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| **Once a sample of suspected DNA evidence reaches the lab, it officially begins the process of DNA Analysis. DNA Analysis is the process of testing to identify DNA patterns or types. In the forensic setting, this testing is used to exclude or include individuals as possible sources of body fluid stains (blood, saliva, semen) and other biological evidence (bones, teeth, hair).** | | |
| Use the following link for this part of the assignment.  <http://learn.genetics.utah.edu/content/labs/extraction/> | | |
| **What are 3 reasons DNA analysis is needed?** | 1.  2.  3. | |
| **Where is DNA found?** |  | |
| **How much DNA is in every cell?** |  | |
| **What is the 1st thing we need to do to analyze DNA?** |  | |
| **List the 4 steps we will eventually do to analyze the DNA.** | 1.  2.  3.  4. | |
| **What does lysis mean?** |  | |
| **What does the detergent and Proteinase K do?** | Detergent  Proteinase K | |
| **What is added to the solution after removal from the water bath? Why?** |  | |
| **What did the centrifuge do to the tube of DNA? Where is the DNA now?** |  | |
| **How can DNA be stored for years?** |  | |
| Use the following link for this part of the assignment.  http://learn.genetics.utah.edu/content/labs/gel/ | | |
| This is another simulation, this time taking you through gel electrophoresis. The beginning gives you a general overview then you will run the simulation. Make sure to read all of the information they provide on each screen and answer the following questions. | | |
| **What is the purpose of gel electrophoresis?** | |  |
| **Describe how strands of differing sizes move through the gel.** | |  |
| **What is the purpose of staining the gel?** | |  |
| **How is the DNA standard used in Gel Electrophoresis?** | |  |
| **How do you know that current is running through your electrophoresis box?** | |  |
| **How will you determine the approximate lengths of the DNA strands from your sample?** | |  |
| **Write in your DNA size estimates on the gel shown in the simulation. How did you do? Did you get the base lengths all right?** | |  |