

## High School Science Virtual Learning

# Applied Biological Science Biowarfare and Terrorism May 14, 2020



### High School Applied Biological Science Lesson: May 14th, 2020

### **Objective/Learning Target:**

Students will be able to define biowarfare and how it affects a population.



#### Let's Get Started:

### 1. What is bioterrorism?

2. Why is anthrax dangerous?





### Let's Get Started: Answers

1. Intentional release of viruses, bacteria, or other germs that cause illness or death of humans or animals.

 Because when humans breathe in the spores it can be deadly and only takes a few spores to infect someone. Anthrax can be engineered to be drug resistant which makes it hard to treat with antibiotics.



## Lesson Activity:

**Directions:** Go to the link below and take notes on what Biological Terrorism is and how it is related to microbiology.

Link(s): Microbiology and Terrorism



## Practice

You will use the information from the lesson activity to answer the practice questions.



### **Practice Questions**

- 1. What is a biological agent?
- 2. What type of biological agent was given to Native Americans during the French-Indian War?
- 3. What are the 3 categories of Biological Agents?
- 4. How are Biological Agents sorted into their categories?
- 5. List 4 Category C biological agents.



### Answer Key

Once you have completed the practice questions check with the work.

- 1. Pathogenic organisms or biological toxins that are used to produce death and disease in humans, animals, or plants for terrorist purposes
- 2. Smallpox Virus
- 3. Category A consists of the agents that are considered the highest risk, and much of the biodefense research effort is directed towards these agents. Included among Category B agents are ones that could conceivably threaten water and food safety. Category C includes pathogens that are considered emerging infectious disease threats and which could be engineered for mass dissemination.
- 4. The classification into Categories A, B, and C is based on: The ability of the agent to be disseminated. The mortality rate of the agent, The actions required for public health preparedness. The capability of causing public panic
- 5. Anthrax, Botulism, Dengue, Ebola, Hantavirus, Smallpox



## More Practice: Click on the links below for additional online practice.

- 1. <u>Anthrax Case Study</u>
- 2. <u>BioTerrorism Case Study</u>



### Additional Resources

### https://news.stanford.edu/pr/01/bioterror117.html

https://www.youtube.com/watch?v=f1GnYs4LOc0