The Weapons of the Meuse-Argonne Offensive

How did soldiers who rest in the Meuse-Argonne Cemetery experience the collision of modern industry and military tradition?

Matt Deegan

“The heroism of the foot soldier is defeated by the steelworker of the colossal factory who builds the huge cannons and by the engineer who mixes the long-irritating gases in the back of his laboratory. The forces of matter annihilate the forces of bravery.”

Abbot Charles Thellier de Poncheville, Military Chaplain, Verdun, France, 1916

German soldiers flee a gas attack at the front lines in Flanders, Belgium in September 1917. (Photo credit: U.S. National Archive)
In World War I, soldiers rode into battle on horses as airplanes flew overhead. They clutched bayonets while dodging machine gun fire. Army couriers pedaled bicycles past tanks that weighed six tons. And troops ran forward on the battlefield, sometimes into deadly clouds of gas. Factories and laboratories of the early 20th century concocted the world’s first industrial war, creating a battlefield that juxtaposed the old and the new: centuries-old military tactics with modern technology. The cost? Destruction beyond belief. About 8 million combatants died, including more than 100,000 Americans (Howard 2002).

The U.S.’s greatest battle of the Great War was a 47-day offensive in the Meuse-Argonne region of northeastern France. This chapter uses the Meuse-Argonne Offensive and the Meuse-Argonne American Cemetery as a window into the impact that modern weapons had on the war’s military tactics and on the toll they exacted on the soldiers themselves. How were these weapons used in the Meuse-Argonne? What was the best way to fight a war in the Meuse-Argonne region? And what was the legacy left by weaponry used in the Meuse-Argonne Offensive? The chapter explores these guiding questions.
The first use of tanks took place during World War I. This one, a French-made Renault, is trekking through Boureuilles, France on Sept. 26, 1918, heading to the front lines. It is manned by a driver and a gunner of the U.S. 344th Tank Corps, and it is chugging along at five to six miles per hour.

(Photo credit: U.S. Army)

From their saddles, two American soldiers watch equipment move toward the front lines. (Photo credit: U.S. Army)

How did the use of horses impact World War I? Dave Bedford, Superintendent of the American Battle Monuments Commission’s Meuse-Argonne American Cemetery, shares his take.
After the U.S. entered the war, American military leaders faced many tactical questions. How would they train their men effectively in such a short time? Would they follow the French and British example and embrace trench tactics and weaponry? Or would they favor the traditional American approach, a war of movement, out in the open? Not all military leaders reached the same answers. These differences are reflected in the two men pictured on the right.

In the end, the tactic of open warfare prevailed, and its chief advocate was the commander of the American Expeditionary Forces, John J. Pershing. Historians continue to debate Pershing’s strategy. Some say the aggressive, offensive nature of open warfare was the jolt that a three-year-old stalemate needed. Other historians assert that if Pershing had used artillery and machine guns as more than just auxiliary weapons, there might have been fewer American casualties. Historian James W. Rainey called Pershing a “captive of tradition,” noting that “open warfare is an irrelevancy when advancements in weapon technology have rendered the survival of attackers in the open a short-term prospect” (1983).

Rainey’s full commentary is available at the website of the academic journal of the U.S. Army War College.
Sgt. Donald D. Kyler, 16th Infantry, 1st Division, Whitley County, Indiana. In July 1917, Kyler and other American troops trained in Domremy-la-Purcelle, France. This recording shows how at least one soldier believed fully in Pershing’s preferred fighting philosophy of “rifles, bayonets, and willpower” (Evans 2001).

This M1917 bayonet was often attached to a U.S. M1917 Enfield .30 caliber rifle. Its blade is 16 inches long, and it weighs about 1 lb. (Culver 2003). The bayonet represents General John J. Pershing’s traditional fighting philosophy of open warfare, which de-emphasized the use of machine guns and other new technology. (Photo credit: Wikimedia Commons user Curiosandrelics)
U.S. troops often carried this light machine gun, the French-made M1915 Chauchat, into battle, because their divisions lacked a stockpile of American-made machine guns. The Chauchat stood about 45 inches long, weighed about 20 lbs., and could be fired more than 2,000 yards. It represents a mechanized, factory-produced style of warfare (Oldham 2014).

Design flaws in the Chauchat frustrated American soldiers. The gun’s designers decided not to cover the magazine so that a soldier could see the number of rounds that remained. As a result, dirt would lodge itself into the gun, jamming the firing mechanism.

After the war, Lemuel C. Shepherd, Jr., a lieutenant in the 5th Marine Regiment, said this about the Chauchat:

“I spent the last few weeks [of World War I] back in the hospital, but I’ll tell you one thing the boys later told me: The day after the Armistice they got the word to turn in their Chauchats and draw Browning Automatic Rifles. That BAR was so much better than that damned Chauchat. If we’d only had the BAR six months before, it would have saved so many lives” (Ibid.).

(Photo credit: Matt Deegan)
Some historians label World War I “the chemists’ war.” Poisonous gases were unleashed in large amounts on the battlefield, slowing offensives and blinding and blistering soldiers, sometimes fatally. About one-fourth of all U.S. casualties were caused by gas (Cook 1999), and about 19,000 American troops were gassed in the Meuse-Argonne Offensive alone (Cochrane 1958). The effects of gas captured the imagination of artists, and as a result, much literature and art from the Great War focused on these toxic concoctions.

The German army first used chlorine gas in April 1915 during the Second Battle of Ypres. This decision stretched the interpretation of international laws involving chemical warfare that were established at the 1899 Hague Convention. The British and the French quickly followed suit, though the Germans led the way, becoming the first nation to use mustard gas in September 1917. The German army used about 68,000 tons of gas during the war. The French used 36,000 tons; the British used 25,000 (Pichtel 2011).

When American soldiers reached the Western Front, they were ill-prepared for chemical warfare. Soldiers’ gas masks would sometimes mist up, especially in the morning fog of the Meuse-Argonne region, leaving them with a crucial decision: rip off their masks and risk exposure or keep them on and risk stumbling into a German machine-gun nest.
At age 62, American painter John Singer Sargent travelled to the Western Front in July 1918 with fellow painter Henry Tonks (see next page). On Aug. 21, 1918, Sargent surveyed the battlefield after a German mustard gas attack in the Second Battle of Arras in northern France. He was so affected by the sight of the wounded British soldiers there that he created this oil painting, which now resides in the Imperial War Museum in London. (Credit: Imperial War Museum)
British painter Henry Tonks visited the Western Front in July 1918 with John Singer Sargent. In a letter to a friend dated March 19, 1920, Tonks described the post-battle scene near Arras, France that the two men observed. The scene inspired Sargent to paint “Gassed.” This recording is an excerpt from the letter (Imperial War Museums 2014).

On Sept. 29, 1918, U.S. Private Willard M. Newton and his 105th Engineer Regiment, 30th Division unknowingly walked into a gas canister. Newton, from Gibson, NC, wrote about the sheer terror of the moment. This recording is an excerpt from his account (Evans 2001).

Vera Brittain was a British nurse during the Great War. She often watched mustard gas slowly destroy a soldier’s body. This recording is one of Brittain’s written accounts (Brittain 2009).

(Photo credit: The Vera Brittain Literary Estate/The Vera Brittain Fonds, McMaster University Library)
Types of Poison Gas
Armies used three kinds of gas on the battlefield throughout World War I: first, chlorine, then they switched to phosgene, and finally, they unleashed mustard gas, the most difficult to fend off. Here is how each type affected soldiers:

Chlorine
This gas produced a greenish cloud and an obvious scent, making it easy to detect. However, its effects were damaging. After inhaling the chlorine, a soldier’s eyes and throat would burn; he would feel the sensation of being suffocated. A soldier would then cough, gag, vomit, and develop a severe headache. The body would produce a yellow fluid to fight the poison.

Chlorine was water-soluble, so soldiers without masks held up to their face a cloth soaked in water or urine to protect themselves.

Though 93,800 tons of chlorine gas were made during the war, more tonnage than any other gas, the mortality rate for those soldiers infected with chlorine was low. About 5 percent of soldiers who reached battlefield medical stations died from chlorine inhalation (Pichtel 2011).

Phosgene
This gas was a hard-to-spot killer. During an attack, a soldier may have smelled cut hay or fresh corn and thought little of it. Soldiers might have also found it difficult to see the colorless or pale yellow cloud, and the enemy often disguised the phosgene by delivering it in high explosive shells. Savvy troops knew the gas
was among them when they saw the white-star marking that was stamped on phosgene shells.

The effects of phosgene were not felt immediately; it could take up to 48 hours for contaminated soldiers to start coughing or to experience blurred eyesight. The gas would then start to dissolve their lungs.

About 36,600 tons of phosgene were made during the war, and it killed far more soldiers and civilians than any other gas. Phosgene was responsible for about 80% of all deaths caused by chemical weapons in the war (Ibid.).

**Mustard**

Soldiers attacked with this gas would see a yellow-brown cloud and smell a distinctive scent. Within hours of exposure, it would cause severe blistering both internally and externally. Internal blisters might start sealing a soldier’s airway, depending on how long he had been exposed. The eyes of unprotected soldiers might also swell shut, causing blindness. Any exposed area of skin was vulnerable to mustard’s effects.

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**The poetry of gas warfare.** British soldier and poet Wilfred Owen penned the poem “Dulce et Decorum Est” about chlorine gas in October 1917 from the front lines of the Western Front and addressed it to his mother, Susan. In November 1918, Owen was killed in action, one week before the armistice was signed. He was 25 (Owen 1921).

Dulce et Decorum Est

Irish actor Kenneth Branagh reads the poem in this video.
The Battle for Mayache Ravine, September 29 to October 1, 1918

The Mayache Ravine features a small stream that quickly empties into the slightly larger Gesnes. The ravine runs between two small wooded hilltops roughly midway between the Meuse River to the east and the Argonne Forest to the west. As one of countless ravines among many wooded hills, it is an otherwise unremarkable landform in northeastern France.

During the climactic Meuse-Argonne Offensive that helped end World War I, however, the ravine saw savage attacks and counter-attacks by numerous American and German units over a three-day stretch.

In many ways, this non-descript corner of the battlefield serves as a microcosm of the 47-day offensive. The Battle for Mayache Ravine showcased the terrain of the region and the variety of weaponry used, especially close-combat arms. It also showed the diversity of the American and German troops in this one small location; veterans, units receiving their “baptism by fire,” and men representing all parts of the United States and the German Empire fought and died to control this small part of France.

Primary source German and American accounts show us that the battle for the small Mayache Ravine represents the type of fighting that was typical across the entire Meuse-Argonne region in the fall of 1918.

But the cost in blood to take and hold the ravine was not some impersonal clash of predetermined forces. The terrain was favorable for close-combat fighting, so for an American sergeant and a German major, the Battle for the Mayache Ravine boiled down to a pistol duel (Henry 2005).
A Fight to Control the Rail Line

America’s overall objective during the Meuse-Argonne Offensive was to seize from the Germans the key railroad hub at Sedan, a town six miles from the Belgian border in northeastern France. Sedan acted as the southern “hinge” of the entire German line in the Western Front, and it was where crucial supplies flowed. If the Germans were to lose this area, their army would be crippled and they would be forced to withdraw from Belgium.

To fend off American forces, the German high command constructed five defensive lines south of Sedan, the heart of which the Germans called the Kriemhilde Stellung. The Germans used the various streams, ravines, and wooded hills and ridges of the area when creating these defensive lines.

One of the German units defending this central area during the American offensive was the 117th Division of the V Reserve Corps, Fifth Army. Although this unit was rated by one source as one of the best second-class divisions in the German army, the official U.S. War Department summary told a different story. It stated that while its defense was “not particularly vigorous,” it nevertheless “was better than that of the divisions on either side.” The concluding estimate of its combat effectiveness stated that by August 1918, “its effectives were feeble and morale, low. It had many older men, returned wounded, and convalescents, and a large number of Poles and Alsatians” (Henry 2005, 50-56).
Because of its flaws, the German 117th Division was largely crushed by the initial American assault. By Sept 29, it was on the verge of withdrawing. The stronger German 5th Division was waiting to reinforce. Elements of the 1st Prussian Guards Division had also been sent to strengthen it.

The 91st “Wild West” Division and the 35th Kansas-Missouri National Guard Division spearheaded the U.S. Army’s initial wave of assault in the center of the Meuse-Argonne Offensive. Like the German 117th Division, these units would withdraw on October 1 and be replaced by the U.S. First Division, the longest-serving division in all of the army. It drew from units from as far afield as New York City and the Great Plains. Over a three-day stretch, from September 29 to October 1, a diverse group of men and units would fight to control this small area (Ibid.).

Surveying No Man’s Land. Mr. Baker places us in the middle of the Mayache Ravine battlefield and explains the positioning of the American and German troops in the lead up to the pistol duel. In this video, Baker recreates the battlefield scene.

Where the duel happened. Mr. Baker shows us the spot where an American sergeant and a German major confronted each other, pistol to pistol.

Tap or click the image to hear the audio. The stakes were high. General Georg von der Marwitz knew the strategic importance of the railway line located near the Mayache Ravine. On Sept. 15, 1918, von der Marwitz issued a forceful order to his men, demanding that they defend this line (Hines and Page 1919).
A nearby landmark. The left photo of Tronsol Farm was snapped a few days after the Battle for Mayache Ravine in 1918. Note the temporary graves of the U.S. First Division soldiers. At the right is what the area looks like today: a wheat field between Tronsol Farm (no longer there) and the distant Montrebeau Woods, with the wooded Mayache Ravine in the foreground. (Credit: National World War One Museum at Liberty Memorial archives)
Two Pistols, One Duel

By September 29, the U.S. 91st division had attacked the Mayache Ravine to the east. However, on the same day, the German 117th division assaulted the Americans through the ravine from the Montrebeau Woods in the west into their left flank, as part of an overall counter-attack. The fighting pushed back the U.S. 35th division and threatened the open left flank of the U.S. 91st. The U.S. 1st Division arrived to relieve both units and to regain lost territory. However, the newly inserted German 5th division was determined to thwart their plan. Ultimately, the area was not fully cleared by the U.S. 1st Division until October 8.

Sgt. Gilbert C. Moore of the U.S. 91st Division knew little of the battle’s bigger picture. Moore’s 348th Machine Gun Battalion was facing north, near the upper end of the Mayache Ravine, in order to protect the division’s left flank. With only one year of army experience, Moore, a California native, exemplified the troops of the U.S. 91st: none had ever seen combat before.

German Major Rainer Volbrecht, by contrast, had been fighting since the First Battle of the Marne in 1914. He had earned the “Blue Max” – Germany’s highest award for bravery – and had been personally gifted a 1917 Luger pistol by one of the Kaiser’s sons, Crown Prince Wilhelm. On a temporary assignment from the 1st Prussian Guards to the German 117th division, Volbrecht was proud at being selected to command the surprise attack on the vulnerable American left flank.

By winning the pistol duel, Sgt. Moore helped fend off the German counterattack that had pushed back the neighboring 35th division and had placed the 91st in such a vulnerable position. Moore also helped secure the 91st division’s western flank and was awarded...
Moore’s Colt pistol. U.S. Sgt. Moore shot from this kind of pistol in the duel, a M1911 .45 caliber Colt that was widely used by the U.S. during World War I. (Credit: Wikimedia Commons user M62)

The Battle of Mayache Ravine saw this small stretch between Montrebeau Woods and Tronsol Farm as key terrain in the ebb and flow of the Meuse-Argonne Offensive. Today, in stark contrast to the October 1918 picture of the terrain, it is peaceful, rolling farmland.

**Volbrecht’s bold climb.** Watch how German Major Volbrecht led the 117th Division up the Mayache Ravine, where U.S. Sgt. Moore awaited.

**Moore’s gritty defense.** Watch how U.S. Sgt. Moore defended the left flank of the 91st Division from a bold German advance.
The showdown. Blacksburg (Va.) High teacher Colin Baker, playing the role of German Major Volbrecht, and Charlottesville (Va.) High teacher Matt Deegan, as U.S. Sgt. Moore, trace the steps of how the leaders confronted each other on the battlefield at Mayache Ravine.

A Luger’s Story

The man still standing. Even with a bullet hole in his left shoulder, U.S. Sergeant Gilbert C. Moore directed Company B’s fire toward Volbrecht’s men. The German advance slowed and eventually stopped. Moore’s division then fixed bayonets to their rifles, and the Germans retreated back into the woods. After surgery and a brief stay at a Belgian hospital, Moore rejoined his 348th Machine Gunners. (Photo Credit: H. Lon Henry)
Like no other 100-year period, the 20th Century revolutionized how battles are planned and fought. That transformation began on World War I’s battlefields. The world’s powers entered the Great War steeped in 19th Century military traditions, but they were armed with 20th Century technology. The result? Factory-made weaponry whose full power was not yet understood created a defensive slog with astronomical casualty counts and incomprehensible destruction. America’s initial raid during the Meuse-Argonne Offensive on September 26, 1918 used more explosives in three hours than had been used in the entire U.S. Civil War. The price tag was $1 million per minute, according to historian John Toland (O’Shea 1996).

With the first uses of poison gas, historians point to the World War I battlefield as the birthplace of weapons of mass destruction. In addition, machine guns, tanks, and airplanes ushered in a more impersonal – some would say dehumanizing – style of warfare. Soldiers could now inflict mass casualties at the squeeze of a button or the lob of a canister; they no longer had to wait “till you see the whites of their eyes,” as the famous 18th Century military command goes.

In addition to its legacy as the first industrial war and the first modern war, World War I leaves us with enduring questions with which nations still grapple today. How can nations balance the power and efficiency of modern weapons with the morality of using them? Just because we can produce weapons of immense power, should we do so? To what extent should the nations of the
world limit the development of war technology, and who is going to enforce these limits? Answers to these questions will be debated ad infinitum; World War I sparked their asking.

**Tap or click the image to hear the recording. The first use of tanks.**
Though tanks made their battlefield debut during World War I, they weren’t a major factor in warfare. Early models were clumsy, slow, and prone to mechanical failure. In this photo, American troops headed to the Argonne Forest for the initial raid of the Meuse-Argonne Offensive in September 1918 are driving French-made Renault FT tanks. About 200 tanks, mostly Renaults, participated in this battle.

The inside of the tanks reached uncomfortably high temperatures, and there were no lights to flip on. When the hatch closed, the two-man crew signaled each other with a series of kicks. If the commander wanted the driver to go forward, he would kick him in the back. A kick in the right or left shoulder told him to turn, and a kick in the head meant he should stop (Lengel 2008).

Lieutenant Colonel George S. Patton, a 31-year-old captain when he arrived in France, was infatuated with tanks. He studied the Renault so meticulously that he could have fully disassembled one and put it back together. Seeing this enthusiasm, General John J. Pershing appointed Patton an officer of America’s first Tank Corps and ordered him to establish the First Army Tank School in France. Upon accepting the appointment, Patton called it “the golden dream.” This recording is an excerpt from a letter Patton wrote to his wife, Beatrice, showcasing his intense curiosity about tanks (D’Este 1995).

**Tap or click the image to hear the recording. The horrors of modern weaponry.** U.S. Sgt. James W. Block and other soldiers in his 59th Infantry Regiment (4th Division) faced heavy machine gun fire from German troops as they fought on Sept. 26, 1918, the first day of the Meuse-Argonne Offensive (Evans 2001). (Photo credit: U.S. Army)
The following lessons and mini-lessons can be used with the chapter.

**How to Use This Chapter in 30 Minutes**

**Lesson Plan: Soldiers vs. Machines Quote Analysis**
Using the featured quote and other content from the chapter introduction, guide students to a fuller understanding of the quote and how it represents the Meuse-Argonne Offensive and the mindset of a World War I soldier.

**Guiding Questions**

1. Why is World War I considered the first modern war?

**Learning Outcomes**

The student will be able to:

1. critically analyze a quote.
2. work with a partner to find meaning in a quote.
3. present thoughts to a partner and to the class.

**Teacher Planning**

**Time Required**
30 minutes

**Materials Needed**
The cover and introductory section for this chapter

**Quote Analysis Handout**

**Quote Analysis Exit Ticket**

Tap or click the preview image to view the document.
Activities

1. Introduce the guiding question by showing it on the slideshow: “Why is World War I considered the first modern war?” Define the term “modern” as a class and make a class list on your SmartBoard or WhiteBoard of the elements of modern war (weapons, strategy, etc.).

2. Discuss the image with the horse and gas mask. Pose questions: What is modern? What is not? Then, create a class list of the elements involved in modern war. (possible ideas: machine guns, tanks, airplanes, gas, atomic bombs, drones, etc.)

3. Instruct students to access this chapter. Allow them 5 minutes to explore the videos, photos, and text on the cover and in the introduction. After 5 minutes, instruct students to read or re-read the quote from the military chaplain.

4. Instruct students to complete the quote analysis sheet independently.

5. After 7 minutes, assign partner groups and ask students to share their interpretations and complete the partner edition of the quote analysis sheet. Stress to students that these answers should be a mix of both partners’ ideas.

6. After 5 minutes, call on partner groups to present their interpretations to the class. As groups present, paraphrase their interpretations and list them on the SmartBoard or WhiteBoard.

7. Pass out the exit ticket and instruct all students to fill it out.

Assessment

Assess students based on their quote analysis sheet and exit tickets.
How to Use This Chapter in 60 Minutes

Lesson Plan: The Great War Debate
Using the content in the section titled “How Should America Fight the Great War in the Meuse-Argonne?”, guide students through a Structured Academic Controversy debate. In this debate format, partners will gather and record evidence to support their assigned side, present their arguments to another partner group who are assigned the opposing viewpoint, and then come together in an unbiased, neutral way to form the group’s best answer to the debate question. The debate question is: Was General Pershing’s embrace of open warfare tactics what World War I needed to break the stalemate, or did Pershing’s strategy lead to more U.S. casualties than there needed to be?

Guiding Questions

1. What is open warfare?
2. What is trench warfare?
3. Was General Pershing’s embrace of open warfare tactics what World War I needed to break the stalemate, or did Pershing’s strategy lead to more U.S. casualties than there needed to be?

Learning Outcomes

The student will be able to:

1. build an argument by analyzing pieces of historical evidence.
2. present convincing talking points to a group.
3. explain how the U.S. military strategy in World War I impacted the overall outcome.

Teacher Planning

Time Required
60 minutes

Materials Needed

Great War Debate Resources

Tap or click the preview image to view the file.

Widget: Ch. 11 – page 6 – great debate – Presentation
Activities

1. Introduce the debate question using the slideshow. Define the terms “open warfare” and “stalemate.” Introduce background on General Pershing and the U.S. casualty count. (3 minutes)

2. Instruct students to access the section of this chapter titled “How Should America Fight the Great War in the Meuse-Argonne?” and fill out the Reading Guide independently. (10 minutes) After 10 minutes, review answers using the Reading Guide Answer Key.

3. Place students into groups of 4. Within each foursome, assign an “A” partner group and a “B” partner group.

4. Read through the “Debate Question” sheet together as a whole class. This tells students what side they will argue for and against, and it will let them know how the debate will go.

5. Instruct students to use the section of this chapter titled “How Should America Fight the Great War in the Meuse-Argonne?” to fill out the debate organizer for only the side they will be arguing for. (10 minutes)

6. The debate starts.

7. Side A presents their position using supporting evidence from their handouts, while Side B listens and fills out the other half of the “Debate Organizer” sheet. (3 minutes)

8. Side B restates Side A’s position to Side A’s satisfaction. In other words, Side B says, “What I hear you saying is _______. “ (1.5 min.)

9. Side B presents their position using supporting evidence from their handouts, while Side A listens and fills out the other half of the “Debate Organizer” sheet. (3 minutes)

Use this slideshow throughout the lesson.

DEBATE QUESTION

Was General Pershing’s embrace of open warfare tactics what World War I needed to end the stalemate, or did Pershing’s strategy lead to more U.S. casualties than there needed to be?
10. Side A restates Side B’s position to Side B’s satisfaction. In other words, Side A says, “What I hear you saying is ______.” (1.5 min)

11. Instruct groups of 4 to build a consensus. Side A and Side B must abandon their sides, and the group uses all of the evidence available to come to their best answer to the debate question. Then, all students must write this consensus answer on the bottom of the “Debate Organizer” sheet. Ask one person from each foursome to present their answer to the class.

12. To close, ask each student to write down his/her group’s consensus answer to the guiding question: Was General Pershing’s embrace of open warfare tactics what World War I needed to end the stalemate, or did Pershing’s strategy lead to more U.S. casualties than there needed to be?

Assessment

Assess students based on their debate organizer and consensus statement.

Lesson Plan: The Poison Gas Op-Ed

Using the content in the section titled, “How Did Poison Gas Change Warfare?”, instruct students to write an Op-Ed, pretending they are a World War I reporter on the front lines of the Western Front who has seen the effects of gas warfare.

First, provide a skills session on how to write an effective Op-Ed. Then, provide students about 20 minutes to explore the content in this section. Require that they use the graphic organizer handout to record their observations. Lastly, instruct students to write their Op-Ed.

Guiding Questions

1. How did poison gas change warfare?
2. How do you write an effective Op-Ed?
3. Why did poison gas warfare capture the imagination of artists?

Learning Outcomes

The student will be able to:

1. write an Op-Ed about the effects of poison gas warfare in World War I.
2. analyze art and poetry that depicts poison gas warfare.

Teacher Planning

Time Required
60 minutes
Materials Needed

Poison Gas Slideshow

*Writing a killer Op-Ed*

What is an Op-Ed?

How do you write an effective Op-Ed?

*Use this slideshow throughout the lesson.*

Poison Gas Op-Ed Packet

Tips from Oregon State's Write a Killer Op-Ed Piece guide

 Alfie Kohn’s Op-Ed, Down with Homework!

*Tap or click the preview image to view the document.*

Activities

1. Read the direction box on page one of the “Poison Gas Op-Ed” handout packet as students read along.

2. Instruct students to independently read the “How to Write a Killer Op-ed” piece prepared by Oregon State University.

3. Using the slideshow and making a list on the SmartBoard or on a marker board, lead a class discussion addressing the following questions:

4. What is an Op-Ed?

5. How do you write an effective Op-Ed?

6. Introduce the four questions below, related to “Down with Homework!” using the slideshow before students read:

7. What does this op-ed do to convince?

8. How effective is the argument?

9. Is the argument simple and straightforward?

10. Are both sides presented?

11. Instruct students to read the “Down with Homework!” After 5 minutes, lead a discussion and list student answers on the SmartBoard or on a marker board.
12. Have students access the “How Did Poison Gas Change Warfare?” section of this chapter. Instruct students to use 15 minutes to explore the videos, text, and audio of this section. Students must fill out the “Observations Organizer” to organize their thoughts.

13. Read the War Times Review prompt. Review the guiding questions using the slideshow. Still using the slideshow, review the expected structure of the Op-Ed. Lastly, allow students to write.

Assessment

Assess students using the organizer and their final product.

How to Use This Chapter in 90 Minutes

Lesson Plan: The Meuse-Argonne Pistol Duel – Act It Out
Students will read about the pistol duel story, write their own script, and act it out.

First, instruct students to take 30 minutes to read the pistol duel story in the section titled “Meuse-Argonne Case Study: How Does Open Warfare Lead to a Pistol Duel?” and fill out a reading guide to organize their thoughts. Then, divide students into groups of 4. Next, instruct them to select roles: actor, scriptwriter, or prop coordinator. Then, instruct students to either prepare to act out their version of the pistol duel in front of the class or to create a video to show in class.

Guiding Questions

1. What happened when an American sergeant and a German major met face-to-face for a pistol duel during a battle of the Meuse-Argonne Offensive?

2. What does this example show about America’s open warfare fighting strategy?

Learning Outcomes

The student will be able to:

1. write a script based on the pistol duel story.

2. synthesize the pistol duel story and summarize in their own words.

Teacher Planning

Time Required
90 minutes
Materials Needed

Act It Out Work Packet

Story Plot Terms chart (scroll down the page to find it)

Act It Out Slideshow

**Quote analysis**

“The American is a clever enemy in close combat, in which he uses his pistol with special skill. Our infantry was defeated in close combat in pistol fighting...”

-From a German army report that was captured by the U.S. First Division. An unknown soldier wrote it on Oct. 14, 1918 at 52nd German Infantry Division Headquarters.

Activities

1. Read the German soldier quote to whole class using the slideshow. Ask students to use the questions on page 1 of the work packet to analyze the quote with a partner. After 5 minutes, have a class discussion about the answers, listing answers on the SmartBoard or White Board.

2. Instruct students to access the section of this chapter titled “Meuse-Argonne Case Study: How Does Open Warfare Lead to a Pistol Duel?” Tell them to use the reading guide in the work packet to read through the story of the pistol duel. Allow 20 minutes for this reading.

3. Review selected answers with the whole class to check for understanding. Play the video clip, “Moore’s gritty defense”.

4. Review as a whole class the “Act it Out” directions found in the work packet. Review directions before revealing groups. After directions, reveal groups on the SmartBoard.

5. After you assign groups, have a group discussion around this question: “What makes a movie script good?” List student answers on your SmartBoard or marker board.

6. After a 5-minute discussion, play this 6-minute clip that addresses this question, instructing students to take notes on the video:
7. Re-visit the question as an entire class: “What makes a movie script good?” Take notes on the marker board or SmartBoard.

8. Instruct students to break out into groups and assign roles. Then, instruct them to use the script outline and Story Plot Terms Chart to organize their ideas. Next, they will write their full script, with dialogue.

9. Circulate among groups to review roles and answer any lingering questions.

10. Close with skit presentations or video viewings. Display the rubric and review expectations before starting presentations so that expectations are clear.

Assessment

Assess students based on their reading comprehension guide and their skits/videos.

Lesson Plan: Building a Persuasive Argument – “World War I Was the First Modern War”
The goal of this lesson is to use the content of this chapter to help students create a persuasive argument that defends this statement: “World War I was the first modern war.”

First, students will be given 30 minutes to explore the chapter. Then, students will brainstorm ideas with a partner. Next, the entire class will learn how to build a winning argument by watching a video clip. Lastly, students will create their product independently or with a group.

Guiding Questions

1. How was World War I the first modern war in world history?

2. How do you build a persuasive argument?

Learning Outcomes

The student will be able to:

1. build a persuasive argument.

2. create a product that convinces their audience that World War I was the first modern war in world history.
Teacher Planning

Time Required
90 minutes

Materials Needed

Persuasive Argument Slideshow

Your goal is to use the art of persuasion to defend this statement:

World War I was the first modern war.

Use this slideshow throughout the lesson.

Persuasive Writing Rubric

Access to this chapter

Projector or SmartBoard for viewing video

Activities

1. Introduce the statement that students will be defending by reading it aloud using the slideshow. Define the question by defining the word “modern.” Write student ideas on the SmartBoard or marker board.

2. Read directions to the “Observations Organizer” sheet in the work packet. Then, instruct students to access this chapter on their device and use 30 minutes to explore it and fill out the organizer. Organize students into partner groups and instruct them to spend 10 minutes completing the “Brainstorm Organizer.”

3. Introduce the brainstorm question using the slideshow: “What makes an argument persuasive?” List student answers on board.
4. Show this 3-minute TED-Ed video clip about persuasive writing. Instruct students to fill out the viewing guide as they watch. After the clip, review the questions posed on the relevant slide. Then, revisit the brainstorm question using the relevant slide.

5. Read through the product menu as a whole class and review the rubric. Field any questions afterward. Then, instruct students to choose a product and start working.

6. Close by having students create their final product.

Assessment

Assess students based on their reading guide and final product.
Bibliography


Today, the Meuse-Argonne American Cemetery helps us make sense of a war that often defied understanding.
The machinery of war can bring despair to even the most faithful. French military chaplain Advate Charles Thellier de Poncheville wrote this in 1916, “the heroism of the foot soldier is defeated by the steel worker of the colossal factory who builds the huge cannons and by the engineer who mixes the long irritating gases in the back of his laboratory. The forces of matter annihilate the forces of bravery.”

However standing in the stillness of the Meuse-Argonne American cemetery, the forces of bravery prevail. This headstone honors the sacrifice of Guss W. Mills of Virginia. This one pays homage to John Ludens from Wisconsin. 14, 244 of their comrades also rest here. The pristine landscape and neat symmetry bring order and belonging to a war whose chaos and destruction were often beyond comprehension. In the cemetery’s chapel, relatives and visitors still search for meaning and reconciliation a century after the first bullet flew. The chapel’s registry book is filled with messages of gratitude and reminders of our present day responsibilities. “Never Forget. Never Again”, writes Nijib Allaz of Metz, Germany, two spaces above Michael Kelly of Lincolnshire England, jots down “If we forget, they shall not sleep”

This chapter will explore the sources of World War I’s destruction, its weapons. Some were leftovers from century’s old military traditions. Some were products of the burgeoning industrial age of the early 20th century. These weapons transformed the way war has been fought and caused at least one military Chaplin to question their dehumanizing power.

How was World War I the first industrial war?
The metallurgy in Germany had made great leaps of, in technology uh, the Germans were experts in their metallurgy and industrialization as well as the French and Brits would be but, you have uh, a breach loading cannons and that sort of thing and you have experimentation with tanks, you have uh aviation for first time ever used in war, um things like that would occur during World War I, now your tanks were underpowered, they didn’t have enough power, so when they when they went forward it literally was at the pace of a snail and artillery, or indirect artillery could hit them they were so slow, incredibly, so um so you have that, that
part of it but the artillery was absolutely devastating, those who died during World War I primarily of wounds, 75 percent are artillery and that is because they have refined artillery to the point were they could adjust it quickly, and be able to reek devastation of course.

**How did the use of horses impact World War I?**

Part of the contributing factor to this trench war and the massive loss of life is that the, the artillery was still hauled by umm horses, the seventy five the Americans used and the one ah ah one five five the Americans used were both French manufactured because we didn’t have the facilities to be able to do that, at least quickly enough. Umm we ah, they had to be hauled by six and eight horses and its like Horses? Well now you’ve got a whole another thing, you’ve got to feed a beast and you’ve got to care for a beast, so you’ve got guys wagon ears out in the cemetery, but that would contribute to the inability to move things forward at a fast pace, umm, if a horse went lame or an arterially shell went off and you lost your horses, you’ve lost your whole means of transportation. Umm, that’s one of the things that for me that marks World War I, is the, the modern technology, the machine guns that fire, firing at a high cycling grade of fire, the artillery that is being perfected, larger and larger artillery being able to shoot, where you can shoot at a um faster pace, but yet you can’t move it around that fast, so you stabilize it in one area and just pound the heck out of the area until you can move forward. The Germans had five offensive during 1918 and um.. during those offensive, what I think contributed, and it talks to it, they get four or five days into it and the logistics couldn’t follow up. Never, you know, the would go towards (Amiens). And that what I wonder, if would have continued the war here, would our logistics been able to follow the soldiers forward? I don’t know.. So.. really transportation with modern weaponry, lack of transportation and modern weaponry mass casualty producing.

**John J. Pershing**

Close adherence is urged to the central idea that the essential principals of war have not changed, that the rifle and the bayonet remain the supreme weapons of the infantry soldier and that the ultimate success of the army depends on their proper use in open warfare. John J. Pershing, Commander in Chief, American Expeditionary Forces.

**John H. Parker**

We are both convinced we have been shown that the day of the rifleman is done. He was a good horse while he lasted, but his day is over. The rifleman is passing out and the bayonet is fast becoming as obsolete as the crossbow. John H. Parker, U.S. Lieutenant Colonel.

**Donald Kyler**

There were divided opinions and a lot of controversy in the army at that time over the value of bayonet training. It was noted that in the French and German armies, fighting with bayonets had largely ceased. But in certain colonial units of the French army and British
Empire troops the reverse was true. Our leaders wisely decided to allot time for the close hand-to-hand combat training… Fire power of all kinds, and by all arms is extremely valuable; but in the end it is the infantry, who by various means closes with enemy, assaults him, and by whatever means destroys him. This is what war is all about. Sergeant Donald Kyler, 17th infantry, 1st Division.

Fritz Haber
Gas weapons and gas defense turn warfare into a chess match. Fritz Haber.

Charles Ferguson
It is a cowardly form of warfare which does not commend itself to me or other English soldiers. But it is clearly impossible to get the enemy to desist from this and other contraventions of previously recognized rules of warfare by holding up our hands with abhorrence at unseemly conduct on his part. We cannot win the war unless we kill or incapacitate more of our enemies than they of us, and if this can only be done by copying the enemy in his choice of weapons, we must not refuse to do so. Lieutenant General Charles Ferguson, Commander British Second Corps

Henry Tonks
After tea we heard on the Doullens Road at the Corps dressing station at le Bac-du-sud there were a good many gassed cases, so we went there. The dressing station was situated on the road and consisted of a number of huts and a few tents. Gassed cases kept coming in, lead along in parties of about six just as Sargent had depicted them, by an orderly. They sat or lay down on the grass, there must have been about several hundred, evidently suffering a great deal, chiefly I fancy from their eyes, which were covered up by a piece of lint… Sargent was very struck by the scene, and immediately made a lot of notes.

Willard Newton
As we are crossing a wide depth of barbed wire entanglements a gas shell falls close by, but we are unaware of it until we notice that the sergeant a few feet ahead of us put on his gas mask. We thought at first it was the powder from the guns that made our eyes, nose, and throat burn. When we find out the difference, it is too late., for when we put on our gas masks, we have to take them off, being unable to wear them. The gas makes our eyes run water, while the burning of our throats makes us spit continually... How I came out unscratched is a mystery to me… Private Willard Newton, 105th Engineer Regiment, 30th Division.

Vera Brittain
…the poor things burnt and blistered all over with great mustard-colored suppurating blisters, with blind eyes… All sticky and stuck together, and always fighting for breath, with voices a mere whisper saying that their throats are closing and they know they will choke. The only good thing one can say is that such severe cases don't last long... Vera Brittain.
Getting the Lay of the Land
So this is where Major Volbrecht led his, uh, small team from the 117th Division, German Army. And he's hoping to sneak up through this ravine here, under cover, and his objective is up there. And this ravine leads to the Bois de Baulny on the horizon and that is the flank, left flank of the American 91st Division, who have not expected their neighbors, the 35th division, to retreat. So this is a, the Germans see this as an opportunity to strike the Americans in a vulnerable flanking position. So this is Volbrecht hoping to achieve honor for his fatherland here.

Surveying No Man’s Land
How are German and Americans units positioned before they fight?

Colin Baker: Ok, so this is the ravine we have just come up and it looks like the woods continue to the first ridge line there but in fact there's open field behind this narrow ravine and that behind is the Bois-de-Montrebeau which the Germans had held after they carried the 35th division back. And the American men first knew that. They knew that the German men were in this wood and that they, the Americans, were in that wood so this was therefore no man's land between the two and as you can see it is all open so a good way to which as you can see is pretty heavily wooded. And that's what the Germans were exactly trying to do, the Americans knew they were there so were pretty close.

Where the Duel Happened
So what we have behind us through the short little woods is the Bois de Baulny which is the main American position. The machine gun battalion was positioned out in the Bois de Baulny, you can see a couple hundred yards a guard was approximately here guarding this revine. That's guarding the flank so that when the Germans come out of the ravine they see the Americans in this tree line and the Pistol Duel happens.

Georg von der Marwitz
The enemy intends to attack the 5th army... The objective of this attack is the cutting of the railroad line, Longuyon-Sedan, which is the main line of communication of the Western Army... The fate of a large portion of the Western Front, perhaps of our nation, depends on the firm holding of the Verdun Front. General Georg Von Der Marwitz. Commander, German 5th Army.

Volbrecht’s Bold Climb
[Music plays]

Hi my name is Colin Baker, and I'm a social studies teacher at Blacksburg High school in Blacksburg, Virginia. But today I'm going to be Major Rainer Volbrecht of the first person guard's
division. And he was assigned to the 117th German Division. And he is leading a raiding party up to this ravine to the edge of the American line and is going to take the American line and flank. So it's 3:50 pm on September the 29th 1918, when the German forces emerged from a heavy screen of smoke and fire poured from the woods. Behind these woods is another set of woods, the Germans are firing smoke into this ravine and into the American position in the woods there. That's the 348th machine gun battalion, that's who we're going to be attacking. So the Germans crossed below the Mayache ravine, this is in here. The Mayache ravine was right here. And they fiercely charged the American left flank.

Volbrecht realized he had caught the Americans out of position, and he could barely believe his good fortune. So he was eager to press his advantage and he personally, in front of his troops, led them in an assault on the machine guns. To gain higher ground, Volbrecht raced to the top of the . So I won't race, but I'm marching up from the bottom of the ravine now, leading my troops, up towards the top. Where he shot one machine gunner, dismounting and dismounting his Browning, which is a 30-caliber machine gun. Then downed another who was in the act of swinging the gun mount around to face the angle of the German attack. Turning to the right, he spotted an American sergeant. Directing troops from the rear position, which is up in the Bois de Baulny up there, forward to provide covering fire for his machine gunners. Volbrecht shifted his feet for a better shot, but stumbled as he fired, and his round missed the target.

Standing fully erect to better direct the position of his machine guns, Sergeant Moore was in full view of the Germans, including Volbrecht, coming up this hill. Volbrecht dropped to one knee, took careful aim, and fired.

[dramatic music plays]

Moore’s Gritty Defense
Hi. My name is Matt Deegan, I’m a history teacher at Charlottesville High School in Charlottesville, Virginia and today I will be playing the role of Sergeant Gilbert Moore, Company B, 348th Battalion and I am about to engage in a duel with German Major Volbrecht.

Sergeant Moore instantly recognized the peril his men were in, risking his life he climbed atop the embrasure in front of his guns. From there he calmly ordered a new deployment of company’s B field of fire and request covering fire from the equally shocked engineers near by. His heroic action made him a conspicuous target for advancing enemy troops.

Volbrecht drops to one knee, took careful aim and fired. At that same instant Moore turned and stepped down behind the embrasure. The bullet struck him high in the left shoulder, passing cleanly through without striking the bone. The shock of the bullet spun him around and he fell back. He felt no pain yet but waves of
nausea immediately swept through his body and his mind struggled to comprehend what had happened. A private near by stared mesmerized by the red stain spreading over the Sergeant’s left shoulder. “Shh,” Moore cried out. “He shot me! Some kraut SOB shot me! Anybody see who?” “There,” answered private Stewart Kinch, a Croix de Guerre recipient in company B, pointing to a German soldier running in a zig-zag toward their position. Stunned, but rapidly recovering his senses, a very angry Moore peered over the top of the embrasure and spotted the weaving German. Drawing his own .45 Colt pistol Moore took a careful aim, inhaled deeply and squeezed the trigger. His third shot staggered the advancing German Major. Shots four and five spun him to the ground with two shots remaining Moore holstered his weapon.

The Showdown
Music introduction

It is 3:50pm on September 29, 1918. German forces emerge from heavy artillery smoke and stream out of the woods to the left of the US 348th machinegun battalion. German Major Volbrecht is stunned by his good luck and is hoping to seize the chance to surprise the out of position Americans.

Meanwhile American sergeant Moore sees that his battalion’s left flank is in danger of collapsing. Volbrecht leads his men up in a climb up Mayache ravine. It is then that he spots Sergeant Moore.

Music

One Farmer Lives the Legacy
Narrator: What legacy have World War I and America’s great battle in it, the Muse Argonne offensive left in France? Phillip Wachet, a farmer who lives in the small French village of Very says the war is still alive in the memories of the locals. Both of Wachet’s grandfathers fought in the great war and he talked about the continued significance of the Muse Argonne offensive to the area.

Phillipe: [speaking in French]

Translator: The first World War is Important here, the Americans came, the Germans stayed fours years, up here in the Meuse, everywhere in the woods, there were trenches, shelters, bunkers, they filled the wood. Here we still live with that war and also it is the centennial so we speak a lot about the Americans.

Narrator: In addition to stories and memories, physical traces of the war also linger. As a farmer, Wachet still uncovers shell fragments of all sizes while working his farm. He shared a story that shed light on the continuing impact of the great wars’ weapons.

Wachet: [speaking in French]
Translator: There are very large number of shells left. Two years ago the bomb squad pick up unexploded ordnances and took them away to blow them up. Two years ago, in the woods near us here, 7000 kg of German shells were found, big as that and there are still some left, lots.

**George S. Patton**

It is funny to hit small trees and see them go down. They're noisy and rear up like a horse or stand on their head with perfect immunity. The thing will do the damndest things imaginable.

George S. Patton, Commander, 1st Tank Brigade

**James Block**

Just how men can exist under such fire I cannot say. The minute a man raised himself and darted forward, a stream of machine gun bullets greeted him. Bursting shells tore huge holes in the earth or threw clouds of dirt and stone upward, much as dynamite does when blasting stumps. The flying pieces of shells went whining through the air or found a target tearing ugly wounds through the body of the unfortunate victim... James Block, 59th Infantry Regiment, 4th Division.
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