**Gel Electrophoresis Laboratory Report**

**Title/Name: 5 Points**

John Smith

Partner(s): Jane Jones

Biology Period D/F/G

Mr. Alvarez

26 February 2013

**Introduction: 20 Points**

* Background (1-1½ pages)
  + Describe Agrose Gel Electrophoresis
    - What is it and what is the agrose gel composed of?
    - What is it used for?
    - How does it work?
    - How does the size of a molecule determine how it will travel in an agrose gel?
    - What is the purpose of restriction enzymes in a gel electrophoresis?
  + Give a History of Gel Electrophoresis. Remember, you have to write a 1.5 page introduction, give me a detailed history of Gel Electrophoresis
* Purpose (1-2 sentences)
  + What is the purpose of this lab?
* Hypothesis (1 sentence)
  + What do you believe will happen (In statement form)
  + **DO NOT USE PRONOUNS (The hypothesis for this lab is…)**

**Materials/Methods: 20 Points**

* Once again, DO NOT list your materials and methods, they should flow together like a story
  + The story should be in your own words; the procedure we performed in lab was may be different from the one that is listed in the laboratory manual (page 113-120). Make sure the procedure matches up to what you did in lab.
  + **DO NOT USE PRONOUNS** (**The stopper was placed on top of the flask…)**

**Results: 20 Points**

* + For your Results, I have allowed you to take a picture of the BEFORE and AFTER of the Gel Electrophoresis. You may have also been required to take other pictures during the course of the lab. Include them in the report.
    - Be sure to include a title of your figure next to where you type “Figure 1.”
  + For your **Qualitative Results**, make sure you write a paragraph for each picture you included in the report

**Discussion: 20 Points (1.5-2 pages)**

* Answer the following questions, but remember, you are writing a Discussion Section. In answering the questions, include what you did in the lab and include results.
  + What determines the direction of DNA movement in a gel?
  + Why does DNA travel to the positive pole (be specific)?
  + What determines the rate of DNA movement in gel?
  + How does electrophoresis separate the dye pigments?
  + Why do the dyes move in the direction they do once the power is turned on?
  + What charge is carried by the pigments in this separation? Support your answer.
  + Do any of the banding patterns resemble one another? If so, how might you interpret that?
  + How can a human being be identified from a blood sample using gel electrophoresis
* Research and write about **THREE** court cases in which DNA was used to either convict a criminal, exonerate an innocent suspect or overturn a past court ruling
* Accept/Reject Hypothesis
* Conclusion

**Reference: 5 Points**

* **Include a References page that is SEPARATE from the rest of the lab**
  + Type the lab, save it, print the document, and close the document. Open a new word document, type references, save that page, print it.
* Include IN-TEXT Citations **ESPECIALLY** in your Introduction
* Use APA Format
* DO NOT PLAGIARIZE (It will result in an automatic zero and an honor code violation)

**Neatness/Grammar/Formatting: 10 Points**

* Use proper grammar
* Double-Spaced, 12-point Times New Roman Font
* Use proper lab report format
* COME INTO LAB WITH THE TYPED LAB REPORT STAPLED!
* **SUBMIT THROUGH TURNITIN.COM**