IB Biology - Year 2 NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Littleton High School

Ms. Chen PARTNER: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Investigation – Bacterial/Viral Infections**

Procedure:

1. Choose a bacterial or viral infectious disease that either has previously been eradicated or currently effects human populations worldwide.
2. Create a slide presentation (Powerpoint) or a Prezi.
3. Your presentation will be worth a lab grade ☺

Be sure to include the following:

* 1. History - Describe the changes in our knowledge and attitudes toward this disease throughout history
  2. Epidemiology: Describe the prevalence and transmission of this disease.

1. Where (in the world) is the disease prevalent?
2. How many people are currently infected?
3. What is the rate of new infections, morbidity and mortality?
4. What is (are) the reservoir(s) of the pathogen?
5. What is (are) the mode(s) of transmission?
   1. Pathology: Describe the pathogenic effects on cells, tissues, and organ systems.
6. Where in the body (what tissues/organs/cells) does the pathogen affect?
7. What damage does the pathogen inflict? How is this damage inflicted (is there direct mechanical damage? is a toxin produced? does the immune response cause damage?)
8. What is the time sequence of the disease and are there sequalae?
9. What are the major signs and symptoms?
   1. Response and Treatment

1. Describe the activity of our immune system against the pathogen.

2. What types of medical treatments exist? Describe how these treatments affect the progression of the disease.

3. Describe prophylactic measures that can be taken to limit the risk of infection.

* 1. Socio-politico-economic

1. Describe any historic or present day social, economic, or political issues that either help or hinder us in limiting the spread of the disease.

2. Suggest policies and practices that can be employed to help with limiting the spread of the disease. For each policy and practice, describe what will be needed in order to properly implement the proposal.