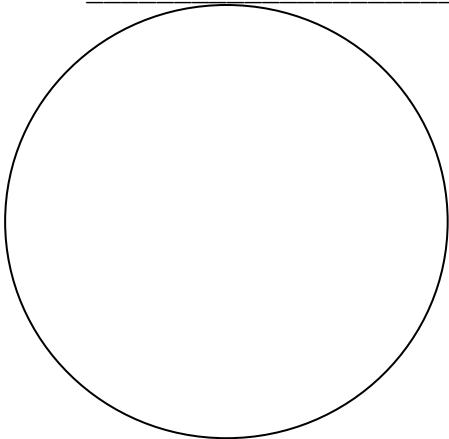
In this part, you will examine 4 prepared slides of different colors of human hair. Draw each of the hairs at high power (make sure to use colored pencils to accurately depict the hair colors and parts). Be sure to note any unique characteristics you observe.

<p>Hair Color: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>	<p>Hair Color: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>
<p>Hair Color: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>	<p>Hair Color: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>

8. Compare and contrast (in complete sentences) the different hair colors that you just observed. Make sure to include differences you saw in the parts of the hair as well.

**Part C:**

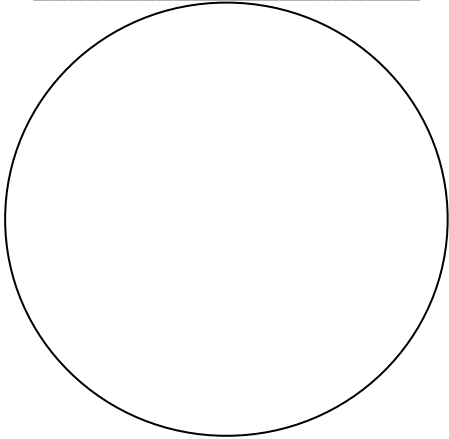
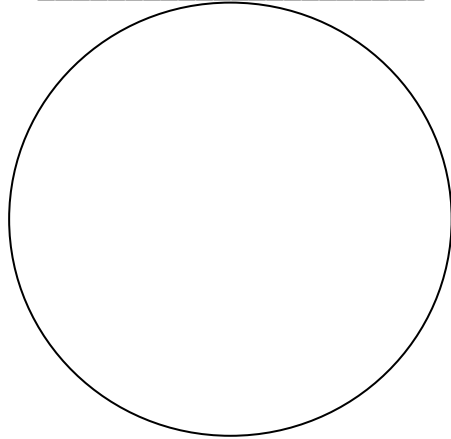
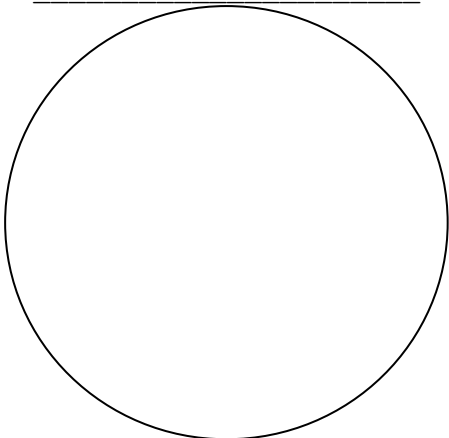
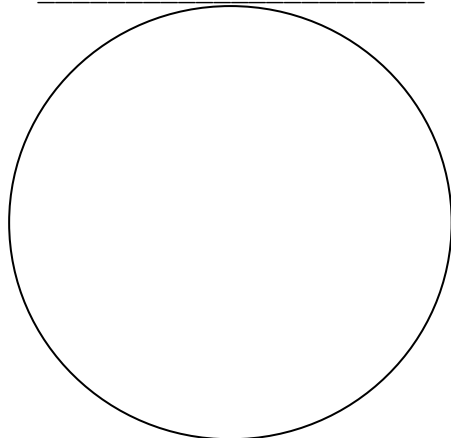
In this part, you will examine prepared a slide of different human hairs (curly, straight and gray) . Draw each of the hairs at high power (make sure to use colored pencils to accurately depict the hair colors and parts). Be sure to note any unique characteristics you observe.

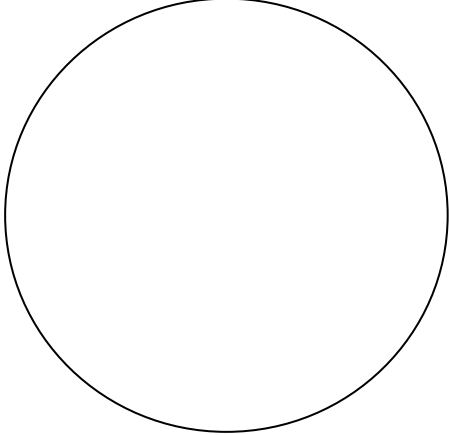
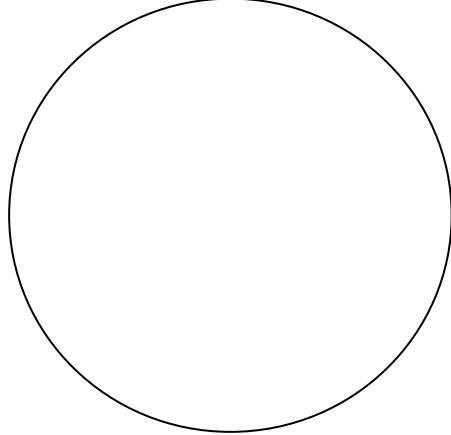
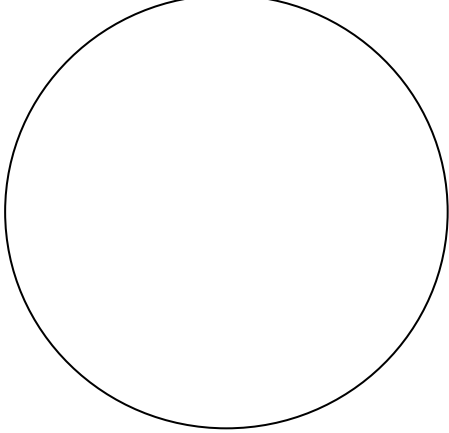
<p>Hair: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>	<p>Hair: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>
<p>Hair: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>	

9. Compare and contrast (in complete sentences) the different hair colors that you just observed. Make sure to include differences you saw in the parts of the hair as well.

**Part D**

In this part, you will examine 7 different animal hairs provided for you. Draw each of the hairs at high power (using colors to help define your sketches). Be sure to note any unique characteristics that you observe and will help you identify this species of animal if asked to do so.

<p>Type of Animal: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>	<p>Type of Animal: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>
<p>Type of Animal: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>	<p>Type of Animal: _____</p>  <p>Magnification: _____ Unique Characteristics: _____</p>
<p>Type of Animal: _____</p>	<p>Type of Animal: _____</p>

 <p>Magnification: _____ Unique Characteristics:</p>	 <p>Magnification: _____ Unique Characteristics:</p>
<p>Type of Animal: _____</p>  <p>Magnification: _____ Unique Characteristics:</p>	

**Part E:**

Comparing and contrasting what you have seen.

1. Write a paragraph that compares the human and animal hair samples you examined. What are the similarities and differences you observed? Describe any characteristics that would help you identify different hair samples.