Second Quarter IB Project

Select any **pathogenic viruses** or **pathogenic bacteria**.

Create a means of sharing important information about the topics. Ways to share information include (but are not limited to):

* writing a report
* preparing a slideshow (for example, PowerPoint) presentation
* creating a concept map

The project must include all of the following information for every organism that is chosen:

1. The full, properly written **scientific name** (and common name if applicable) for each.

2. The **name** of the disease or illness caused by the pathogen

3. The **etiology** for the illness which would include the following:

A. **Symptoms** of this disease or illness that lead to correct diagnosis.

B. Expected **outcome** for the individual (for example, how long will he be ill or is he even expected to survive?).

C. What **medical treatment** is effective (if any) to prevent or treat a person who is infected?

D. **How is the disease transmitted** from one individual to another?

E. Any **additional interesting information** about the pathogen; for example, is it specific to any one region, is it carried by a specific organism, when was it discovered, etc.

There is no minimum or maximum length for this assignment. Include all of the required information in a brief, well organized and factual product. Be sure to show/share the information in the order above with each 'section' numbered as shown.

Pathogenic Viruses:

Zika Virus, Papilloma virus and cervical cancer, Human T cell leukemia virus and leukemia, Chicken Pox, Hepatitis, SARS, Mad Cow disease (BSE), HIV/AIDS

Pathogenic Bacteria:

Foodborne illnesses: Salmonella, Listeria, E. coli. Examples of Pathogenic Bacteria: Shigella Pneumonia, Tuberculosis,  [Pseudomonas](https://en.wikipedia.org/wiki/Pseudomonas), Pathogenic Bacteria also cause infections such as [tetanus](https://en.wikipedia.org/wiki/Tetanus), [typhoid fever](https://en.wikipedia.org/wiki/Typhoid_fever), [diphtheria](https://en.wikipedia.org/wiki/Diphtheria), [syphilis](https://en.wikipedia.org/wiki/Syphilis), and [leprosy](https://en.wikipedia.org/wiki/Leprosy).

**DUE NOVEMBER 13, 2017**

**Pathogenic Bacteria/Virus Project - IB Subject Year 3**

Name: \_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_ Pathogenic Bacteria or Virus and Name of Disease Chosen: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Pathogenic Bacteria/Virus Project - IB Subject Year 3 – Criterion A: Knowing and Understanding**

At the end of year 1, students should be able to:

i. describe scientific knowledge

|  |  |  |
| --- | --- | --- |
| **Achievement Level** | **Level Descriptor** | **Task Specific Clarifications** |
| **0** | The student does not reach a standard indicated by any of the descriptors below. |  |
| **1 - 2** | The student is able to:  i. **recall** scientific knowledge | You were barely able to recall what a pathogenic bacteria or virus is, what causes it, and the environment in which the pathogen exists in. |
| **3 - 4** | The student is able to:  i. **state** scientific knowledge | You were somewhat able to recall what a pathogenic bacteria or virus is, what causes it, and the environment in which the pathogen exists in. |
| **5 - 6** | The student is able to:  i. **outline** scientific knowledge | You were mostly able to recall what a pathogenic bacteria or virus is, what causes it, and the environment in which the pathogens exists in. |
| **7 - 8** | The student is able to:  i. **describe** scientific knowledge | You were completely able to recall what a pathogenic bacteria or virus is, what causes it, and the environment in which the pathogen exists in. |

**SCORE: \_\_\_\_**

**Criterion D: Reflecting on the Impacts of Science**

At the end of year 1, students should be able to:

1. summarize the ways in which science is used to address a specific problem or issue
2. describe and summarize the various implications of the use of science and its application in solving a specific problem or issue

iii. apply scientific language effectively

|  |  |  |
| --- | --- | --- |
| **Achievement Level** | **Level Descriptor** | **Task Specific Clarifications** |
| **0** | The student does not reach a standard indicated by any of the descriptors below. |  |
| **1 - 2** | The student is able to:  i. **state** the ways in which science is used to address a specific problem or issue  ii. **state** the implications of using science to solve a specific problem or issue, interacting with a factor  iii. **apply** scientific language to communicate understanding but does so **with limited success** | You were hardly able to state how the pathogenic bacteria or virus is spread and how the cycle can be broken. You were barely able to set a plan to break the cycle to cure for the disease caused by the pathogenic bacteria or virus.  You were hardly able to state the implications and the challenges to a community and its residents when trying to break the triangle caused by the pathogenic bacteria or virus.  You were hardly able to apply scientific language to discuss the challenges for a community and its residents when trying to break the disease caused by the pathogenic bacteria or virus. |
| **3 - 4** | The student is able to:  i. **state**  the ways in which science is used to address a specific problem or issue  ii. **state** the implications of using science to solve a specific problem or issue, interacting with a factor  iii. **sometimes apply** scientific language to communicate understanding | You were somewhat able to state how this pathogenic bacteria or virus is spread and how the triangle can be broken. You were hardly able to create a plan to break the cycle to cure the disease caused by the pathogenic bacteria or virus.  You were somewhat able to state the implications and the challenges to a community and its residents when trying to break the spread of this pathogenic bacteria or virus.  You were somewhat able to apply scientific language to discuss the challenges for a community and its residents when trying to break the spread of the pathogenic bacteria or virus. |
| **5 - 6** | The student is able to:  i. **Outline** the ways in which science is used to address a specific problem or issue  ii. **Outline** the implications of using science and its application to solve a specific problem or issue, interacting with a factor  iii. **usually apply** scientific language to communicate understanding **clearly and precisely** | You were mostly able to outline how this pathogenic bacteria or virus is spread and how the triangle can be broken. You were mostly able to set plan to break the cycle to cure the disease caused by this pathogenic bacteria or virus.  You were mostly able to state the implications and the challenges to a community and its residents when trying to break the spread of this pathogenic bacteria or virus.  You were mostly able to apply scientific language to discuss the challenges for a community and its residents when trying to break the spread of this pathogenic bacteria or virus. |
| **7 - 8** | The student is able to:  i. **Summarize** the ways in which science is used to address a specific problem or issue  ii. **Describe and summarize** the implications of using science & its application to solve a problem or issue, interacting with a factor  iii. **consistently apply** scientific language to communicate understanding **clearly and precisely** | You were thoroughly able to summarize how this pathogenic bacteria or virus is spread and how the triangle can be broken. You were completely able to set a plan to break the cycle to cure the disease caused by this pathogenic bacteria or virus.  You were totally able to state the implications and the challenges to a community and its residents when trying to break the spread of this pathogenic bacteria or virus.  You were completely able to describe and summarize scientific language to discuss the challenges for a community and its residents when trying to break the spread of this pathogenic bacteria or virus. |

**SCORE: \_\_\_\_**