

# Teaching World War I with Immersive Experiences: Where Virtual Reality Meets Reality

Virtual Conference  
December 4-6 2020



# Agenda

Where we are going today?

AKA

Where are we going in 20 mins  
or so?



**Background and Motivation**

**Why VR at Blacksburg Middle School?**

**Structure of the Learning Experiences**

Guiding Questions

Learning Centers and Logistics

**Experiences and Outcomes**

**Looking Forward - Playing with Ideas**

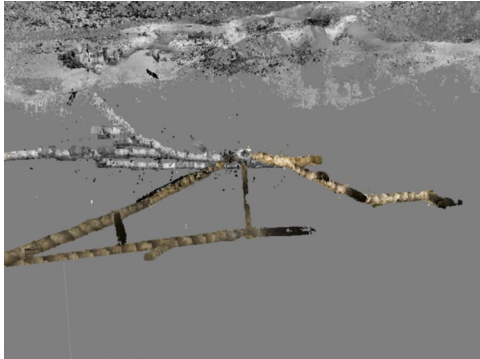
**Resources**

# Background and Motivation



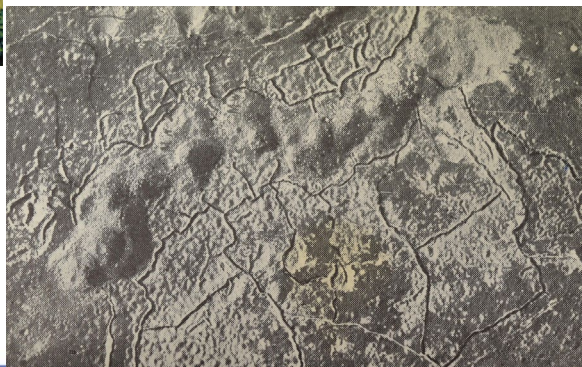
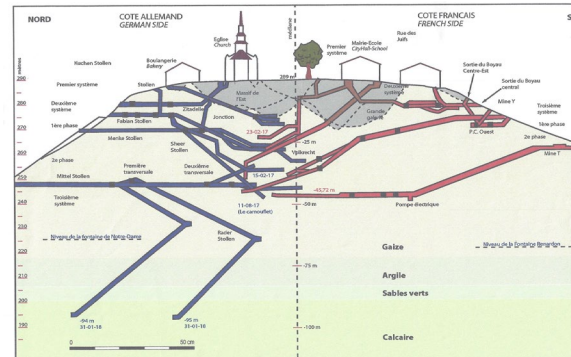
## The Hill of Vauquois Research Focus:

- Making large historic sites accessible in VR
- Student learning through immersive experience
- Teachers pedagogical decisions when implementing VR in school curriculum



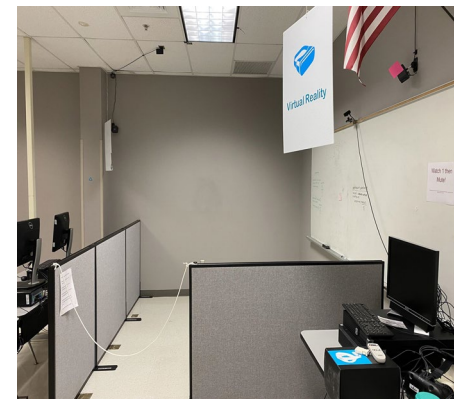
Making visible the invisible  
Walking in the footsteps of others  
Plausibility Illusion - experience as if real!

# The Destroyed Village of Vauquois



## Why VR at Blacksburg Middle School

- A student visit to the VT library sparked interest and led to our ITRT seeing the educational potential.
- She then pursued a grant with VT to get VR started at BMS.
- VT has been an incredible partner to support us with the technology and education.
- Since then, other schools have visited and inquired how to get this started.



# Structure of the Learning Experiences at Blacksburg Middle School



## Guiding Questions to be Explored...

**If this place could talk what would it tell us about the impact of World War I on people and communities on the Western Front in France a 100 years ago?**

- What happened to the destroyed village of Vauquois in France during World War 1?
- What do the events at Vauquois tell us about the type of fighting that occurred on the Western Front? What is unique what is typical?
- How did more efficient technologies actually change the nature and pace of warfare and prevent the war being over by Christmas 1914?





## The Four Learning Centers and Logistics

- Learning Center 1: Vauquois Tunnel with HTC Vive
- Learning Center 2: Tunnel Hyperdoc Station
- Learning Center 3: Vauquois Documentary Edpuzzle
- Learning Center 4: Google Expedition Trench Warfare



## WWI GROUPS ROTATION SCHEDULE

### “Group A”

- 1: VR Lab (In VR Lab)
- 2: Hyperdocs (In VR Lab)
- 3: Google Expedition (Mrs. Bonds' Room)
- 4: Poster Station (Mrs. Ratcliffe's room)



## WWI GROUPS ROTATION SCHEDULE

### “Group B”

1. Hyperdocs (In VR Lab)
2. Google Expedition (Mrs. Bonds' Room)
3. Poster Station (Mrs. Ratcliffe's Room)
4. VR Lab (In VR Lab)

## Learning Center 1: Vauquois Tunnel with HTC Vive

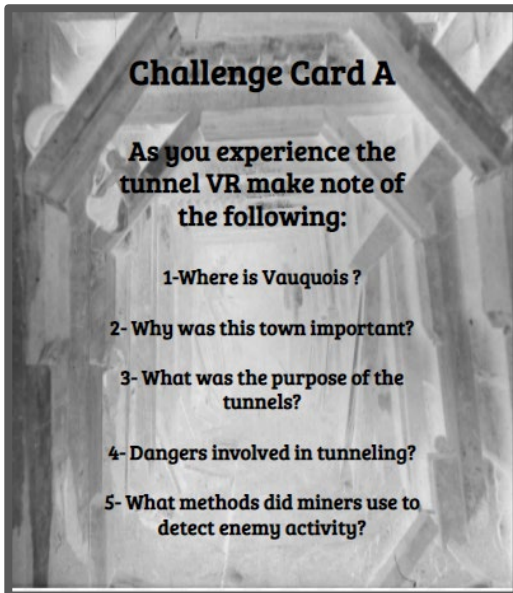
- During this center, students experience a WWI tunnel located in Vauquois, France. Students listen to the history of the hill while exploring the tunnel as if they were there today. This immersive experience peaks student engagement and curiosity. As they move through the remaining stations, students investigate more about tunnel warfare during WWI.



# What the Students See/Experience



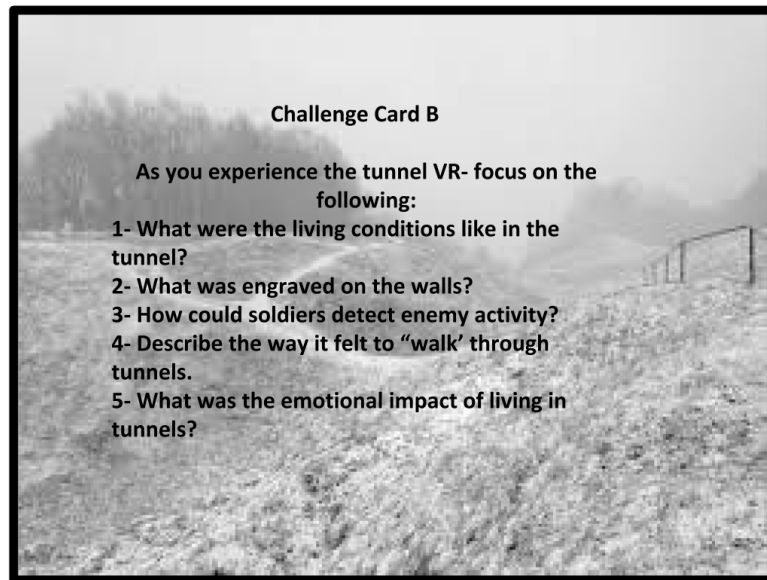
# Challenge Cards to help focus attention during VR



**Challenge Card A**

As you experience the tunnel VR make note of the following:

- 1-Where is Vauquois ?
- 2- Why was this town important?
- 3- What was the purpose of the tunnels?
- 4- Dangers involved in tunneling?
- 5- What methods did miners use to detect enemy activity?



**Challenge Card B**

As you experience the tunnel VR- focus on the following:

- 1- What were the living conditions like in the tunnel?
- 2- What was engraved on the walls?
- 3- How could soldiers detect enemy activity?
- 4- Describe the way it felt to “walk’ through tunnels.
- 5- What was the emotional impact of living in tunnels?



## Learning Center 2: Tunnel Hyperdoc Station

- As students wait their turn to experience the Vauquois tunnel, they independently work through a hyperdoc lesson to further discover more interesting information about how tunnel warfare was used and implemented. Students watch videos, explore research, annotate a primary source picture, and critically think and reflect on tunnel warfare and its use during WWI (the Vauquois Hyperdoc is available for download [here](#)).

### Tunnel Warfare

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#### Engage

 <p><small>*Click the image for video</small> <a href="https://www.youtube.com/watch?v=BGqPMFvGJDM">https://www.youtube.com/watch?v=BGqPMFvGJDM</a></p>	<b>Vauquois Hill Video</b> <ol style="list-style-type: none"><li>List one advantage to mining/ tunneling.</li><li>Why was Vauquois Hill important?</li></ol>
 <p><small>*Click the image for video</small> <a href="https://www.youtube.com/watch?v=phBly2KUZTAFs">https://www.youtube.com/watch?v=phBly2KUZTAFs</a> <small>58s</small></p>	<b>Tunnel Warfare Video</b> <ol style="list-style-type: none"><li>List one use of a tunnel during WWI.</li><li>Where was most of the tunneling done?</li><li>What was one condition a miner had to face?</li></ol>

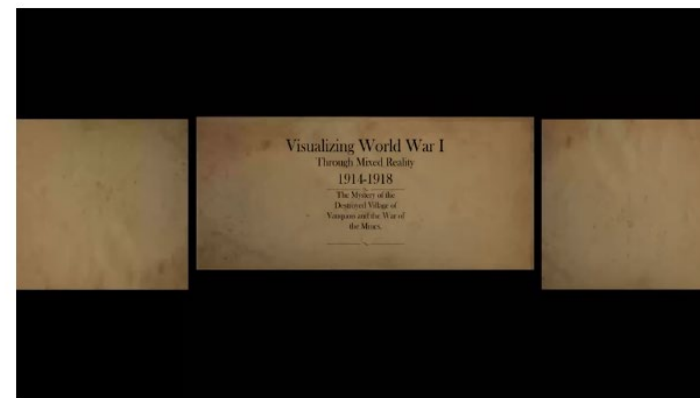
## Learning Center 3: Vauquois Documentary Edpuzzle

- At this center, students watch a documentary about Vauquois and its importance in WWI. Here they gain an understanding of the tunnel's location, uses, and many tools associated with mining a tunnel during war. In order to gauge understanding, the documentary is uploaded to Edpuzzle.com, so as students watch they must answer questions at certain points in the video.



Vauquois Documentary - VT ICAT Cyclorama Format

Jessica Ratcliffe



## Learning Center 4: Google Expedition Trench Warfare

- Students use Google Expeditions to explore trench warfare. After completing the tour, students describe trench conditions and discuss the challenges of trench warfare.

Explore The Great War in Expeditions:

<https://expeditions.gle/fdl/D2Q3>

Explore Reconstructing World War I Trenches in Expeditions:

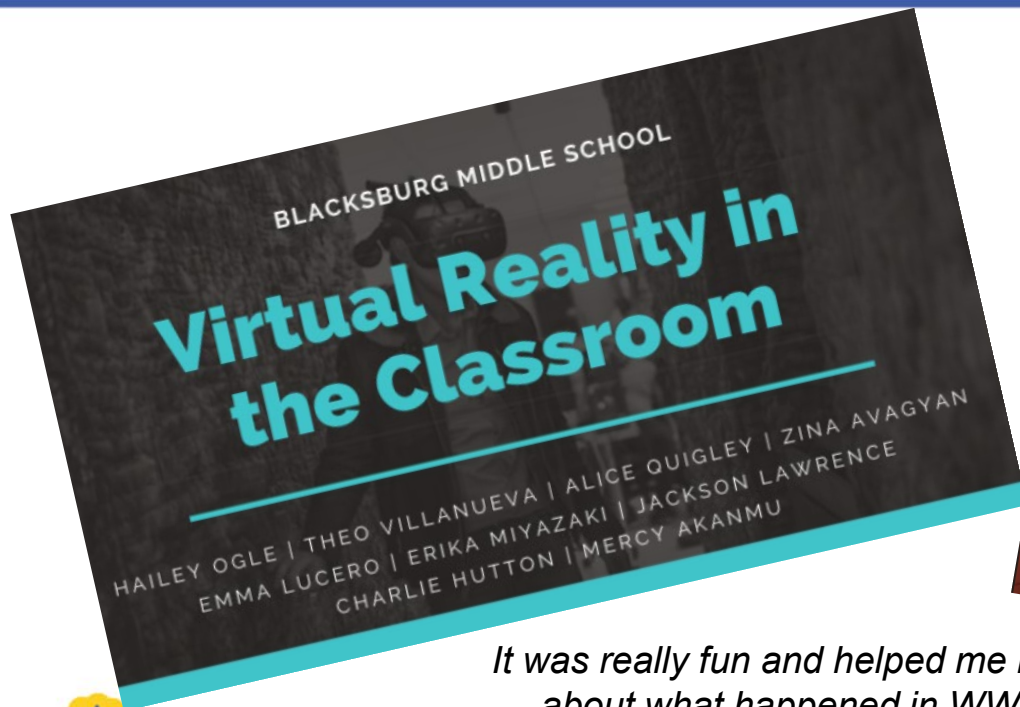
<https://expeditions.gle/fdl/NUvK>





# Experiences and Outcomes





*It was really fun and helped me learn about what happened in WW1.*

*It felt like you were actually there, and there was a guide explaining everything you did.*

I was very interested in it, and it was really cool being able to actually walk through the tunnels because it helped me understand it a lot more.



Student presentation available by clicking on the image.



# Potentials and Looking Forward



# Resources and Materials to Play

[BMS Virtual Reality - Lessons](#)

[Explore Reconstructing World War I Trenches in Expeditions](#)

[Explore The Great War in Expeditions:](#)

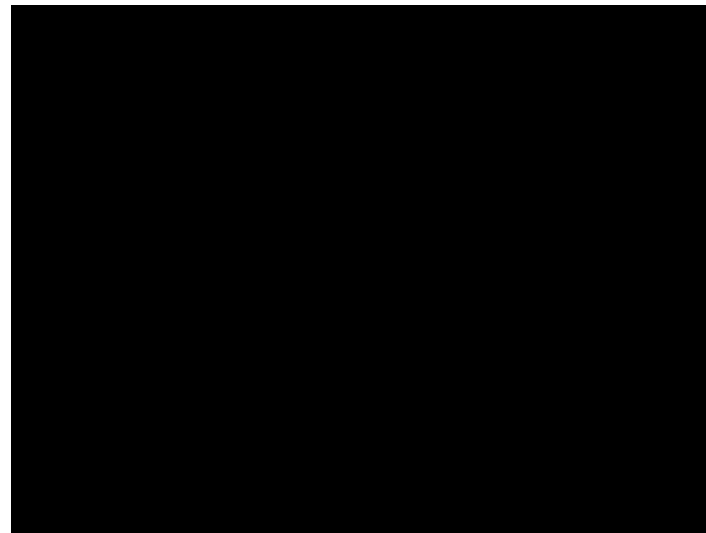
[Conclusion/Discussion](#) (for students)



## Meet Mozilla Hubs

- Mozilla Hubs is an online virtual reality system that works on Chromebooks, phones and VR headsets like the Oculus Quest
- We have created the Vauquois Experience for Hubs that can be used from classrooms and from home
- To learn more and try the Hub, see:

<https://historyviz.com/portfolio/vauquois>



**For live Q&A (or breakout rooms or discussion), please follow us to a live Zoom room by clicking on the Zoom link above the video player.**

