



The Technology of the First World War

Ohio Memory Interactive Lesson—www.ohiomemory.org

In July 1914, the First World War broke out across Europe. As the war began, a new style of fighting developed across the Western Front—trench warfare. Trench warfare was the system of digging long, narrow ditches for soldiers to take shelter in while on the front lines. It then became a soldier's mission to go "over the top," race across to the enemy trench and attempt to take over their position. It was extremely intense warfare and very dangerous for everyone fighting.

On April 22, 1915, during the Second Battle of Ypres, the German Army became the first side to use poison gas on the Western Front. They dispersed chlorine gas inside of large canisters which was then carried by the wind to the opposing trenches. Later in the war, poison gas was shot out by artillery in specially-designed shells. It was not until 1917 that mustard gas was introduced. Unlike chlorine gas that was designed to attack the lungs of its victims, mustard gas burned any exposed skin.



This [World War I training slide](#) shows four soldiers wearing gas masks of various styles, likely during a gas training exercise.



Activity 1

As the use of poison gas progressed during the war, so too did the protective devices against gas. Look through the [History of the Army Protective Mask](#) document available through the [Defense Technical Information Center](#), and describe what you think was the best design and why.

Activity 2

Poison gas was not the only new technology used during the Great War. Throughout World War I, new technologies were implemented to adjust to trench warfare. Because many fronts were lined with miles of trenches, new technologies had to be invented to successfully attack enemy trenches.

Read through the primary sources linked below. Identify three new technologies that you think were invented as a result of the use of trench warfare and explain why.

[Vaughn Horner letter to Armco, November 18, 1917](#)

[Dalton Smith Hayes letter to his mother, October 22, 1918](#)

[Harlan W. Johnson letter to his sister Mary, July 1917](#)





Activity 3

Search through the issues of [Aviation Weekly](#) or editions of the [Rainbow Reveille](#) in the [World War I Collection](#) on Ohio Memory. Identify an article that discusses some new technological development from World War I (airplanes, zeppelins, weapons, gas, etc.) and evaluate the way this technology was discussed in the publication. How early or late in the war did this article appear? Was the technology considered cutting edge? How was it described to the reader?

Activity 4

Imagine that you are an American soldier serving on the front lines, and you can take only three items with you into the trenches. What would you choose? Feel free to consider a variety of aspects of military life, such as weapons, personal items, and clothing and equipment. What factors helped you decide what to take and why?

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