



Catalyze the discussion with these three topics. Discuss one or all before the presentation to “break the ice” or after the presentation to take the content to the next level. Share your ideas with other groups by commenting online using #ACSPIB on Twitter, Facebook and Instagram. Bit.ly links are case sensitive. (ex. [CyanideChem](http://bit.ly/CyanideChem))

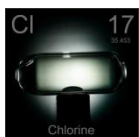
1. Discuss the ethics of chemical weapons. Some of the original synthetic pathways were developed for use as insecticides, although others were developed specifically for warfare. Do you think past scientists could predict the future ramifications of their inventions? Should scientists be held accountable for the positive and negative effects of their inventions?



Discover more about one of the most important and controversial scientists of the 20th century in this special article by C&EN.

<http://bit.ly/ChemEthics>

2. How does chlorine gas react with water in the eyes and lungs? Does this explain the immediate burning sensation upon exposure?



Discover more about chlorine gas inhalation and its toxicity in this article provided by PubMed Central. See Figures 1 & 2.

<http://bit.ly/ChlorineChem>

3. Discuss antidotes for cyanide poisoning. Although cyanide is not technically a chemical weapon, hydrogen cyanide in the form of Zyklon B was used to kill millions in German concentration camps. In detoxification, an enzyme catalytically detoxifies cyanide as in the case of thiosulfate-cyanide sulfur transferase (TCST) by converting cyanide to thiocyanate. Biochemical antidotes such as antihistamines or the α -adrenergic blocking agent phenoxybenzamine work through an unexplained mechanism.



Discover more about cyanide poisoning, effects, detection, and treatment with this infographic by Compound Interest.

<http://bit.ly/CyanideChem>