Annotated Bibliography

Primary Sources

<u>Map</u>

"Trench Map of the 7th Division's Frontage of Attack at the Battle of Loos." Map. 1915.
    Accessed April 5, 2021. https://www.nam.ac.uk/explore/battle-loos.

    To help understand the dangers soldiers faced against poisonous gas, a dangerous weapon
    utilized during this battle, we analyzed this map. It helped us form a better idea of the
    speed needed when communicating between soldiers, and it supported our thesis.

<u>Photos</u>

Aerial View of the Trenches. Photograph. DailyMail. March 14, 2014. Accessed May 18, 2021.
    https://www.dailymail.co.uk/news/article-2581167/Aerial-images-horrifying-scale-trench
    es-WWI.html.

    In this photo, we were able to see the mass destruction of modern warfare and see the
    importance of the trenches. Thus, it helped us gain a better understanding of the
    importance of new forms of communication.

Allain, Rhett. *1910's Telegraph*. Photograph. Thank the Old-Timey Telegraph for Your Garage
    Door Opener. January 21, 2019. Accessed April 1, 2021.
    https://www.wired.com/story/thank-the-old-timey-telegraph-for-your-garage-door-opener
    /.

    We found this photo of the telegraph used during WWI when we were looking for images
    that accurately depicted the tools and advancements during the war. By learning about
    how the telegraph looked at the time, it helped us see its disadvantages over the telephone
    and radio.

"American 'Hello' Girls Ready for Service 'Over There,'. Photograph. Library of Congress.
    January 29, 2019. Accessed May 16, 2021.
    https://blogs.loc.gov/headlinesandheroes/2019/01/hello-girls-answer-uncle-sams-call/.

    In this photograph, it showed women working at a job, something that was very rare
    during this time period. We realized these women showed to the world that they could do
    any job a man could do just as well or even better but couldn't have had this opportunity
    without the telephone.

Americans Join the Celebration on the Grand Boulevard on Armistice Day for World War I in
    Paris, France. Photograph. National Archives. November 8, 2018. Accessed March 29,
    2021.

https://www.kuow.org/stories/looking-back-on-the-100th-anniversary-of-the-wwi-armistice.

We utilized this photo to see the effect communication had on the outcome of WW1 in an indirect way. By seeing the joy people had about the outcome of WW1, we had a stronger understanding of the positive effects of effective communication during WW1.

American Soldiers Arrive in France. Photograph. East Sussex. Accessed March 29, 2021.
https://www.eastsussexww1.org.uk/american-soldiers-arrive-france/index.html.

We learned the importance of the U.S. entrance into WW1 through this photograph and realized communication was responsible for this. It helped us understand the important role cryptology had on the arrival of more American soldiers that helped the Allies win WW1.

Australian Soldiers with One of the British Tanks That Fought at Hamel. Photograph. 9News.
June 4, 2018. Accessed May 18, 2021.
https://www.9news.com.au/national/australian-victory-at-the-battle-of-hamel-defined-the-rules-of-modern-warfare/e4631fe0-4576-4526-9fd2-2694b7bd033e.

With this photo, we realized tanks are always on the move, and they were in the open during battle. This meant telegraphy lines were impractical as they could be cut by the enemy's fire and visual signaling could easily be seen by the enemy.

Bairnsfather, Bruce. *Why M.C.A.?: German Prisoners of War, World War I, before Y.M.C.A.*
Photograph. Word Digital Library. Accessed March 29, 2021.
https://www.wdl.org/en/item/2941/#q=the+telephone+in+world+war+1&qla=en.

This political cartoon gave us knowledge on the different forms of communication there was between the soldiers, and the common public. We learned the kind of artwork that was used during WWI, and the cartoon could even be considered propaganda.

British Mark IV Female Tanks Being Loaded. Photograph. Imperial War Museums. Accessed
May 16, 2021.
https://www.iwm.org.uk/history/how-the-battle-of-cambrai-changed-fighting-tactics-on-the-western-front.

We knew radios had to be used for tank drivers to communicate with one another. With this photo, it helped us visually see why older forms of communications, the telegraph, and telephone could not be used, and it helped us create a stronger historical argument in our project.

Crowds Waiting for the Parade of the Famous 369th [African American] Infantry, Formerly 15th
New York Regulars, New York City. Photograph. Accessed March 29, 2021.
https://catalog.archives.gov/id/533517.

We utilized this photo to see the effect communication had on the outcome of WW1 in an indirect way. By seeing the joy people had about the outcome of WW1, we had a stronger understanding of the positive effects of effective communication during WW1.

Cushing, Charles Phelps, Hudson Hawley, and William K. Michael. "The Stars and Stripes." *American Expeditionary Forces* (Paris, France), February 8, 1918. Accessed March 29, 2021. https://www.wdl.org/en/item/17982/#q=YMCA+hut+world+war+1&qla=en.

This photo gives another example of how the war communicated with people outside of the war. This newspaper was run by the American Expeditionary Force (AEF). The AEF was the group of Americans that went over to France during WWI and aided in the war.

Equipment for Sound Ranging; A Man with a Horse Wearing a Field; Two Men Using a Telephone to Communicate with Their Headquarters Radio; Wireless Telegraphic Operator Using a Morse Key in a Shell Hole;. Photograph. National Archives of the United Kingdom. Accessed April 4, 2021. https://www.nationalarchives.gov.uk/first-world-war/telecommunications-in-war/.

Showing very complicated sound ranging equipment, this photo helped us realize how difficult it must have been to use and properly send messages with any of the newly developed communication inventions.

This photograph clearly showed us how big, cumbersome, and annoying it must have been to carry around one radio. It helped us realize the numerous amounts of improvements that have been made to radio sets since the first world war.

Not only does this photo show how dreadful and cramped trench warfare was but also how prone telephone and telegraph wires were to breaking. It better helped us visualize how unreliable the telegraph and telephone could have been due to the lack of protection for the telephone wires.

Seeing how difficult it was to carry a telephone set due to its size and weight through this photo, it showed us the issues with new communication. Additionally, it helped us better see the amount of heavy equipment and struggles they must have gone through to merely send a single message.

French Troops at the First Battle of the Marne. Photograph. History.com. Accessed April 5, 2021. https://www.history.com/news/the-first-battle-of-the-marne-100-years-ago.

Through this photo, we learned more about the danger soldiers were in against the new technologies developed during WWI without the protection of the gruesome trenches. By seeing the dangers of WWI, it helped strengthen our knowledge about our topic to create a stronger historical argument.

Holland, Patrick. *Apple iPhone 12*. Photograph. The Best Phone for 2021. March 22, 2021. Accessed April 2, 2021. https://www.cnet.com/news/best-phone/.

This photo illustrates incredibly well the difference between the telephone used during WWI and the smartphones that we have today. This image was not chosen for any particular reason, but it was a good image of a phone that many people love and use today.

Image of a Telephone. Photograph. Nbi8shop. Accessed April 5, 2021.
        https://nbishop8.blogspot.com/.

        This photograph helped us see the evolution between the telegraph to the telephone and
        help prove our conclusion that WWI affected the future of communication.

McGarvey, Paul. *An Aerial Photograph Showing a Trench System between Loos and Hulluch*.
        Photograph. BBC News. March 27, 2016. Accessed May 16, 2021.
        https://www.bbc.com/news/uk-northern-ireland-36135290.

        A horrifying photo shows not only the power of the military in WW1 but how close the
        trench systems were together. It helped us realize the importance of the protection of the
        trenches and the need for new communication that could utilize this protection.

Military Radio Training, 1918. Photograph. Mountain West Digital Library. Accessed March 29,
        2021.
        https://utah-primoprod.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=digcol
        l_usu_16USU_Photos%2F214&context=L&vid=MWDL&lang=en_US&search_scope=
        mw&adaptor=Local%20Search%20Engine&tab=default_tab&query=any,contains,Milita
        ry%20radio%20training%20%201918&mode=basic.

        This photo gave a visual of what the radio looked like during WWI. Some kinds, like the
        one in this photo, were quite large, and bulky, but they were capable of communicating
        much quicker than other forms of communication.

The Miriam and Ira D. Wallach Division of Art, Prints and Photographs: Photography Collection,
        The New York Public Library. *Student Aviators Getting Acquainted with the Radio
        Instruments at the Aeronautical School of the Signal Corps, Univ. of Calif.* Photograph.
        New York Public Library Digital Collections. Accessed March 29, 2021.
        https://digitalcollections.nypl.org/items/510d47d9-b394-a3d9-e040-e00a18064a99.

        Depicting the difference in communication, from before to during WWI, the soldiers in
        this photo are communicating inside a building, which would not happen before WWI.

People Talking on the Phone. Photograph. Adobe Stock. Accessed April 5, 2021.
        https://stock.adobe.com/images/people-talking-phone-men-women-teenagers-calling-by-t
        elephone-flat-communication-and-conversation-with-smartphone-vector-characters-phon
        e-conversation-and-communication-illustration/306849255?tduid=ecccf938c9c4c4532f0
        5e1c6ca7eb13f&as_channel=affiliate&as_campclass=redirect&as_source=arvato.

A very simple image that shows the way we communicate with cell phones are due to the creation of the telegraph. It helped us realize the cellphone did not just pop out of thin air. We used this as part of our conclusion to show the reader that after many steps in evolution, we have created the mobile smartphone that allows us to make long distance calls.

Pigeon Fitted with German Miniature Camera. Photograph. WW100. Accessed April 4, 2021. https://ww100.govt.nz/pigeons-of-war.

With the help of this photo, it helped us realize pigeons were far more useful and important than we thought. It helped us see they could carry fairly heavy objects and important information on pieces of paper since in the image, it was carrying a heavy camera with a small sack on the back.

Pigeon Message from Major Whittlesey to the Commanding Officer of the 308th Infantry. Photograph. National Archives. October 4, 1918. Accessed April 4, 2021. https://catalog.archives.gov/id/595541.

This photograph shows an important message on a notecard that was carried by a carrier pigeon that really helped us realize how invaluable these pigeons were to soldiers when other communication technologies could not do the job.

Receiving Set for Trench Radio. Photograph. Digital Public Library of America. Accessed April 4, 2021. https://dp.la/exhibitions/radio-golden-age/radio-frontlines/?item=671.

Learning about some background on the radio used during WWI through this photo, it also gives some perspectives on how important communication was during WWI. Communication during WWI was so important that they created an entire school just for soldiers to learn how to communicate.

Sergeant Stubby. Photograph. History.com. Accessed April 4, 2021. https://www.history.com/news/dog-heroes-world-war-i-photos.

This photograph of a dog of war shows how small and fit they had to be to deliver messages quickly and without drawing too much attention from the enemy fire. It really helped us better see the importance of having a small creature that can deliver messages when telephone/telegraph lines broke or it was too dangerous for runners.

Soldiers at the First Battle of Marne. Photograph. ThoughtCo. Accessed April 4, 2021. https://www.thoughtco.com/the-first-battle-of-the-marne-1779220.

The horror of living in the trenches was well visualized in this photo. It helped us learn the impracticality of communicating without modern technology in such a tight and dirty space.

Soldiers Celebrating World War I Armistice in November, 1918. Photograph. History.com.
    Accessed April 5, 2021.
    https://www.history.com/news/world-war-i-armistice-germany-allies.

    Occurring soon after the signing of armistice, the soldiers in the photo clearly celebrate in
    joy and happiness for the end of the war. Not only did it help us see the significance of
    this event, but it helps us prove to the reader the importance of the Allies victory over the
    Central Powers and indirectly show the effect communication had on the outcome of the
    war.

Soldiers Wearing Gas Masks to Protect against Poisonous Gas. Photograph. Study.com.
    Accessed April 4, 2021.
    https://study.com/academy/lesson/wwi-chemical-warfare-poison-gas-gas-masks.html.

    We utilized this photograph to show the precautions taken against the new, dangerous
    weapons in WW1. It helped our apprehension of the weakness of older forms of
    communication and see the necessity of faster and more effective communication.

Spad XIII. Photograph. World War Wings. Accessed May 16, 2021.
    https://worldwarwings.com/top-15-fighter-planes-wwi/.

    While the order of these planes are opinion based, it showed us the flimsiness of these
    aircrafts compared to planes in the modern day. We learned the importance of new
    innovations to the radio so that they would be small and light enough on planes.
    Additionally, it showed us the improvements to the radio during WW1 were the first
    steps taken to bring lighter and smaller radios that are in many cars and cell phones today.

SS Majestic Radio Room. Photograph. MarconiHeritage. Accessed May 16, 2021.
    http://marconiheritage.org/ww1-orders.html.

    In this photo, we were able to learn about the immense size of the radio but its advantage
    of being wireless. It helped us realize the importance of radios for soldiers on ships so
    they could communicate to headquarters.

Telegram from Ambassador Walter Page to Secretary of State Robert Lansing. Photograph.
    National Archives. Accessed April 4, 2021. https://catalog.archives.gov/id/302022.

    This photograph helped us empathize the urgency and hope the British had when sending
    this message. By learning about the tensions and feelings at the time, it helped us see the
    importance of the USA's entrance into the war to the Allies and helped strengthen our
    proof for our thesis.

Telegram from Secretary of State Robert Lansing to the American Embassy, London:
    Zimmermann Telegram as Received by the German Minister to Mexico. Photograph.
    National Archives. Accessed April 4, 2021. https://catalog.archives.gov/id/302025.

A message sent through a telegraph line during the first world war, the photo showed us the simplicity of decoding codes during the early 1900's and the vulnerability of sending codes through telegraph lines. By seeing real messages sent by soldiers in the war, we grasped a stronger understanding of the role hacking played in the first world war.

A Telephone Central Station and Telegraph Office behind the French Lines. Photograph. Scientific American. September 9, 1916. Accessed April 4, 2021. https://blogs.scientificamerican.com/anecdotes-from-the-archive/the-telephone-at-war-1916/.

Learning about the telephones back then through this photo, we realized they were much different than the ones that we have today. The actual telephone in this picture is much, much larger than most of them are today. The ones today are capable of fitting in a pocket, but this one could not.

Two Men Using a Telegraph. Photograph. Engineering and Technology. Accessed April 4, 2021. https://eandt.theiet.org/content/articles/2014/06/ww1-first-world-war-communications-and-the-tele-net-of-things/.

This photograph helped us see how cramped and difficult it must have been to fight and send messages in the trenches. Additionally, it helped us imagine the pain and struggles the soldiers must have gone through when trying to send just a single message that helped us when creating this project.

Videos

"Lines of Communication (1917)." mp4 video. Youtube. Posted by BFI, January 8, 2017. Accessed March 29, 2021. https://www.youtube.com/watch?v=nixjhUmTpvQ.

Soldiers were laying down telegraphy wires in the trenches during this video. We used this to illustrate how many casualties there were while installing wires in the ground.

Secondary Sources

Interview

Lee, Jooyoung. Email message to historian. May 13, 2021.

> In our interview, he gave us helpful information and feedback about our project that we further researched on. He helped us formulate a stronger student voice, include multiple perspectives, and better prove our thesis. Professor Lee also introduced many perspectives such as women's rights.

Map

"Battle Map of the 1st Battle of Marne." Map. Accessed April 1, 2021.
http://www.geocities.ws/charlotte_susan_wood/cs02003.htm.

> This battle map is an incredible depiction of the 1st Battle of Marne. We found this map after diving deeper into the event of the 1st Battle of Marne, and its effect on the war -- including trench warfare. During the first battle of Marne, the German armies were stopped by the British on their way to Paris, and both sides dug trenches. Technology played a large role during this battle, but in order to fully understand the communication, it is important to understand the battle itself.

Websites

"Battle of Hamel 4 July 1918." Anzac Portal. Last modified January 14, 2020. Accessed May 16, 2021.
https://anzacportal.dva.gov.au/wars-and-missions/ww1/where-australians-served/western-front/battle-of-hamel.

> Giving us a concise and detailed summary about the Battle of Hamel, it told us the number of tanks, infantry men, and airplanes that were used in this successfully coordinated attack. With this information, we were able to create our own opinion about this battle's effect on the war and future of military attacks.

Cleary, Vern. "The Battle of the Marne: The German Offensive Is Stopped." Modern World History. Accessed March 20, 2021.
http://webs.bcp.org/sites/vcleary/ModernWorldHistoryTextbook/wwi/section_4/thebattleofthemarne.html#:~:text=The%20Battle%20of%20the%20Marne%2C%20fought%20mostly%20between%20September%205,counter%20attacked%20on%20September%207.&text=The%20Germans%20would%20now%20be,a%20protracted%20two%2Dfront%20war.

Giving details about the Battle of Maren as well as its significance, this reference source was used to help us learn more about the famous battle and the difficulties soldiers faced. It helped us understand the importance of more efficient and effective communication technologies.

Ducksters. "World War I Trench Warfare." Ducksters. Accessed March 20, 2021.
https://www.ducksters.com/history/world_war_i/trench_warfare.php.

We found this document at the end of our research and used it to provide information on trench warfare. This article explained the distance between two enemy trenches. We used three different sources to verify this distance (50 - to about 250 yards) because it seems easy for this fact to vary depending on how it was deduced.

The Editors of Encyclopaedia Britannica. "Bruce Bairnsfather." Britannica. Last modified September 25, 2020. Accessed March 20, 2021.
https://www.britannica.com/biography/Bruce-Bairnsfather.

This article provided background on Bruce Bairnsfather, the man that created a political cartoon that was used in this project. Bruce Bairnsfather grew up with a father in the military, so tried and failed to join the military. After leaving the military, however, he pursued an art career, but that failed, and, after a while, found himself back in the army for WWI. He used his art skills to draw cartoons and sketches, and was an immediate success.

Ganon, Paul, and James Hayes. "WW1: First World War Communications and the 'Tele-net of Things.'" The Institution of Engineering and Technology. Last modified June 16, 2014. Accessed March 20, 2021.
https://eandt.theiet.org/content/articles/2014/06/ww1-first-world-war-communications-and-the-tele-net-of-things/.

This reference source gave a detailed analysis of how the first "modern war" and the many different parts of it such as the trench warfare greatly affected how communication developed. This analysis helped us better see that many of the advancements in communication that completely changed how we communicated were due to the need for more effective and efficient communication during the first "modern war".

History.com Editors. "First Battle of Marne." HISTORY. Last modified October 29, 2009. Accessed April 3, 2021.
https://www.history.com/topics/world-war-i/first-battle-of-marne#:~:text=The%20First%20Battle%20of%20the,Paris%20in%20early%20September%201914.&text=On%20September%2010%2C%20German%20chief,front%20between%20Soissons%20and%20Verdun.

We knew this website was very reliable and gave us a lot of information about what happened at the Battle of Marne to cross-check with an image used in our website to ensure the photo is reliable. By pairing a detailed explanation and a photo about the

events during this historical battle, we were able to confidently write and argue our historical argument.

History.com Editors. "First trenches are dug on the Western Front." History. Last modified September 14, 2020. Accessed March 20, 2021. https://www.history.com/this-day-in-history/first-trenches-are-dug-on-the-western-front.

In doing research about trenches, we found this document that had plenty of information for us to use. We were able to back up the fact that trenches were 50 to 250 yards apart, but learned that enemy trenches could be as far as a mile from each other. This was very helpful, and supported our claim.

History.com Editors. "The United States officially enters World War I." History. Last modified April 3, 2020. Accessed March 20, 2021. https://www.history.com/this-day-in-history/america-enters-world-war-i.

Discussing the USA's entrance into WW1 on this website, we learned about America's effect on the war and by having a stronger background knowledge about this major turning point, we were able to create a better explanation that proved our thesis.

History.com Editors. "World War I." History. Last modified January 13, 2021. Accessed March 20, 2021. https://www.history.com/topics/world-war-i/world-war-i-history.

This reference source talked about the many parts of World War 1 that helped us have a better understanding about the significance of the war. By providing us with many details about WWI, it helped us understand why certain advancements were made and allowed us to connect the different parts of our research back to the thesis.

History.com Editors. "World War I Battles: Timeline." History. Last modified April 8, 2021. Accessed May 16, 2021. https://www.history.com/topics/world-war-i/world-war-i-battles-timeline.

On this reliable website, it gives a quick description of many battles during the first world war and the effect they had. We used it to cross check other resources that weren't as trustworthy to help us gain historically accurate information.

Klein, Christopher. "The First Battle of the Marne." History.com. Last modified September 5, 2014. Accessed April 3, 2021. https://www.history.com/news/the-first-battle-of-the-marne-100-years-ago.

This website taught us what happened at the Battle of the Marne and the effect communication technology had on preventing Germany taking over Paris. By knowing more about this battle, it allowed us to utilize this to help strengthen our argument.

Lallania, Marc. "The Science of World War I: Communications." Live Science. Last modified
March 15, 2014. Accessed March 20, 2021.
https://www.livescience.com/45641-science-of-world-war-i-communications.html.

This article provided a lot of information about the uses of the radio, dogs, and pigeons
over the telegram or the telegraph when they could not be used. It helped us see that these
other forms of communication were still useful to the war because the telegram and the
telegraph were still inconsistent and unreliable.

NASA. "The Electromagnetic Spectrum." NASA. Last modified November 14, 2014. Accessed
March 20, 2021. https://imagine.gsfc.nasa.gov/science/toolbox/emspectrum1.html.

With this website, we used to ensure our background knowledge about radio waves are
accurate. By using other sources related to radio waves, we were able to better
understand the drastic speed difference between older technology and the radio.

RMR Foundation. "Communications in WW1." Royal Montreal Regiment. Last modified July
14, 2015. Accessed March 20, 2021.
https://royalmontrealregiment.com/communications-in-ww1/.

This reference source talks about the many different ways military troops communicated
with one another. It provides many details about the strengths, weaknesses, and uses of
each communication form that helped us figure out what forms of communication were
better than others in certain circumstances.

Royde-Smith, John Graham. "World War I." Britannica. Last modified March 17, 2021. Accessed
March 20, 2021. https://www.britannica.com/event/World-War-I.

In this reliable resource, it was used to corroborate information found on other websites
that may not have been as reliable as Britannica. By making sure the information we
found was reliable, it helped us gain confidence in our research that in turn, gave us a
better understanding of our project.

Sloan, Martha. "Communication Technologies During World War I and the Interwar Years."
Digital Commons. Last modified September 28, 2018. Accessed March 20, 2021.
https://digitalcommons.mtu.edu/cgi/viewcontent.cgi?article=1018&context=ww1cc-sym
posium.

By reading about a historian's perspective, it helped strengthen our support for our thesis
on WW1 to improve our student voice. It helped us gain another view of how different
events that occurred during the first world war affected its outcome that increased our
understanding of how communication affected the war.

Smith, Chris. "How communications technology helped win World War I." BT. Last modified
November 10, 2018. Accessed March 20, 2021.

https://home.bt.com/tech-gadgets/how-communications-technology-helped-win-world-war-i-11364181314987.

Many examples of how communication technology were used to help the Allies win WWI were described in this article. But it gave a very specific example of how radio sets were invaluable to air pilots that helped us learn another way communication technologies were utilized during WWI.

"Technological and Scientific Progress During the First World War." Canopé. Accessed March 21, 2021. https://www.reseau-canope.fr/apocalypse-10destins/en/theme-based-files/technological-and-scientific-progress-during-the-first-world-war.html.

Many scientific and technological advancements during the first world war were discussed in this article, but we used information about the communication technologies. It helped us see the many imperfections of the communications technologies during the war and how the newer technologies resolved some of those issues but created new ones.

Tworek, Heidi J.S. "Wireless Telegraphy." International Encyclopedia of the First World War. Last modified October 8, 2014. Accessed May 16, 2021. https://encyclopedia.1914-1918-online.net/article/wireless_telegraphy#:~:text=The%20British%20relied%20more%20upon,trench%20warfare%20in%20mid%2D1915.

We learned Germany embraced the radio far more than the Allies at the beginning of the war as well as which branches of the military used the radio on this website. It helped us gain multiple perspectives about new communication technology in WW1 and how it helped the Allies to defeat the Germans.

United States Department of State. "U.S. Entry into World War I, 1917." Office of the Historian. Accessed March 21, 2021. https://history.state.gov/milestones/1914-1920/wwi.

We learned about the U.S entry into WW1 through a very reliable article by the U.S government. By learning about the event in detail, it helped us learn the huge effect technological communication advancements had on the outcome of WW1.

"War Communication during WWI." National Museum of the Marine Corps. Accessed March 21, 2021. https://www.usmcmuseum.com/uploads/6/0/3/6/60364049/nmmc_wwi_military_communication_resource_packet.pdf.

This article gave background on the different types of communication used during WWI. While some forms of communication were new, like the telegraph, telephone, and radio, there were many older forms of communication used that were extremely helpful; for example, dogs and pigeons were used to carry messages over distances that took longer to deliver by a human.

"Women in World War I." The National World War Museum and Memorial. Accessed May 16, 2021. https://www.theworldwar.org/learn/women.

Through this webpage, we learned about the opportunities women had in WW1. Since men left their jobs to fight for their countries, and women filled their spots, they proved themselves in the workforce and contributed to the women's rights movement.

"World War I Trench Facts and Worksheets." Kidskonnect. Last modified March 1, 2019. Accessed March 21, 2021. https://kidskonnect.com/history/wwi-trenches/#:~:text=The%20land%20between%20t.

As we were closing up our research, we decided to seek more data to support our claim, which led us to this and other documents. We learned that trenches were 50 to 250 yards apart, which supported our claim that using visual signaling in trenches was undesirable because the enemy could see and decode it.

Zagorsky, Jay L. "Rise and Fall of the Landline: 143 Years of Telephones Becoming More Accessible – and Smart." The Conversation. Last modified March 14, 2019. Accessed March 21, 2021. https://theconversation.com/rise-and-fall-of-the-landline-143-years-of-telephones-becoming-more-accessible-and-smart-113295.

We had almost finished our research when we found this source, which illustrates the effect of communication back then to now. In the article Zagorsky states, "In 1914, at the start of World War I, there were 10 people for every working telephone in the U.S. By the end of World War II in 1945, there were five people for every working phone." This statistic shows how much WWI had an effect on the world around it.

Electronic Newspaper

McLintock, Penny. "Battle of Hamel Still Considered 'Turning Point.'" *ABC News*. Accessed May 16, 2021. https://www.abc.net.au/news/2008-07-04/battle-of-hamel-still-considered-turning-point/2494406.

While keeping in mind this article has some bias, it helped us develop our own opinion about the Battle of Cambrai and its long term effect on the future of tank warfare after learning about the successful communication between soldiers using the radio.

Robinson, Frances. "Telecommunications." *The Wall Street Journal*. Accessed March 20, 2021. https://graphics.wsj.com/100-legacies-from-world-war-1/telecommunications.

This electronic newspaper enhanced our knowledge about how telecommunications and wireless telegraphy were utilized during WWI. It provided us with many examples of telecommunications and wireless telegraphy being used during the war.

Online Magazine

McKay, Sinclair. "Hack of the Century." *The Spectator*. Accessed May 16, 2021.
   https://www.spectator.co.uk/article/hack-of-the-century.

   In this online magazine, it tells the story of how the Zimmerman Telegram, a message
   that influenced the US to join the war, was cracked. It included a quote of Nigel de Gray
   that showed us the importance of the message.

Videos

"The British Codebreaker Who Cracked the Zimmerman Telegram | Forces TV." mp4 video,
   2:44. Youtube. Posted by Forces News, January 18, 2017. Accessed May 16, 2021.
   https://www.youtube.com/watch?v=AXjLEMHbTgo.

   In this video, it explains what the Zimmerman Telegram was and helped us realize its
   significance in bringing the US into WW1.

"Life in a Trench | World War I | History." mp4 video, 3:14. YouTube. Posted by History, March
   21, 2014. Accessed March 20, 2021.
   https://www.youtube.com/watch?v=_G4ZY66BG38.

   We watched this video to see the horrors and gruesomeness of the trenches. It helped us
   visualize the impossibility of using older forms of communication and the need for
   modern technology.

"The Native American Code Talkers Who Helped Win WWI." mp4 video, 1:57. YouTube. Posted
   by History, March 11, 2017. Accessed March 20, 2021.
   https://www.youtube.com/watch?v=OsPVzBXzjqY.

   Giving insight into the significance of code-talkers and the role it had in ensuring
   messages were not as easily decoded by the enemy, this video helped us learn the
   importance of cryptology. For example, the Choctaw Nation used their language to send
   messages the Germans could not crack.