

# Special Project Menacing Microbiological Menagerie

This project is designed to have you learn by self-discovery and research. This assignment is not a cut and paste Google task. It is an academic assignment with the expectation of proper citations for all sources from where information is derived.

Below, you will find a list of microorganisms. Select six of the microorganisms and find an example to collect as part of your menagerie. For each microorganism, you will take a photograph or print out a representative image of the microorganism exhibiting its pathogenicity or virulence and write a report about the microorganism selected. Each report is to be one page in length, doubled spaced. Three-quarters of the report will be used to describe, explain, and explore the selected microorganism as it relates to virulence and pathogenicity. The last quarter of the report will be used for you to reflect on the research and explain how the report subject affects you as an individual or how it affects us as humans, collectively.

Once you have completed all six reports, you will provide a final reflection on the assignment to address what you learned and how the process of researching the subjects allowed you to acquire knowledge. This reflection will also be one page in length, double-spaced.

**In summary, there are a total of six subject reports and one final reflection report for the written part of this assignment. Use either Arial or New Times Roman 12-point font. Each report should be one full page, double spaced. The photograph is not part of the write up but serves as a focal point to address the topics and should be attached to the applicable report and labeled for the subject it represents. References and citations as needed.**

**Focal Topics (You must address six of these topics in the project.)**

1. Fungus that produces toxins
2. Dimorphic Microorganism
3. Bacterium that produces hyaluronidase
4. Intracellular bacterium
5. Anaerobic microorganism
6. Nosocomial Pathogen (Not US)
7. Lysogenic virus
8. Zoonotic microorganism
9. Microorganism that produce an antimicrobial molecule
10. BSL4 microorganism
11. Microorganism that can be used as a Biological Weapon
12. Prion

The successful completion of this project will allow you to earn points equivalent to one lecture exam. Furthermore, being awarded the points associated with this project will allow you to replace your lowest exam score with the grade earned by the special project.

**If you do not successfully complete this assignment, your lecture average will be calculated from the five one-hour lecture exams, *only*.**

**Due Dates:**

## **Special Project    Microbiological Digi-Hunt Portfolio**

This project is designed to have you learn by self-discovery and research. This assignment is not a cut and paste Google task. It is an academic assignment with the expectation of proper citations for all sources from where information is derived.

Below, you will find a list of five major topics. Pick one subject under each major topic. For each subject picked, you will take a photograph representative of the subject and write a report about the subject selected. Each report is to be one page in length, doubled spaced. Three-quarters of the report will be used to describe, explain, and explore the selected subject. The last quarter of the report will be used for you to reflect on the research and explain how the report subject affects you as an individual or how it affects us as humans, collectively.

Once you have completed all five reports, you will provide a final reflection on the assignment to address what you learned and how the process of researching the subjects allowed you to acquire knowledge. This reflection will also be one page in length, double-spaced.

In summary, there are a total of five subject reports and one final reflection report for the written part of this assignment. Use either Arial or New Times Roman 12 point font. Each report should be one full page, double spaced. The photograph is not part of the write up, but serves as a focal point to address the topics and should be attached to the applicable report and labeled for the subject it represents.

The successful completion of this project will allow you to earn points equivalent to one lecture exam. Furthermore, being awarded the points associated with this project will allow you to replace your lowest exam score with the grade earned by the special project. **If you do not successfully complete this assignment, your lecture average will be calculated from the five one-hour lecture exams, *only*.**

### **1 *Sudden Impact* (Bugs Have An Impact On Our Lives Daily)**

- a. Microbial autotrophism or heterotrophism or saprophytism
- b. Denitrification or nitrogen fixation
- c. Archea or Eubacteria in natural habitat
- d. Bioremediation
- e. Oxygen Production

### **2 *Go Ahead Make My Day* (Bugs Make the Day Better, Sometimes)**

- a. Symbiosis (mutualism or commensalism, or parasitism)
- b. Antimicrobial process (mechanical/physical or chemical)
- c. Fermentation or pasteurization
- d. Novel Control (Holistic or Pharmaceutical)

### **3 *For A Few Dollars More* (Bugs Make Money and Cause Expenditures)**

- a. Probiotic (not a nutraceutical)
- b. Synergy or antagonism or satellitism
- c. Food production or spoilage

### **4 *My Bunny Has Contracted Tuberculosis* (Bugs Are Distributed)**

- a. Vector (mechanical or biological)
- b. Reservoir
- c. Fomite (associated with nosocomial or community acquired infection)
- d. Communicable

***5 The Good, The Bad, and The Ugly***

- a. Natural toxicological event or process
- b. Fairy ring or dermatophyte
- c. Acquired immunity (active or passive and natural or artificial)

**Due Dates:**