

Pickett's Retreat

A Journey from Gettysburg to Coding Comprehension

Approximate Time Needed	45 - 60 min
Grades	5 - 6
Standards	Click Here

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Objectives:

Students will understand the historical significance of the Battle of Gettysburg, with a focus on Pickett's Charge, and its aftermath.

Students will be introduced to basic coding concepts using Kai-Unplugged coding cards and KaiBot, fostering computational thinking.



Materials:

KaiBot robot (fully charged)

Kai-Unplugged Coding cards

E Resource: First Steps to Mathematical Thinking and Game-Based Learning

KaiTiles (1-20)

Historical resources on the Battle of Gettysburg and Pickett's Charge

Kainundrum.com

Lesson Sequence:

Lesson 1: Historical Context (90 minutes)

Introduction to the Battle of Gettysburg (30 minutes):

Discuss the significance and the unfolding of the Battle of Gettysburg, with a focus on Pickett’s Charge.

Introduce key figures and strategies involved in the battle.



Background

Teachers can use this time to educate students on the history of the Battle of Gettysburg.

The Battle of Gettysburg was a significant battle fought during the American Civil War. It took place from July 1 to July 3, 1863, in and around the town of Gettysburg, Pennsylvania, in the United States. This battle is often considered one of the turning points of the Civil War.

Key points about the Battle of Gettysburg include:

Context:

By the summer of 1863, the American Civil War had been raging for two years. The Confederate Army of Northern Virginia, commanded by General Robert E. Lee, had won several significant battles and was looking to capitalize on its successes by launching an invasion of the North.

Initial Clashes:

The battle began on July 1 when Confederate forces clashed with Union forces in the town of Gettysburg. The Union Army of the Potomac, commanded by General George G. Meade, established defensive positions on Cemetery Ridge and Cemetery Hill.

Three Days of Battle:

Over the next three days, the two armies engaged in fierce fighting. Key moments included Pickett's Charge, a Confederate assault on July 3 that failed disastrously, and the defense of Little Round Top by Union forces.

Casualties:

The Battle of Gettysburg was one of the bloodiest battles of the Civil War, resulting in a large number of casualties. It's estimated that there were around 51,000 total casualties, including killed, wounded, and missing soldiers.

Union Victory:

Ultimately, the Union forces emerged victorious at Gettysburg. General Lee's Army of Northern Virginia retreated back into Virginia on July 4, ending the Confederate invasion of the North.

Impact:

The Battle of Gettysburg had several significant consequences. It boosted Union morale, halted the Confederate advance into the North, and marked the beginning of a decline in the South's military fortunes. It also encouraged President Abraham Lincoln to deliver the Gettysburg Address, a speech that emphasized the principles of liberty and equality and redefined the purpose of the war.

Gettysburg Address:

On November 19, 1863, President Lincoln delivered the Gettysburg Address during the dedication of the Soldiers; National Cemetery at Gettysburg. In this brief but powerful speech, he articulated the principles of the United States and the importance of preserving the Union.

This lesson can focus on the Pickett's Charge on the 3rd day, and the Confederates retreat back to Virginia.

Here are some specific facts about the Pickett's Charge:

Pickett's Charge was a critical and ill-fated infantry assault ordered by Confederate General

Robert E. Lee during the Battle of Gettysburg, which took place from July 1 to July 3, 1863,

during the American Civil War. Pickett's Charge occurred on the third and final day of the battle,

July 3, 1863. It is one of the most famous and tragic episodes of the Civil War.

Here are the key details about Pickett's Charge:

Commanders:

Pickett's Charge was led by General George Pickett, a Confederate division commander, but it was part of a larger assault planned and ordered by General Robert E. Lee. Lee believed that a coordinated assault in the center of the Union line on Cemetery Ridge could break through and potentially lead to a Confederate victory at Gettysburg.

Objective:

The objective of Pickett's Charge was to break through the Union lines on Cemetery Ridge, a prominent high point that provided the Union army with a strong defensive position.

Assault:

On the afternoon of July 3, 1863, approximately 12,000 Confederate soldiers from Pickett's division, as well as additional troops from A.P. Hill's and Richard Ewell's corps, advanced across open fields towards Cemetery Ridge. They faced heavy artillery and musket fire from well-fortified Union positions.

Outcome:

Pickett's Charge was a devastating failure for the Confederates. As the Confederate soldiers advanced, they suffered heavy casualties. Union artillery and infantry fire tore into their ranks, causing tremendous losses. The Confederate assault was unable to break through the Union lines, and the surviving Confederate troops were forced to retreat.

Casualties:

Pickett's Charge resulted in numerous casualties for the Confederate forces. Estimates suggest that as many as 6,000 Confederate soldiers were killed, wounded, or captured during the attack. It is often considered one of the high-water marks of the Confederate Army, as it marked a turning point in the Battle of Gettysburg and a significant setback for General Lee's Army of Northern Virginia.

Impact:

The failure of Pickett's Charge had several consequences. It contributed to the overall Confederate defeat at Gettysburg, as it was a major component of Lee's plan to win the battle. Following the battle, Lee's army retreated back to Virginia, ending the Confederate invasion of the North.

Pickett's Charge is remembered as one of the most dramatic and tragic episodes of the

American Civil War, symbolizing the bravery and sacrifice of the soldiers who participated, as

well as the futility of frontal assaults against well-fortified positions. It is often cited as a key

moment in the turning of the tide against the Confederacy in the Civil War.

Activity:

Historical Investigation (30 minutes)

Students work in pairs or small groups to explore different aspects of the battle, using provided resources.

Reflection and sharing (30 minutes):

Students share their findings with the class.

Discuss the impact and the consequences of the battle on the Civil War.



Lesson 2: Coding Expedition (90 minutes)



Coding Fundamentals (30 minutes):

Introduce students to Kai-Unplugged coding cards and explain how they function.

Discuss the concepts of sequences, loops, and conditions in coding.



Activity: Pickett's Retreat Game (45 minutes):

Scenario: Students will code the route for a Union soldier collecting supplies to support troops at Cemetery Ridge.

Students work in pairs to program their KaiBot to navigate a mapped route, collecting Springfield rifles and cannons depicted by tiles, and reaching Cemetery Ridge before time runs out (1-minute timer).



Reflection and Assessment (15 minutes):

Discuss the experience and the challenges faced during the activity.

Assess students' understanding of coding concepts and historical context through a brief quiz or discussion.

Evaluation:

Formative assessment through observation during activities.

Summative assessment via quiz or discussion, reflecting on the historical and coding aspects of the lessons.

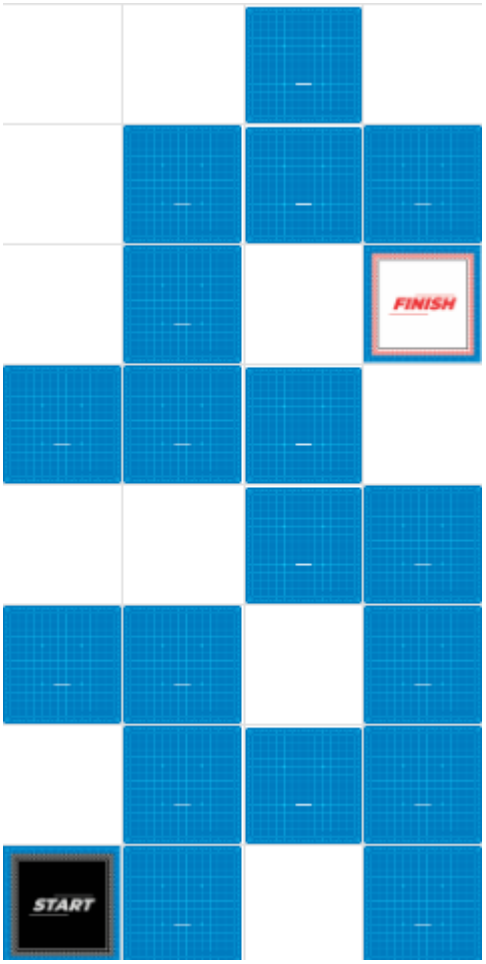
Extensions:

Explore other significant battles or aspects of the Civil War and how they could be modeled using coding activities.

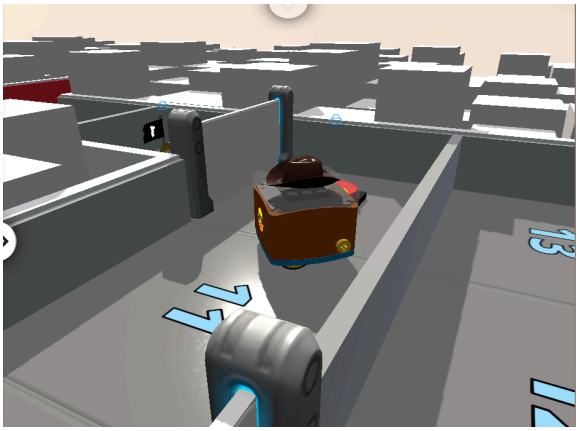
Explore further coding concepts and how they can be integrated with other historical or cross-curricular topics.

This lesson plan aims to create a balanced and sensitive approach to teaching a sensitive historical topic while also introducing fundamental coding skills. Through a carefully structured narrative and engaging activities, students are encouraged to explore both the historical and computational thinking aspects of the lesson, aligned with CSTA and TEKS standards.

Tile layout



Ways to code

Kainundrum lite (app)	Kainundrum.com (browser)
Available on the app store & code with KaiBot & coding cards.	Code in Blockly or Python using your computer browser. (KaiBot not required)
Scan the QR code with the Kainundrum lite app	https://kainundrum.com/work/work--cui3ecnNix6ZiJseI2QrkcAs3G-218Wm
	 Screenshot of Kainundrum.com game

Rubric: Pickett's Retreat - A Journey from Gettysburg to Coding Comprehension

Category	Excellent (4)	Proficient (3)	Developing (2)	Needs Improvement (1)
Historical Understanding	Accurately explains **Pickett's Charge**, its significance, and consequences with **specific details** (e.g., casualty numbers, Lee's strategy).	Describes key events of the battle with minor omissions.	Recalls basic facts but lacks depth.	Unable to articulate historical context.
Coding Proficiency	Programs KaiBot to **efficiently** navigate the route using **sequences/loops**, collecting all supplies within the time limit.	Completes the mission with 1–2 coding errors (e.g., missed tile).	Struggles with basic commands; needs guidance.	Code fails to execute core tasks.
Collaboration	Works seamlessly in pairs to **debug code** and strategize historical connections (e.g., "Why did supplies matter at Cemetery Ridge?").	Contributes to teamwork but relies on partner for some tasks.	Minimal interaction; passive role.	No collaboration observed.
Critical Thinking	Connects coding challenges to **historical obstacles** (e.g., "Our loop mimics Confederate retreat paths").	Identifies basic parallels between coding and history.	Needs prompts to make connections.	No analytical reflection.
Time Management	Completes **both** historical investigation and coding tasks within allotted time.	Finishes one activity fully; rushes the other.	Requires time extensions for both.	Unable to complete either task.

Scoring Guide

- **18–20 pts** = ⭐ **History & Coding General** (Exceeds expectations)
- **14–17 pts** = 🎖️ **Battle-Ready Scholar** (Meets expectations)
- **8–13 pts** = 🏕️ **Camp Recruit** (Approaching expectations)
- **1–7 pts** = 🚩 **Retreat Needed** (Requires reteaching)