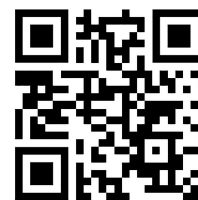




FOR MORE INFORMATION:
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SCAN ME TO VIEW LESSON

HVL LESSON TITLE:

FIGHTING OBSTACLES

DEVELOPED BY: KATHY HIGHTOWER

FIGHTING OBSTACLES

GUIDING QUESTION:

How did obstacles
impact the Allied Forces
on D-Day?

OVERVIEW

Harold McMurran was drafted into the 56th Maintenance Division of the Army. On D-Day, his responsibilities suddenly shifted to infantry. At 7 a.m. on June 6, 1944, McMurran began the fight of his life on the beaches of Normandy.



Subject(s):

Math
Science



WWII Veteran(s):

Harold McMurran



Duration:

1 to 2 classes
(55-70 min.)

FIGHTING OBSTACLES

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“The Germans had just about every inch of that beach covered with machine gun fire. You could see the bullets hitting everywhere in the sand.”

HAROLD MCMURRAN - WWII VETERAN

OVERVIEW

Harold McMurran was drafted into the 56th Maintenance Division of the Army. On D-Day, his responsibilities suddenly shifted to infantry. At 7 a.m. on June 6, 1944, McMurran began the fight of his life on the beaches of Normandy.

HISTORICAL CONTEXT

The Allies and Axis Powers knew they would meet on the shores of France. The Allies set up a decoy force at Calais to throw off the German forces. For months, the Allies had extensively planned the attack at Normandy. By attacking in early June, under a full moon, they hoped to maximize the opportunity to employ air, water, and land attacks. The original date for the attack was June 5th, but British meteorologists were able to persuade the Allied leaders to wait another day because of storms. Conditions were better on the 6th, but many things went wrong. The Allies were tenacious, improvisational, and strategic. Weeks later, they would turn the corner to begin to see the war's end.

OBJECTIVES

At the end of this lesson, students will be able to

- Identify by name some of the obstacles the Germans created at the coastline and consider why their geometric shapes were often destructive to the Allies;
- Appreciate the tactical speed that soldiers had to have to battle the tides and weather; and
- Understand why Omaha Beach itself remains significant because of what remains in the sands; and
- Understand that the iron and steel used in war is important in everyday living.

STANDARDS

MATH

9-12.G-GMD Geometric Measurement and Dimension

Explain volume formulas and use them to solve problems

9-12.G-GMD.35

Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone.

9-12.G-GMD.36

Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.

9-12.N-Q Quantities Reason quantitatively and use units to solve problems.

9-12.N-Q.4 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

SCIENCE

HS-PS1-2.

Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. [Clarification Statement: Examples of chemical reactions could include the reaction of sodium and chlorine, of carbon and oxygen, or of carbon and hydrogen.]

FIGHTING OBSTACLES

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MATERIALS & DOCUMENTS

DOCUMENT A: HAROLD MCMURRAN VIDEO:

Things You Don't Forget: Harold McMurran
<https://www.youtube.com/watch?v=fd8okLRFUeQ>

DOCUMENT B: ARTICLE LINK:

Tour the Battlefields of Normandy: The Obstacles
<https://www.strijdbewijs.nl/hinder/obstacles.htm>

DOCUMENT C:

The Role of German Tetrahedra (Activity Sheet)

DOCUMENT D: ARTICLE LINK:

Astronomy and D Day: The Sun, Moon and Tides at Normandy
<https://skyandtelescope.org/astronomy-news/astronomy-d-day-sun-moon-tides/>

DOCUMENT E:

Trying to Keep Up! Setting the Detonations Before the Tide Rises (Activity Sheet)

DOCUMENT F: ARTICLE LINK:

The geological fingerprint of war in photos - UT News
<https://news.utexas.edu/2012/05/25/the-geological-fingerprint-of-war-in-photos/>

DOCUMENT G: ARTICLE LINK:

Why Does Steel Rust?
<https://capitalsteel.net/blog/steel-faqs>

DOCUMENT H:

The Relevance Of Rust, Iron, and Steel (Activity Sheet)

FOR MORE INFORMATION:
email: info@honoringveteranlegacies.org

PROCEDURES

MATH LESSON: ACTIVITY 01

(15 minutes)

Students will watch the story of Harold McMurran. What were some of the obstacles the soldiers faced on D-Day? How was it evident that the Axis Powers were prepared for their arrival?

ACTIVITY 02 (10 minutes)

In Document B: Tour the Battlefields of Normandy: The Obstacles, students will see some of the sea and beach obstacles used by the Axis Powers and note how the structures could be damaging to the Allies. Students will see how triangular shapes were useful. Then students will use formulas to complete Document C : The Role of German Tetrahedra.

ACTIVITY 03 (15 minutes)

- Students will skim Document D, Astronomy and D Day: The Sun, Moon, and Tides at Normandy.
- After obtaining information from Document D, students will complete Document E, Trying to Keep UP! Setting the Detonations Before the Tides Took Over

SCIENCE LESSON: ACTIVITY 01

(15 minutes)

Students will use Document F to find out why the beach sand at Omaha Beach is different from other beaches in the world. Students will then use Document G to see the relationship between steel, rust, and iron oxide.