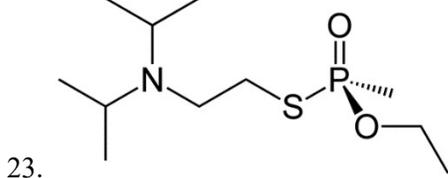
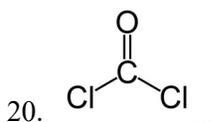
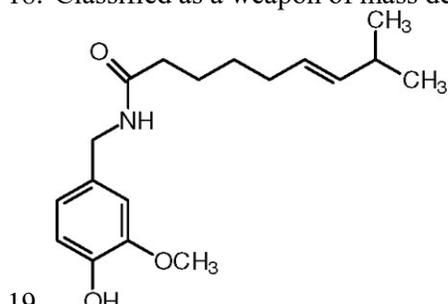


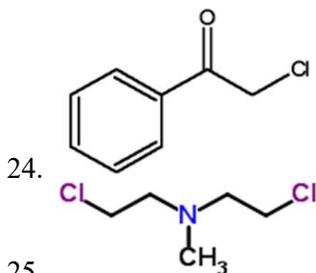
STEM CAREER STUDY GUIDE

1. Near the end of the Civil War, the Union planned to use _____ to clear Confederate trenches, during the siege of Petersburg. The plan was never acted upon.
2. Who did the Germans use chlorine gas on during their first chemical attack of World War I?
3. What scientist came up with the idea of using chlorine gas on the battle field?
4. Who invented Lewisite?
5. Who found and raised Stubby?
6. Who was caught by police before he launched his attack? 20 pounds of cyanide was found in his apartment.
7. Who designed a ship board weapon that would fire arsenic filled shells?

What chemical agent would best answer the following?

8. Ignoring the Geneva Protocol, Italy used this from airplanes when they invaded Ethiopia.
9. Germany used this to massacre Jewish civilians in concentration camps.
10. The Egyptians used this against civilians in the Yemen civil war.
11. Thousands of sheep died near a weapons facility in Utah. Although the findings were not definite it is believed that this was leaked from the facility.
12. The USSR used this in their invasion of Afghanistan.
13. Federal agents found 30 gallons of this when they raided an armed camp ran by a white supremacist group called The Covenant, The Sword, The Arm of the Lord.
14. The Aum Shinriko cult released this in a Tokyo subway.
15. The USSR developed this in the 1970s. Popular culture features this in movies and comic books as "knockout gas".
16. This is a vesicant agent that take effect immediately.
17. Gas mask filters are ineffective or saturated quickly when exposed to this and need to be replaced quickly.
18. Classified as a weapon of mass destruction according to UN Resolution 687 in 1991.

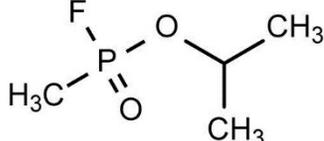




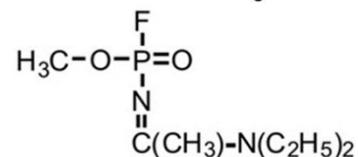
25.



27.



28.



29.

30. Non-lethal. Renders individuals unable to perform their duties.

31. Inhalation causes a buildup of fluids in the lungs.

32. Causes severe chemical burns.

33. Prevents the exchange of oxygen and carbon dioxide between cells.

34. Prevents muscle control.

35. Derived from chilies, causes a burning sensation. Normally wears off in two hours

36. Irritates mucus membranes in the eyes, nose, mouth and lungs. Normally wears off in about 15 minutes

37. Smells like musty hay at 0.4 ppm

38. Has a faint bitter almond odor

39. Has a faint garlic odor

40. Hexamethylterramine can be used to neutralize this

41. Can cause stupor, confusion, confabulation, illusions, hallucinations, and may regress into phantom behaviors such and plucking and disrobing

42. An antidote to nerve agents

43. A neurotransmitter that nerves release which makes muscles contract

44. A third generation nerve agent designed by the USSR, which is undetectable by NATO equipment and bypasses protective gear

45. Causes pulmonary edema

46. Sodium thiosulfate can be used to neutralize this

47. 100 times more toxic than sarin (GB)

48. Twice as toxic as sarin (GB)

49. About as toxic as sarin (GB) but acts much faster

50. 10 times more toxic than sarin (GB)

51. A molecule that is riddled with small pores