Ve	er	si	٥r	า	Δ
vc		יוכ	υı	L .	m



Bioterrorism WebQuest

Use the following sites to help you (also linked from my Biology Links page):

Bioterrorism History Global Guide to Bioweapons Future Germ Defenses

Head to the Bioterrorism History site.

Click on "Launch Interactive" and use it to answer the following questions.

1. Give one example of bio-warfare from the Medieval era. (1 point)

2. Give one example of bio-warfare from the American Revolution. (1 point)

3. Give one example of bio-warfare from World War I. (1 point)

4.	Give one example of bio-warfare from World War II. (1 point)
5.	Give one example of bio-warfare from the Cold War. (1 point)
6.	Describe the role played by Soviet Superbugs in the history of bio-terrorism. (1 point)
7.	Describe the role played by The Cults in the history of bio-terrorism. (1 point)
8.	Describe the role played by Iraq's Secret Weapons in the history of bio-terrorism. (1 point)

9. Describe the role played by the Anthrax Letters of 2001 in the history of bio-terrorism. (1 point)

Visit the <u>Global Guide to Bioweapons site</u>.

Read the introduction, then click "Go to "Global Guide to Bioweapons" in the upper right.

Click on 5 different locations and record their current status and some of their biological agents.

- 10. Location 1
 - 1. Name?
 - 2. Status?
 - 3. Agents? (1 point)

- 11. Location 2
 - 1. Name?
 - 2. Status?
 - 3. Agents? (1 point)

- 12. Location 3
 - 1. Name?
 - 2. Status?
 - 3. Agents? (1 point)

- 13. Location 4
 - 1. Name?
 - 2. Status?
 - 3. Agents? (1 point)

- 14. Location 5
 - 1. Name?
 - 2. Status?
 - 3. Agents? (1 point)

Go to the Future Germ Defenses site.

Use it to answer the following questions.

15. Explain who Shaun Jones is and what his goals were in terms of "germ defenses." (1 point)

16. What is the "promise of DNA vaccines?" (1 point)

17. What is an anthrax detergent and how does it work? (1 point)



Version A

Answer Sheet

Bioterrorism WebQuest

Use the following sites to help you (also linked from my Biology Links page):

<u>Bioterrorism History</u> <u>Global Guide to Bioweapons</u> <u>Future Germ Defenses</u>

1. Answers may vary

Sample Answer: Launching dead animals, leaving behind ill soldiers, launching dead soldiers and stockpiling manure.

2. Answers may vary

Sample Answer: The British inoculated themselves against smallpox while simultaneously attempting to infect civilians. Blankets and other supplies from smallpox patients were earlier given to Native Americans at peace treaty gatherings.

3. Answers may vary

Sample Answer: German troops attempted to infect livestock with glanders and anthrax.

4. Answers may vary

Sample Answer: The Japanese army tested and deployed biological weapons against the Chinese, including anthrax and plague-infested fleas.

5. Answers may vary

Sample Answer: Both the Soviet Union and the United States developed biological weapons in the Cold War, with the United States going as far as a field test in the Pacific Ocean. The Soviet Union spied on this exercise as well, helping to further develop their own program. Richard Nixon ultimately stopped the program.

6. Answers may vary

Sample Answer: During the late 1980s, a release of anthrax killed around 70 people in the Soviet Union. The United States suspected (as corroborated by defected Soviet scientists) that the country was at work on genetically engineered resistant forms of anthrax and other biological weapons.

7. Answers may vary

Sample Answer: Several times, cult groups have attempted to spread bio-terror. Among them, an Oregon-based group spread salmonella in the 1980s, and in the early 1990s a Japan-based group launched sarin gas (chemical), botulinum toxin, and anthrax in Tokyo.

8. Answers may vary

Sample Answer: Leading up to the first Persian Gulf War, Iraq developed its own bio=weaponry program, despite never actually launching anything (other than chemical

weapons).

9. Answers may vary

Sample Answer: In late 2001, five media outlets and two senators received letters containing anthrax spores. Ultimately, five people were killed as a result of U.S. Army scientist Bruce Ivins' attacks.

- 10. Answers may vary
- 11. Answers may vary
- 12. Answers may vary
- 13. Answers may vary
- 14. Answers may vary
- 15. Answers may vary

Sample Answer: Shaun Jones is the first director of DARPA's (Defense Advanced Research Projects Agency) Unconventional Countermeasures Program. His ideas, in general, were to use molecular genetics to create vaccines capable of immunizing the body against a range of pathogens.

16. Answers may vary

Sample Answer: DNA vaccines are far more targeted than traditional vaccines. Side effects are minimized and production is easier in some respects.

17. Answers may vary

Sample Answer: Anthrax detergents are enzymes that can dissolve anthrax spores, thus acting as a blanket "cure" for a potential anthrax attack.