

Science Labs

January: Parts of the Microscope

- * Discuss/Explain how Compound and Electron Microscopes work (summary attached)
- * Explain/Review the use of a Microscope (worksheet attached)
- * Compound Microscope (handout attached)
- * Begin Lab about Hair:

Activity: Hair Hair Hair!

(Or, "Why do different pieces of hair look different?")

Things you will need:

- Hair from people with different colors of hair, dyed and natural
- Hair from a man's mustache or beard
- Hair from pets such as a dog, cat, rabbit, or others
- Slides and cover slips
- Scissors and tweezers
- Pen and labels
- Your microscope
- Your science journal

Procedures:

1. The hair you collect can be removed from a hairbrush, or collected by cutting or pulling. When you ask for the hair, also ask the person you collect if from if they would mind telling you the following things:
 - Is your hair dyed?
 - Do you use conditioner on your hair?
 - Do you use a hair dryer, hot curlers, or a curling iron?
 - Have you had a permanent wave or used a hair straightener?
 - (You might find it helpful to make envelopes with the questions written on them, and then place the samples inside. The envelopes can be numbered for ease of labeling slides.)
2. With tweezers, place a few 1/4" to 1/2" pieces of human hair from one person in a drop of water on a slide, and cover with a cover slip. Label the slide. (See "Wet Mounting" if necessary.)
3. Observe the hair and write a description of it in your science journal, along with the answers to the questions you asked of the person from whom the hair came.
4. Repeat this with each sample of human hair you have received, then make slides of the animal hairs you collected.

Questions:

1. Did you see any differences between
 - Hair that had been dyed and that which was a natural color?
 - Hair that had been heated and that which had not?
 - Hair that had been treated with conditioner and that which had not?
 - Hair that had been permed or straightened and that which had not?
 - In your science journal, describe each difference seen.
2. What was the difference in hairs of different natural colors?
3. What was the difference in hairs from the head and hairs from the face?
4. What were the differences in hairs from humans and hairs from pets?

Extra things to do: