**Cloning Lab Manuscript Outline**

1. Abstract
   1. One short paragraph that outlines your entire manuscript. Write this last.
2. Introduction
   1. You should have at least 5 sources
   2. Discuss the theory behind ligation, restriction enzymes, transformation, cloning
   3. End with an “Our Study” section about this particular experiment
3. Methods
   1. Reference the “Edvotek 301 standard cloning and transformation protocol.”
   2. As in…”We used the Edvotek 301 standard cloning and transformation protocol. The basic steps of the protocol are outlined below.”
   3. Outline the general steps. There are 5 modules in this experiment, outline each.
   4. DO NOT give the step-by-step lab protocol
4. Results
   1. Provide pictures of each final step…your gel, your plate, etc.
   2. Provide a picture of your final gel result
   3. For each gel, include an annotated image (bars around each band with base pair measurements for each)
5. Discussion
   1. Discuss your success at each step.
   2. What could you have done differently?
   3. What do your results tell you about the ligation?
   4. Discuss real-world applications of this technique