

Alternate Assignment for the 2015 Biotechnology Symposium

The keynote speakers at the Shenandoah Valley Biotechnology Symposium will likely address the study of genomics with distinct emphasis on pathogenomics. This area of molecular biology involves the study of the genomes of organisms (pathogens) that cause infectious disease. Essentially, the goal here is to know thy enemy. In other words, understanding how the genes of these organisms function to create pathology (disease) enables the discovery of new ways to bioengineer effective treatments. With this in mind, write a typed, double spaced paper on one of the related topics below. Your paper should be three to five pages in length. Your paper must be written clearly in your own words and you must include full citations (Google is a search engine not a source). Please use reliable sources (avoid Wikipedia, blogs, ask.com, etc.)

- ▶ General impact of the Human Genome Project on treatment of genetic disorders.

- ▶ Overview of recent efforts to use genetically engineered viral vectors to treat various types of cancer. (The video Do now#6 was based on addressed this area. The video is linked on my website if you'd like to watch it again).

- ▶ Overview of pathogenomics with an emphasis on recent research developments. Be specific about particular studies.

To help you get started, you may use Wikipedia for background information and suitable sources, but please do not use Wikipedia as one of your sources. You need to include full citations of all sources that you use at the end of your paper. All writing should be in your own words. Do not use any direct quotations and do not do any copying and pasting. All papers will be due to your biology teacher by Friday, March 27. This paper will be counted as a test grade, so do your best.

Full citation example (this is made up).

Smith, B. 2014. The genomics of bacterial pathogens. Nature. www.(Website url listed here if you accessed the source online.)

	Points Possible
1. Paper is written clearly and in student's own words	15
2. Student fully explores the topic in a nicely structured and written paper (including an introduction and conclusion)	40
5. Paper includes specific examples (plural!) of cases and research studies to support his or her points	30
4. Student includes at least 4 full citations from reliable sources.	15

