Lesson HIII-8: Sarin Nerve Agent Attacks: The Danger of Chemical Weapons of Mass Destruction

Objective:
Students will examine the sarin nerve gas attack in Japan as an example of the dangers associated with chemical weapons of mass destruction (WMDs).

Key Terms:
Sarin nerve gas/liquid       Aum Shinrikyo

Materials:
Reading – “Sarin Nerve Agent Attacks: The Danger of Chemical Weapons of Mass Destruction”
http://www.factnet.org/headlines/index.html
www.factnet.org/cults/aum_shin_rikyo/nerve_gas_victims.htm
http://terrorism.about.com/od/originshistory/a/AumShinrikyo.htm

Activities/Procedures:
Background for Subject of the Lesson – Sarin Nerve Agent: Sarin is an extremely toxic substance whose sole application is as a nerve agent. As a chemical weapon, it is classified as a weapon of mass destruction by the United Nations. Production and stockpiling of sarin was outlawed by the Chemical Weapons Convention of 1993. It is estimated that sarin is more than 500 times more toxic than cyanide. The short-and long-term symptoms experienced by those affected include:

1. coma
2. convulsions
3. death
4. difficulty breathing
5. disturbed sleep and nightmares
6. extreme sensitivity to light
7. foaming at the mouth
8. high fevers
9. influenza-like symptoms
10. loss of consciousness
11. loss of memory
12. nausea and vomiting
13. paralysis
14. post-traumatic stress disorder
15. respiratory problems
16. seizures
17. uncontrollable trembling
18. vision problems, temporary & permanent

Evidence of Understanding (Assessment of Student Performance)
Formative and Summative:
Student response during discussion and written responses to questions selected.

Extension Activities: Taking Action and Giving Service:
1. Research the anthrax attacks that occurred in the United States when several elected officials and public figures received letters in the mail containing a suspicious white powder. Prepare a short 3-6 minute report for the class on the impact and response, by officials, the media, and the general public, to this anthrax threat. Explain the following:
   - What is anthrax?
• Why is it such a frightening threat?
• What was the government response to the postal workers who may have come into contact with the anthrax while processing and delivering the mail? What precautions were set in place?
• What post offices were affected? What happened to those postal facilities?
• How much time passed during the investigation before a person(s) was officially announced as the most likely person to have committed the crime?
• How long did the primary postal facility contaminated remain closed? What happened to the workers? Were any other persons affected, injured, or killed by the anthrax?
• What were the motives of the person accused?
• Do you think that this was a case of terrorism? Justify your response.

2. What are botulin and cholera? Why are they so frightening? Have these biological weapons ever been used in war and/or violent conflict? Investigate the history of these biological agents and identify any instances of natural or human induced outbreaks of either/both diseases including dates, locations, numbers of people fallen ill/ deaths, public reactions, etc.

3. Research and read about the mass suicide/murder at the “People’s Temple Agricultural Project” (known as Jonestown), Guyana in 1978. Explain the origins and nature of the People’s Temple. Where did it begin? How did it expand? Why did it leave the United States and move to Guyana? What were its beliefs? What was life like in Jonestown for the people? Why did the leaders decide to instigate a “mass suicide?” Why did the members of the group participate in the suicide/murder?

Critical Thinking Questions

1. What is Aum Shinrikyo? Why did they launch the sarin nerve agent attacks in Tokyo in 1995? What beliefs motivated their founder and its members to institute such attacks against the general public?

2. Prior to the March 20, 1995 sarin nerve agent incident in the Tokyo subway system, had Aum Shinrikyo engaged in any other incidents involving chemical/biological weapons? Describe their actions.

3. What are some of the long term effects of exposure to sarin? Identify physical, psychological, and emotional effects. Describe “post traumatic stress.”

4. Does Aum Shinrikyo continue to exist today? If so, where and how large? Why?

5. Why are chemical and biological agents such as anthrax, cholera, botulin, sarin, etc. an especially difficult security problem against which to find a defense? How does an individual, group, community, nation, government, etc. defend against such dangerous agents?