



Pre-lab questions:

1. Come up with two reasons why scientists might want to perform a human DNA extraction (think about your favorite dramatic TV shows or movies if you can't think about an application in your own life).
2. We will be extracting DNA from your cells today – predict whether or not you will be able to “see” the famous DNA double-helix structure. Explain why or why not.
3. Use the animation to answer the next two questions: <https://dnalc.cshl.edu/view/16000-Nuclear-DNA.html>
 - a. Where in a typical human cell is DNA stored?
 - b. What is the function of DNA?

During-lab observations: Write down your observations and any questions you have during the lab!

Gatorade post-swishing	After shampoo/soap addition + stirring Gatorade/cell mix	After rubbing alcohol addition /precipitate formation

Post-lab questions:

1. Why did we use Gatorade for collecting cells instead of regular water?
2. What was the purpose of shampoo/soap/detergent in this procedure?
3. What was the purpose of rubbing alcohol in this procedure?
4. In the DNA Extraction procedure, you used your cheek cells. Your friend thinks it would be cool to use red blood cells instead (eek- find a new friend!) – apart from this proposal involving a difficult, messy, and painful procedure, why would using red blood cells specifically not work for a DNA extraction? (Hint: do all human cell types contain DNA? You may need to do a quick internet search or consult a textbook to answer this question.)
5. DNA is a microscopic molecule, and yet, it was visible at the end of this lab. Explain why you were able to see the DNA without a microscope.