Activity: Mapping the Meuse-Argonne Offensive

Guiding question:
How did geography and the cultural landscape affect advancements by the American Expeditionary Forces (AEF) during the Meuse-Argonne Offensive?

DEVELOPED BY CHRIS BUNIN
Grade Level(s): 9-12
Subject(s): Social Studies, Geography
Overview
In this activity students use ArcGIS online to explore a layered map that illustrates phases of American advancement during the Meuse-Argonne Offensive. They will also look at a variety of embedded primary source photographs of the battlefield.

Historical Context
The Meuse-Argonne Offensive took place on the Western Front of World War I (WWI) in four phases beginning September 26 and ending with the Armistice on November 11, 1918. It was one of the largest military offensives in U.S. history involving 1.2 million U.S. troops. The battlefield was a large, highly-fortified area with many towns, hills, trenches, roads, and railroads.

Objectives
At the conclusion of this lesson, students will be able to

• Explain how geography and German defenses affected AEF advancements during the Meuse-Argonne Offensive;

• Identify and explain how the AEF overcame a number of “seemingly insurmountable” obstacles during the Meuse-Argonne Offensive; and

• Analyze images and primary documents to explain the significance of the Meuse-Argonne Offensive in American history.

Standards Connections

Connections to Common Core
CCSS.ELA-Literacy.RH.9-10.2 Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.
**CCSS.ELA-Literacy.RH.11-12.2** Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear among the key details and ideas.

**CCSS-Literacy.RH.11-12.7** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

**Connections to C3 Framework**

**D2.Geo.1.9-12.** Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their political, cultural, and economic dynamics.

**D2.His.1.9-12.** Evaluate how historical events and developments were shaped by unique circumstances of time and place as well as broader historical contexts.

**D2.His.14.9-12.** Analyze multiple and complex causes and effects on events in the past.

**D2.His.15.9-12.** Integrate evidence from multiple relevant historical sources and interpretations into a reasoned argument about the past.

**Materials**

- Mapping the Meuse-Argonne Offensive Student Directions and Worksheet
- Mapping the Meuse-Argonne Offensive Student Answer Key
- Optional – [Getting Started with ArcGIS Online Handout](#)
- Computer with Internet access for each student. Lesson can also be completed with a computer and projector as a teacher-led activity.

**Lesson Preparation**

- Make one copy of Mapping the Meuse-Argonne Offensive Student Directions and Worksheet to hand out to each student.
- Optional – [Getting Started with ArcGIS Online Handout](#)
- Before beginning the lesson, test the online maps and check your technology functionality. **Do not use Internet Explorer. It has compatibility issues with ArcGIS Online.**
Procedure (60 minutes)

• Pass out the Mapping the Meuse-Argonne Offensive Student Directions and Worksheet to each student.

• Have students go to http://arcg.is/1Tb12re and load, “It’s Now or Never! The Battle of the Meuse-Argonne” web map.

• Demonstrate for students how to use the interactive map. If necessary, distribute a copy of the Getting Started with ArcGIS Online Handout.

• Inform students that the Meuse-Argonne Offensive was one of the largest land offensives in U.S. history, and briefly tell them where the battle took place. Explain that they will interact with a web map to better understand the obstacles the AEF faced in helping end WWI.

• Have students navigate the online map and activities using the Mapping the Meuse-Argonne Offensive Student Directions and Worksheet. Monitor their progress by helping with technical support, map analysis, and primary source analysis.

Closure

• When students have completed the activity, review the questions and answers by using the ArcGIS Online map. Key discussion points to cover while reviewing answers should include, but not be limited to:
  ◦ The Meuse-Argonne region was located in a hilly area heavily fortified by the Germans. If German troops broke through this area, they could easily capture Paris. However, if American and French forces could push the Germans out of this area, they could force them to surrender.
  ◦ The battlefield was a large, highly-fortified area of towns, hills, trenches, roads, and railroads. The only way for the Allies to effectively defeat the Germans was to get out of the trenches and go on the offensive. Hence the name, Meuse-Argonne Offensive.
  ◦ There were five important heights that needed to be taken in order to control this region: Montfaucon, Romagne Heights, Heights of the Meuse, Argonne Forest, and Barricourt Heights.
  ◦ On day one American forces gained ground while trying to take Montfaucon, an important point that would provide Americans a good view of the other four major heights in the area.
  ◦ The AEF continued the assault on Montfaucon during phase one and began to try to take the Argonne Forest.
  ◦ During phase two, the AEF continued to advance on the Argonne Forest and Romagne Heights.
  ◦ The AEF continue to gain control of Romagne Heights, Barricourt Heights, and Heights of the Meuse during phase three. This phase lasted nearly four weeks.
  ◦ During phase four, Americans pursued German forces to the Belgium border. The battle ended at the 11th hour of the 11th day of the 11th month on November 11, 1918.
American Battle Monuments Commission (ABMC) was established at the end of WWI. One of the first monuments constructed was the Montfaucon American Monument. See the "Primary Focus" marker located on the ArcGIS Online map. It consists of a massive granite Doric column topped by a statue symbolic of liberty and towers more than 200-feet above the war ruins of the former village of Montfaucon commemorating the American victory during the Meuse-Argonne Offensive. An engraved map of the operations and a tribute to American troops who served are on the walls of the foyer.

Assessment

- Students complete Mapping the Meuse-Argonne Offensive Student Directions and Worksheet. Teachers review and grade their answers and contributions to the classroom discussion.

Methods for Extension

- Students may complete the following ABMC lessons about the Meuse-Argonne Offensive: “Honoring Service, Achievements, and Sacrifice: A Virtual Field Trip”; “Geography is War: The Lost Battalion”

Adaptations

- Students may complete this activity in a mixed-ability group.
- Complete the assignment as a guided activity in which the teacher follows along with the students, checking for assessment and providing support and clarification as needed.
Mapping the Meuse-Argonne Offensive Student Directions and Worksheet

1. Navigate to the following address: http://arcg.is/1Tb12re for the map “It’s Now or Never: the Battle of the Meuse-Argonne.”

2. Important features on the map are:
   - **Meuse-Argonne Images:** Images and primary sources from the Meuse-Argonne Offensive
   - **Primary Focus:** Hyperlink to General John J. Pershing’s remarks during the dedication of Montfaucon American Monument
   - **Day One:** American advancement lines during day one of the Meuse-Argonne Offensive
   - **Phase One:** American advancement lines September 26 – October 3
   - **Phase Two:** American advancement lines October 4 – 7
   - **Phase Three:** American advancement lines October 8 – 31
   - **Phase Four:** American advancement lines November 1 – 11
   - **Important Towns:** Towns of particular interest during the Meuse-Argonne Offensive
   - **Towns:** Other towns in the region of the Meuse-Argonne Offensive
   - **Farms:** Major farms located within the Meuse-Argonne battlefield
   - **Hills:** Major hills of the Meuse-Argonne battlefield
   - **Bois (Woods):** Wooded sections of the battlefield
   - **Railroads:** Railroads that ran through or near the battlefield
   - **Rivers:** Two major rivers that were part of this battlefield
   - **German Lines:** Major German defensive lines
   - **Hindenburg Line:** Strongest of the German defensive lines
   - **Important Heights:** Major heights of the Meuse-Argonne battlefield
   - **Meuse-Argonne Area:** Battlefield area

**THE BATTLEFIELD**

- Select the Measurement Bookmark and use the measure tool to calculate total square mileage of the battlefield. Click on the measure tool, choose the area feature, and change the units to miles. Click, drag, and click to draw a box around the battlefield and answer Q1.

Q1: How large was the area that the AEF aimed to capture?
DAY ONE

• Select the Day One Bookmark.

• Turn on Day One (September 26, 1918) and Meuse-Argonne Images layers. Look at the distribution of advancement lines and then click on and open at least seven images located near Day One advancement lines. Turn on German Lines and Important Heights layers to help answer Q2 – Q4. Turn off layers when you are done and ready to move onto the next phase of the battle.

Q2: Describe the geography and landscape of Day One using the map and images provided.

Q3: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Day One?

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Q4: What feature(s) on the map appears to have been the AEF’s objective on Day One?

• Use the Measure Tool to find out how much land Americans gained during the first day of battle. To do this, click on the Measure Tool, choose the area feature, and change the units to miles. Click, drag, and click to draw a box around Day One advancement lines and answer Q5.

Q5: How much ground did the AEF gain during Day One?
PHASE ONE

• Select the Phase One Bookmark.

• Turn on Phase One layer (September 26 – October 3) and keep Meuse-Argonne Images layer visible. Look at the distribution of this phase’s advancement lines and click on and open at least five of the images located in the vicinity. Turn on German Lines and Important Heights layers to help answer Q6 - Q8. Turn these layers off when you are done.

Q6: Describe the geography and landscape of Phase One using the map and images provided.

Q7: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Phase One?

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Q8: What feature(s) on the map appears to have been the AEF’s objective during Phase One?

• Use the Measure Tool to find out how much land Americans gained during Phase One of the battle. To do this click on the Measure Tool, choose the area feature, and change the units to miles. Click, drag, and click to draw a box around Phase One advancement lines and answer Q9.

Q9: How much ground did the AEF gain during Phase One?
**PHASE TWO**

- Select the Phase Two Bookmark.
- Turn on Phase Two layer (October 4 – October 7) and keep Meuse-Argonne images visible. Look at the distribution of advancement lines and click on and open at least five of the images in the vicinity. Turn on German Lines and Important Heights layers to help answer Q10 - Q12. Turn these layers off when you are done.

Q10: Describe the geography and landscape of Phase Two using the map and images provided.

Q11: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Phase Two?

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Q12: What feature(s) on the map appears to have been the AEF’s objective during Phase Two?

Use the measure tool to find out how much land the Americans gained during Phase Two of the battle. Answer Q13.

Q13: How much ground did the AEF gain during Phase Two?

**PHASE THREE**

- Select Phase Three Bookmark.
- Turn on Phase Three layer (October 8 – October 31) and keep Meuse-Argonne Images visible. Look at the distribution of advancement lines and open at least five of the images in the vicinity. Turn on and Important Heights layers to help answer Q14 - Q16. Turn these layers off when you are done.

Q14: Describe the geography and landscape of Phase Three using the map and images provided.
Q15: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Phase Three?

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Q16: What feature(s) on the map appears to have been the AEF's objective during Phase Three?

- Use the measure tool to find out how much land the Americans gained during Phase Three of the battle. Answer Q17.

Q17: How much ground did the AEF gain during Phase Three?

**PHASE FOUR**

- Choose Phase Four Bookmark.

- Turn on Phase Four layer (November 1 – November 11) and keep Meuse-Argonne images visible. Look at the distribution of advancement lines and click on at least five of the images in the vicinity. Turn on German Lines and Important Heights layers to help answer Q18 – Q20. Turn these layers off when you are done.

Q18: Describe the geography and landscape of Phase Four using the map and images provided.

Q19: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Phase Four?

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Q20: What feature(s) on the map appears to have been the AEF’s objective during Phase Four?

- Use the Measure Tool to find out how much land Americans gained during Phase Four of the battle. Answer Q21.

Q21: How much ground did the AEF gain during Phase Four?

- Look at the Phase Four layer and answer these reflection questions. Answer Q22 - Q23.

Q22: What were the German Army’s options during Phase Four?

Q23: What were the American Army’s options during Phase Four?

**PRIMARY FOCUS**

- Choose Primary Focus Bookmark.
- Turn on Primary Focus layer.
- Click on the place mark and open the image. Read General Pershing’s dedication to the ABMC Montfaucon American Monument. Answer Q24 - Q25.

Q24: What does General Pershing note about the weather during the battle? Why do you think he chose to make note of this in his remarks?

Q25: Pershing’s remarks include the following statements: “The Meuse Argonne Battle presented numerous difficulties seemingly insurmountable”; and “one of the greatest achievements in the history of American Arms?” From what you have seen in the maps and images from the battle, identify at least three reasons Pershing would make these statements about the Meuse-Argonne Offensive’s place in American history.
Mapping the Meuse-Argonne Offensive Student Answer Key

THE BATTLEFIELD
Q1: What was the area (in square miles) of the Meuse-Argonne battlefield? 700 – 800 square miles

DAY ONE
Q2: Describe the geography and landscape of Day One using the map and images provided. Answers will vary. Possible answers – the land was full of craters, barbed wire, destroyed towns, shattered trees, and German defense systems.

Q3: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Day One?
PATTERNS – Day One shows the jumping off line and the area where the Americans met serious resistance from the Germans.
CONTESTED AREAS – It is difficult to tell at this stage of the battle, but Americans met a lot of resistance along the northern advancement line. Notice the “bulge” in the line around Montfaucon.

Q4: What feature(s) on the map appears to have been the AEF’s objective on Day One?
Montfaucon was the objective of Day One. Note the “bulge” in the line near this important heights area.

Q5: How much ground did the AEF gain during Day One?
100 to 120 square miles.

PHASE ONE
Q6: Describe the geography and landscape of Phase One using the map and images provided. Cratered land, destroyed villages and farms, and shattered trees in the Argonne forest.

Q7: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Phase One?
PATTERNS – Lines along the southern Argonne forest, around Montfaucon, and along the Meuse River.
CONTESTED AREAS – Areas approaching Montfaucon from the northeast.

Q8: What feature(s) on the map appears to have been the AEF’s objective during Phase One?
Argonne Forest, Montfaucon, and Meuse River to the west.
Q9: How much ground did the AEF gain during Phase One? *This will be difficult to measure.* Encourage your students to do the best they can. The amount of area is about 50 – 70 miles depending on how you measure it. The key take away is that the AEF spent over a week fighting to capture Montfaucon and about one half of the area they captured during Day One.

**PHASE TWO**

Q10: Describe the geography and landscape of Phase Two using the map and images provided. Farmland, destroyed villages, fortified farms, tanks, destroyed wooded areas, and many hills.

Q11: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met a lot of resistance or encountered fighting. Which areas appear most contested during Phase Two?

**PATTERNS** – Advancement lines in the Argonne Forest and along the south edge of Romagne Heights, and continued protection of the Meuse River in the west.

**CONTESTED AREAS** – Lost Battalion area in the Argonne Forest, and the southern portion of Romagne Heights.

Q12: What feature(s) on the map appears to have been the AEF’s objective during Phase Two? *The Argonne Forest, Romagne Heights, and protecting land already gained.*

Q13: How much ground did the AEF gain during Phase Two? *This will be difficult to measure.* Encourage your students to do the best they can. The amount of area is about 30 – 50 square miles depending on how you measure it. The key take away is that the AEF spent nearly two weeks to capture the same amount of area as Day One. After these two weeks, they controlled Montfaucon and were at the edge of Romagne Heights and the Argonne Forest.

**PHASE THREE**

Q14: Describe the geography and landscape of Phase Three using the map and images provided. The fighting became extremely intense during Phase Three. Features to note: the arrival of reinforcements, tanks, machine guns, and a lot of contested ground.

Q15: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest that the area met lot of resistance or encountered fighting. Which areas appear most contested during Phase Three?

**PATTERNS** – A lot of lines close together suggest intense fighting along Romagne Heights, the Argonne Forest and along the foothills and woods along the base of the Heights of the Meuse (in the west).

**CONTESTED AREAS** – Romagne Heights, Argonne Forest, a lot of woods, hills, farms and towns, and near the Heights of the Meuse. The fighting crossed the Hindenburg Line.
Q16: What feature(s) on the map appears to have been the AEF’s objective during Phase Three? Romagne Heights, Argonne Forest, and the railroad lines running east/west and north/south.

Q17: How much ground did the AEF gain during Phase Three? This will be difficult to measure, but worthwhile. Encourage your students to do the best they can. The amount of area is about 100 - 120 square miles depending on how you measure it. The key take away is that the AEF spent nearly three weeks fighting to capture Romagne Heights and the Argonne Forest. After five weeks, the AEF finally crossed the Hindenburg Line.

PHASE FOUR

Q18: Describe the geography and landscape of Phase Four using the map and images provided. Flooded rivers, soldiers celebrating, Americans in control of observation towers, open space that is less rugged than in Phases One to Three.

Q19: Look at the advancement lines and describe any patterns you see. Are they close together or spread out? Many lines together suggest there was a lot of resistance and fighting in the area. Which areas appear most contested during Phase Four?

   PATTERNS – Lines far apart and stretching for miles all the way to Sedan.

   CONTESTED AREAS – Heights of the Meuse and some of the railway junctions are the contested area during this phase. After this, the Americans had the Germans on the run and gained tremendous amounts of land.

Q20: What feature(s) on the map appears to have been the AEF’s objective during Phase Four? Capturing Barricourt Heights, the Heights of the Meuse, liberating towns, and pushing the German forces out the Meuse-Argonne region.

Q21: How much ground did the AEF gain during Phase Four? 400 – 500 miles depending on how you measure. The key take away is that once the Americans broke through the Romagne Heights, the Argonne Forest, and the Hindenburg Line the last line of defense for the Germans was the Heights of the Meuse and Barricourt Heights. They captured half of the battlefield in a little less than 10 days.

Q22: What were the German Army’s options during Phase Four? Very few options remain. Try to mount a counter-offensive (unlikely) or surrender or retreat to the Ardennes along the border between Belgium and France.

Q23: What were the American Army’s options during Phase Four? Pursue the Germans and hold the Meuse-Argonne area. The battle ended with the Armistice on November 11, 1918. Some believe the loss of the Meuse-Argonne compelled the Germans to agree to this cease-fire.
PRIMARY FOCUS

Q24: What does General Pershing note about the weather during this battle? Why do you think he chose to make note of this when reflecting on the Meuse-Argonne? This was a battle of more than armies and fortifications. The AEF also had to fight elements of cold temperatures, cold ground, and mud.

Q25: Pershing’s remarks includes the following statements:“The Meuse-Argonne Battle presented numerous difficulties seemingly insurmountable” and “one of the greatest achievements in the history of American Arms.” From what you have seen in the maps and images from this battle identify at least three reasons Pershing would make these statements about the Meuse-Argonne Offensive’s place in American history. Answers will vary. Look for your students to make connections with Pershing’s statements and the images and landscape of WWI. The offensive took over six weeks in which the AEF captured many German fortifications, five heights, and over 700 square miles of land. This was possibly the most highly fortified area of the Western Front.