GREETINGS FROM

THE NATIONAL WWII MUSEUM

and welcome to the exciting, hands-on world of WWII artifacts. We are pleased that you and your students will be discovering the history and lessons of WWII by exploring the artifacts in this footlocker.

As a classroom teacher, you represent the front line of teaching WWII history to your students. We hope that by using this footlocker of WWII artifacts, your students will gain a richer appreciation for WWII history and for history in general.

Please take a moment to review the instructions in this binder before going any further. Following these directions will ensure that your students get the most out of these artifacts and that the artifacts are properly handled and preserved for students in the future.
Directions for returning footlocker

Your footlocker must be shipped back to the Museum on or before the date on your Reservation Form. When ready to return, please:

1. Please complete our on-line Evaluation Form.  

2. Fill out the Artifact Inventory and Condition Report and place it in the pocket of the Teacher Manual.  
   Do not hesitate to let us know about any breakage that occurred during your sessions. That way we can replace or repair them before we send the footlocker to another school.

3. Inspect the original cardboard packing box and wooden Footlocker. Both should be able to safely withstand cross-country shipment. Call us if there is an issue at 504-528-1944 x 333.

4. Replace all artifacts in their proper containers and pack them into the footlocker using the re-packing instructions on page 7. Do not force or jam artifacts. Take care to arrange them securely and pack materials around them so that they will not be jostled during shipping. Please return the gloves – we wash them after every usage!

5. Secure Footlocker using original lock (don’t forget to replace the key in the lock!), place footlocker into cardboard box, affix pre-addressed “RS” return address sticker over original mailing sticker, and seal box with packing tape.

6. Arrange day/date/time for pickup by UPS at your school. Optionally, you can drop off the Footlocker at the nearest UPS shipping office. You must call or email us with the UPS tracking number. Local teachers may be able to drop off footlockers, please call for possible arrangements.

If you have any questions about re-packing or shipping your footlocker, please call The National WWII Museum’s Education Department at 504-527-6012, x 333.
What is an artifact?

An artifact is an object that has been created or altered by humans from another place or time (or both). As such, it may be irreplaceable.

Artifacts represent the material culture of a place and time. If we analyze, or “read,” artifacts, we can learn about what was occurring when the item was created and used.

Artifacts can be small or large or somewhere in-between. But whatever their sizes, artifacts are the “real deal” of history—not reproductions, fakes, or copies. By handling artifacts, students, in a sense, travel back in time to experience history.

Artifact reading uses multiple learning styles to capture students’ interest. Reading artifacts involves:

1. Use of multiple senses to manipulate and investigate.
2. Natural curiosity about the unknown nature of an artifact.
3. Tie-ins with prior knowledge about the subject matter (in this case WWII).
4. Forming conclusions about artifacts from their physical attributes.
5. Forming conclusions about a time and a place from an artifact’s physical attributes.
6. Developing and exploring emotional connections to the past through physical encounters.
How to handle artifacts

Remember: an artifact is an object from another place or time (or both). As such, it must be treated with great care and respect.

Students and teachers alike need to understand the fragile nature of the artifacts they will be using. Students will increase their appreciation for history by learning to handle artifacts properly.

Each artifact used in Operation Footlocker is unique, and will require special treatment, but there are a few basic handling rules students should learn:

1) When handling artifacts, wear cotton gloves. Gloves allow students to feel the item’s texture, but prevent contact with the natural oils of human skin. Each contact with human skin degrades an artifact, especially paper ones. Gloves may be reused between classes - we will wash the gloves when you return them!

2) Handle with care! Special care should be taken when artifacts are being taken out of (or put back into) protective covers and boxes. Do not force artifacts out, or back in, to their storage packaging. Call us if there’s an issue!

3) Once out, artifacts should be handled delicately and supported by both hands. Extra care should be taken when artifacts are being passed between students. This is especially important for paper items such as books, magazines and advertisements. **PLEASE TURN PAGES CAREFULLY!**

4) Artifacts can often be repaired if damaged. When you return your Footlocker to the Museum, **please record any damage** to artifacts on the Artifact Condition Report found at the back of this binder.
Leading an Artifact “Reading” Session

The handling of artifacts should always be done with close teacher supervision. Do not allow students free access to the artifacts or trunk.

What is meant by “reading” an artifact? Reading is just a friendly term for analyzing, exploring, and discovering the use and significance of an artifact. Some artifacts are easier to identify than others. Some artifacts need more careful examination to determine what they are and how they were used.

When students “read” an artifact, they become detectives, piecing together clues from what they see, feel, smell, hear (please, no tasting). They also use past experience and knowledge to compare and contrast, intuit, deduce, and assess the historical use and significance of an artifact.

**GOAL:** Students will gain a richer understanding for and appreciation of WWII history by analyzing (what historians call “reading”) artifacts.

**RECOMMENDED PROCEDURE:**

1. Define “artifact” for students; introduce Project Footlocker by telling students that they will be exploring actual pieces of WWII history

2. Briefly review *How to handle artifacts* page and obtain an agreement from students that they will handle each object carefully and respectfully

3. There are several ways to proceed:

   a. Divide class into small groups and pass out gloves and artifacts. Ask each group to examine their artifact and make a verbal report to the class on what they have. You may wish to use the questions on the following page as a guide. Follow up with the information on each artifact found in the following pages.

   b. Call up students one at a time, each handling and examining an artifact in front of the entire class. Follow up with the information on each artifact found in the following pages.

   c. Divide the class into small teams. Give each team an artifact to “read.” Have them make a report to the class on their artifact.

   d. If it is not appropriate to let students handle the artifacts, the teacher can handle them, showing the class each one in turn.

   *Remember, students must be wearing gloves if they are handling the artifacts*
Sample questions to ask for artifact “reading”

1. What kind of item do you have? Some artifacts are self-evident; others may not be so apparent. Look carefully for details.

2. What materials is it made of? Be specific. Artifacts may be made of several materials. Try to list them all.

3. Does it have anything written on it? English? Other language? Read what you can on the artifact to learn more about it.

4. Where did it come from? Where was it manufactured? Can you tell? How?

5. How was it used? This may be the trickiest question. Each artifact is described in the following pages.

6. Who was it used by? Soldiers/civilians; Allied/Axis; etc.

7. Where was it used? Continent/climate/country/on a ship/in a plane/etc.

8. Do we have or use anything similar today? If so, how is this object the same and how is it different?

9. Note those things that are different or strange or that you cannot identify or do not understand.

And, perhaps, the most important question:

10. What can we learn about WWII from this object?

This last question is important because it helps us understand history by exploring its material culture. There are many ways to research and analyze history. Reading books and watching documentaries are great ways to learn history. But being able to handle actual pieces of history (primary sources) gives students a unique opportunity to interact with history in a physical, hands-on way.

When students reach a conclusion or gain an insight about history from studying an artifact, they gain not just knowledge, but a material connection to the past and the experience of discovery they cannot get from books, documentaries, or other secondary sources.
Artifact Inventory & Re-Packing Instructions

This footlocker contains approximately 20 of the following items. The specific ones are listed on your Artifact and Inventory Condition form. Please note the way items fit as you unpack.

When repacking, all items should fit snugly against each other, or against the sides of the Footlocker, so items don’t shift – and become damaged - in transit. On top of the artifacts, gloves and bubble wrap should be placed to cushion items, and newspaper should fit snugly between the Footlocker and all sides of the cardboard box. Don’t put newspaper in the trunk. Relock Footlocker (don’t forget the key!), then cushion all sides of box. We have provided you a return shipping label. Contact UPS for shipping.

INVENTORY
- Baggie with cotton gloves – we will wash these between Footlocker shipments.
- Operation Footlocker Teacher Instructions binder.

Page/Item:
8) V-Mail letter and stationery (2 separate items)
9) War Ration book and tokens (2 separate items)
10) Serviceman’s vinyl record and CD (2 separate items)
11) Iwo Jima sand and Omaha beach (Normandy) sand (2 separate items)
12) Wartime High school yearbook
13) Coca-Cola ad
14) US Army-issue underwear
15) US Army foreign language manual
16) Wartime Life Magazine
17) 1943 Penny/Modern Penny/Magnet (3 separate items)
18) Trinitite/Fulgurite (2 separate items)
19) Identification “dog” tag
20) Personal effects bag
21) Wartime license plate
22) Cloth map
23) Gas mask
24) Philippine occupation currency
25) American tank periscope
26) Animal waste fat (grease) collection jar
27) Savings bond stamp book
28) Wooden toy from World War II
29) Ship recognition slides
30) Airplane recognition slides and viewer (2 separate items)
31) Garrison cap
32) WWII computer
33) Spotting mirror
34) US Army Field Manual
35) “Yank” Magazine
36) First-aid Packet

When you ship, remember to call us at 504-528-1944, x 333 with the UPS tracking number. THANKS!
Artifact Description: **V-Mail Letter and Stationary**

V-mail, short for Victory Mail, was created in 1942 to reduce the space and weight required to ship soldiers’ letters home. Soldiers would write their letters on special V-mail stationery—no postage was necessary. The letter was read by a military censor and photographed onto a roll of 16mm microfilm (by the US Army Signal Corps). The microfilm rolls would then be flown to the US, where it was developed and printed out onto 4 x 5” cards. The US postal service then delivered these small photographed letters.

Here’s why the system worked: 18,000 letters could be photographed onto one roll of microfilm. That means that 150,000 letters on microfilm would fill just one mail bag. This represents the difference between shipping 2,000 pounds for paper letters and 45 pounds for V-mail film. Because of the space and weight savings of V-mail, it could be flown to the US instead of sent by ship. This meant that V-mail could often be delivered within 12 days.

510 million V-mails were sent from Europe and the Pacific to the US between June 1942 and August 1945.

**Additional Items of Interest**

V-mail reduced any threat of spies using microdots or invisible ink—these would not be readable following the photographing and developing processes.

Drawbacks to V-mail: you don’t get the actual writing. Delivered V-mail was small and often hard to read (about half the size of the original). The V-mail stationery was rather small. Longer letters required sending multiple V-mail forms separately.

**Questions for further inquiry**

1. What did this soldier write and what can you learn about him and WWII from it?

2. How important do you think it was for soldiers to communicate with their families and friends?

3. How do you think a soldier would feel having to wait a month or more for a reply to a letter?

4. People don’t often write letters today. Compare and contrast the ways we communicate with family and friends today with how it was done during WWII. What are the positive and negative features of these different means of communication?
Artifact Description: **War Ration Book and Tokens**

Once the United States entered war in late 1941, U.S. government, businesses, and farmers had to work together to make the most out of some scarce resources. On the Home Front, all Americans had to make adjustments so that the troops could have what they needed. Rationing meant sacrifices for all.

Rationing limited what people could buy. Sugar rationing took effect in May 1942 with the distribution of “Sugar Buying Cards.” Coupons were distributed based on family size, and the coupon book allowed the holder to buy a specified amount. Possession of a coupon book, however, did not guarantee that sugar would be available. Honey and molasses often served as substitutes.

Each family was issued a monthly “War Ration Book” and each stamp allowed the purchase of rationed goods in the quantity and time designated. “Red Stamp” rationing covered all meats, butter, fat, and oils, and most cheese. Each person was allowed a certain number of points weekly with expiration dates. “Blue Stamp” rationing covered canned, bottled, and frozen fruits and vegetables, plus juices and dry beans.

**Additional Items of Interest**

Not all food in America was rationed. Canned foods that could be sent overseas to soldiers were rationed at home, but fresh fruits and vegetables grown locally generally were not rationed.

Rationing could be confusing. Each version of the War Ration books was different as supplies and demands for different foods and materials changed during the war. In addition to food, rationing encompassed clothing, shoes, gasoline, tires, and fuel oil. Rationing of gas and tires highly depended on the distance to one’s job.

While life during war meant daily sacrifice, few complained because they knew it was the men and women in uniform who were making the greater sacrifice. A poster released by the Office of War Information stated simply, “Do with less so they’ll have enough.” Another encouraged Americans to “Be patriotic, sign your country’s pledge to save the food.”

Training sessions were held to teach women to shop wisely, conserve food, and plan nutritious meals. The government also printed a monthly meal-planning guide with recipes and a daily menu. Good Housekeeping magazine printed monthly special sections for cooking with rationed foods. Numerous national publications also featured articles explaining rationing to Americans.

**Questions for further inquiry**

1. Think about your favorite foods. Which of them would you be willing to give up if it helped your country win a war? For how long would you be willing to make these sacrifices?

2. Not everyone followed the rationing rules. Some people shopped on the illegal “black market.” Would you have shopped on the black market if you had the chance?
Artifact Description: **Serviceman’s Vinyl Record (and CD)**

During WWII several companies, in this case Pepsi-Cola, offered US servicemen opportunities to record short messages to be sent to their families. Soldiers would enter a small studio room and speak into a microphone for about two minutes. Their message would be instantly recorded on a vinyl record. The soldier would then mail the record home so that family and friends could hear their voice and learn something of their experiences at their military posts.

**Additional Items of Interest**

This system for hearing a serviceman’s voice while he trained was only used in this country. Records were too bulky and heavy to be shipped or flown overseas. Soldiers overseas could only communicate through letters.

During WWII, it was much more difficult to hear people’s voices. All telephones were connected by wires, including some that crossed the oceans on the sea floor! German improvements in rocket design during the war, later adopted by the U.S. and Russia, would be needed before satellite communications could be developed.

Radios used during the war years were bulky by today’s standards because they used vacuum tubes to modify radio signals rather than today’s solid-state semiconductor devices (such as transistors and diodes - which hadn’t been invented yet.)

We have included a CD of a sample recording. This CD was burned from a record of the type you have in the footlocker.

**Questions for further inquiry**

1. Why do you think Pepsi-Cola and other companies offered this service to US soldiers?

2. Listen to the CD (not taken from the artifact recording.) Why does Serviceman Claire Harper refer to mail call as “the happiest and saddest time of the day? He also mentions “the same old rumors.” What types of rumors might circulate on a military base during wartime?

3. How do you think a soldier’s family felt when they listened to the record?

4. If you were far away from your family and could only record a two-minute message, what would you say?

5. How is a soldier’s experience different today regarding family communications?
Artifact Description: Vials of Beach Sand

These vials are sealed—DO NOT attempt to open them.

The golden colored sand comes from Omaha beach, Normandy, and the black sand comes from Iwo Jima. These sand samples have been included so your students can actually hold in their hands two of the great battlefields of WWII. Following is a description of those beaches and battles.

Omaha Beach

Omaha beach was one of five beaches along the Normandy coast chosen as the site of the Allied amphibious invasion of Western Europe. This invasion was code-named Operation Overlord, but is more commonly called D-Day. On D-Day, June 6, 1944, more than 175,000 American, British, and Canadian soldiers in 5,000 ships and boats, and 11,000 airplanes crossed the English Channel from Great Britain and assaulted German defenses along the coast of Normandy, France. The operation took two years to plan. The timing and location of the invasion was one of the most closely guarded secrets of the war.

Of the five invasion beaches, two were assigned to American forces: beaches code-named Utah and Omaha. Utah beach was secured relatively easily, with only about 200 causalities. But at Omaha beach, German resistance was much stronger. By the end of the D-Day, more than 2,000 soldiers had been killed attempting to take the high ground just behind the beach.

Iwo Jima

In the war in the Pacific, the US fought against the Japanese on many islands—some large and some small. Their goal was to work their way closer and closer to Japan itself, so that they could bomb Japan with newly invented aircraft. It was even thought that US troops would eventually have to invade Japan itself. After taking the Solomon, Gilbert, Marshall, and Marianas Islands, the US decided to invade the tiny island of Iwo Jima. This island lay directly in the path of US air raids over Japan. Iwo Jima is a volcanic island only 2 miles by 4 miles, but it held 22,000 Japanese defenders who were dug into the island in deep bunkers and tunnels.

On February 19, 1945, US Marines invaded Iwo Jima and began fighting a 36-day battle. During that battle more than 8,000 Marines and more than 20,000 Japanese soldiers were killed. More Medals of Honor (27) were bestowed for valor on Iwo Jima than any other battle in Marine Corps history.

Questions for further inquiry

1. You are holding pieces of very historic places, where many men died during WWII. How does this make you feel?

2. Now, what if you were told that this sand is actually from a regular beach in the US? Does it feel different? (It actually is from Omaha and Iwo Jima)

3. Although this sand can’t teach us many specific facts about WWII, how else can it help us connect to those past events?
Artifact Description:** Wartime High School Yearbook

***Yearbooks are about 70 years old, so may be previously damaged, and are prone to more wear and tear, please treat them carefully.***

One of the best ways to engage students in history is to let them see something of themselves in the story. This wartime high school yearbook is full of reminders that the students pictured were living in a time of war. But they were also average students going to school, joining clubs and sports teams, and attending dances. Let students explore the pages of this yearbook with the following two goals: find examples of the war intruding on students’ lives and find examples of activities that seem familiar to them today.

Look carefully for details in the artwork, the dedication, and the ads in the back.

Compare the dress of the teachers and students. Differentiate between the hairstyles, clothing, and language of the period as compared to those of today.

**Questions for further inquiry**

1. In what ways did WWII affect these students’ lives? How do American foreign affairs affect your life today?

2. How important is it for people to see something of themselves in the history they study? Do you enjoy history more when you feel like people like you are included?

3. Imagine future students 65 years from now looking at your yearbooks. What themes, activities, clothing styles, and classes would they recognize? What will be different in the yearbooks of those future students?
Artifact Description: **Coca-Cola Advertisement**

During WWII, American companies wanted the public to know that they were supporting the war effort. More often than not, magazine advertisements made some mention of the war. These included direct connections between their products and victory in WWII; or perhaps just reminded readers to Buy War Bonds. Many US companies benefitted greatly from wartime government contracts for vehicles, weapons, supplies, food, and equipment. By advertising in popular magazines, they not only informed the public about their products, but ensured that the public saw them as patriotic.

Coca-Cola was one such company. The entry of the United States into the war brought an order from company president Robert Woodruff in 1941 “to see that every man in uniform gets a bottle of Coca-Cola for 5 cents, wherever he is and whatever it costs the Company.” On June 29, 1943, General Eisenhower requested shipment of materials and equipment for 10 bottling plants to North Africa and 3 million bottles of Coca-Cola for the soldiers. In all, 64 bottling plants were shipped abroad during World War II. The plants were set up as close as possible to combat areas in Europe and the Pacific. More than 5 billion bottles of Coke were consumed by military service personnel during the war. When the war ended, Coca-Cola had made huge inroads into markets throughout the world, and they also had many loyal customers in returning soldiers.

**Additional Items of Interest**

Coca-Cola had bottling plants in Germany before the war and therefore had business dealings with the Nazis. Many other US companies did business with Germany, Japan, and Italy in the years before the war started. Some even helped these countries to improve their military might, although the incentive was almost always economic, and not political. Most, if not all, of these companies tried to hide or minimize these facts after the war.

**Questions for further inquiry**

1. What messages is Coca-Cola trying to send to the readers of the advertisement?

2. How do you think a soldier, sailor, or Marine serving abroad felt about having Coca-Cola available?

3. Wars are often “good for business.” Do you think businesses should profit from war?
Artifact Description: **US Army-Issue Underwear**

To fight and win WWII, the US had to make thousands of tanks, ships, planes, millions of guns, and billions of bullets. But that’s not all. The country had to make everything those soldiers, sailors, and Marines needed for their training, their fighting, their transportation, their relaxation, and their recovery. This included food, cooking equipment, medicines, books and magazines, toiletries, and uniforms—right down to the underwear.

When imagining WWII artifacts, most students would not expect to see Army-issue underwear. But this artifact demonstrates the fact that war is more than a series of battles. It is a complex endeavor, requiring planning, production, and distribution thousands of different types of equipment and supplies, from the largest battleship to a soldier’s underwear.

This artifact also demonstrates how immersive military life was for those draftees and volunteers who served. Once in the military, they left their civilian lives behind—everything from their freedom to travel where they pleased to the food they ate and the clothes they wore. It was important for these men to make that transition as quickly as possible. Switching from civilian clothes to military uniform instantly gave these men an everyday reminder that they were no longer civilians.

**Questions for further inquiry**

1. Why do you think so much military clothing and equipment is colored olive drab?

2. More than 15 million Americans served in the military during WWII. How many pairs of underwear do you think were produced for them? Can you find out?

3. What are the plusses and minuses of having to wear various types of uniforms: military, sports teams, school, social (wearing what all the other kids are wearing)?

4. If you were to join the military and you could bring with you just one personal reminder of your civilian life, what would it be?
Artifact Description: US Army Foreign Language Manual

*** Manuals are about 70 years old, so may be previously damaged, and are prone to more wear and tear, please treat them carefully.***

The United States sent troops all around the world during WWII. In some of the places they went the people spoke English (like Canada, Great Britain, and Australia). But in many other places, English was not commonly spoken. The US government tried to prepare its soldiers who found themselves in non-English-speaking countries.

The War Department published a series of language guides for more than a dozen foreign languages, including Japanese, German, French, Dutch, Turkish, Italian, Chinese, Russian, Bulgarian, Spanish, Korean, Swedish, and Hindustani. Each booklet contains simple phrases, important terms, a pronunciation guide, learning quizzes, and even cartoon examples of soldiers using the language.

Questions for further inquiry

1. In what country or countries is this language spoken? Were these countries friendly or enemy areas during WWII?

2. Locate the following phrases and words in the language guide and try to say them:
   - I am an American
   - My name is ____________
   - I am hungry
   - Please speak slowly
   - The numbers 1 through 10

3. What other phrases do you think an American soldier might need to say in another language during WWII?

4. What does this artifact say about the way the United States prepared for war?

5. Do you think it is valuable to be able to speak a language other than English? Why or why not?
Artifact Description: **Wartime Life Magazine**

***Magazines are about 70 years old, so may be previously damaged, and are prone to more wear and tear, please turn pages carefully.***

During WWII Americans got their war news from the radio, newspapers, and newsreels at the movies, and from weekly and monthly magazines. One of the most popular magazines was Life. Life magazine sent reporters and photographers all over the world during WWII to write stories about and take photographs of the war and of the men and women fighting it.

Along with these stories of WWII, Life produced stories of other events happening in the US and other countries. Popular entertainment, politics, the economy, sports, medicine, and science and technology were all covered. Often these other stories were affected by the war in some way, so they, too, became “war stories.”

Look for stories about people and places you have heard of.

Lastly, the advertisements in the magazines often took on a wartime flavor, with companies highlighting their contributions to the fighting or utilizing wartime themes, images, and messages.

Look for ads of companies that are still around today. How has the look of their products changed?

**Questions for further inquiry**

1. What do you think companies that made products for the military advertised those facts to the public?

2. Do you think it was OK for magazines to publish stories about entertainment or sports during the war?

3. Today we have instant access to news 24 hours a day. Do you think people are better informed about their world today than they were during WWII?

4. Life magazine is no longer published. What kind of magazines do we have today similar to Life magazine? What magazines do you read?
Artifact Description: **1943 Steel Penny**

On the Home Front the war affected many aspects of people’s lives, from the big (where they worked, what they ate, what they saw at the movies, etc.) to the small (what they carried in their pockets). This is a penny minted in 1943. It does not have the distinctive copper color of most pennies, because it is not made of copper. It is made of steel. During the war, the need for copper increased greatly. Copper was needed primarily for wiring used in communications and in the building of aircraft. To avoid a copper shortage, the US Treasury Department decided in 1943 to mint pennies out of steel, which was not in short supply.

Besides their color and make-up, there is one other interesting characteristic of 1943 pennies: they are attracted to magnets. Try this: hold the magnet over a modern penny. What happens? Now hold the magnet over the 1943 steel penny. What happens?

By 1944, it became apparent that there would not be a copper shortage and the Treasury went back to making pennies out of copper. But many steel pennies are still around. They can be purchased for under a dollar at many coin shops, making it possible to own a very small, yet significant piece of WWII history.

**Questions for further inquiry**

1. The penny is a small, everyday object. Can you think of other everyday objects that were affected by the war?

2. Were other coins affected by the war? What about paper money? Try to find out the answers to these questions.

3. Does an artifact have to be big to tell a big story?
Artifact Description: Trinitite/Fulgurite Pieces

***Do not attempt to open these display cases. These are fragile objects. Do not shake or drop***

A Fulgurite is created when lightning strikes the earth and silica (or sand) is melted into glass. The temperature needed to melt sand into glass is about 1,800° C (3,272° F). The temperature of lightning can reach as high as 30,000° C (53,000° F) or five times hotter than the surface of the sun.

Can you think of a man-made source of heat hot enough to melt sand into glass?

Early in the morning on July 16, 1945, the first atomic bomb blast was detonated in the desert just outside of Alamogordo, NM. The test was codenamed Trinity. It was the result of three years of the most secret and expensive project ever undertaken by the United States government—the development of an atomic bomb—an operation known as the Manhattan Project. The actual explosion produced a blast equivalent to eighteen thousand tons of TNT (dynamite). The resulting fireball that scorched the desert formed a depressed crater 800 yards in diameter, glazed with a light olive green, glass-like substance where the sand had melted and quickly solidified again.

The crater was buried for security reasons not long after the explosion and, as a result, “Trinitite” has remained relatively difficult to obtain. To this day, Trinitite is slightly radioactive.

Less than a month after the Trinity test, the US dropped atomic bombs on the Japanese cities of Hiroshima (August 6) and Nagasaki (August 9). These bombs killed between 90,000-140,000 people in Hiroshima and between 40,000-75,000 people in Nagasaki.

Questions for further inquiry

1. What can this artifact help us understand about WWII?
2. How do you feel when you hold it? What does it make you think about?
3. Does an artifact have to be big to tell a big story?
Artifact Description: Identification Tags

Each soldier, sailor, or Marine was issued, soon after entering the service, a pair of identification tags, commonly known as “dog tags.” These were worn around the neck on a chain. If he died in combat, one tag was buried with the body for future identification by the Graves Registration Service. The other tag was collected for the unit commander and for administrative purposes. Tags for the US Army were oblong and included a notch at one end. This notch allowed the tag to be correctly inserted into an embossing tool.

- Changes in the information embossed of the tag: From November 1941 to July 1943
  1st line: first name, middle name initial, last name
  2nd line: Army Serial Number/T—followed by the year of the anti-tetanus shot and booster injection/blood type (A, B, AB, O)
  3rd line: next-of-kin
  4th and 5th lines: next-of-kin’s address/soldier’s religion—C(atholic), P(rotestant), H(ebrew).

  July 1943: the name and address of the next-of-kin were removed from the tag. This was done to prevent the enemy who had captured a soldier from using that information to frighten or demoralize him, i.e. “Your mother Sue must be very worried about you,” or “We know where your family lives, so you better talk.”

  After March 1944: the soldier’s last name was embossed first, and then the first name and middle initial.

- Serial Numbers

  The serial number’s first digit indicates the soldier’s enlistment status: 1 if he was a Regular Army (professional) soldier, 2 if he came from the National Guard, and 3 or 4 if he was a draftee. Serial numbers for officers started with O. W was for warrant officers, N for nurses, A for WAC (Women’s Army Corps) members, L for WAC officers, and V for WAC warrant officers.

Questions for further inquiry

1. Based on the information above, when was this dog tag issued?

2. Why do you think these identification tags got the nickname “dog tags”? What do you think soldiers thought about this nickname?
Artifact Description: Personal Effects Bag

When a soldier died on the battlefield or in a military hospital behind the front lines, his personal belongings would be collected and placed in a personal effects bag. All non-Army-issue items, such as his watch, his wallet, and photographs he may have carried, were sealed up in one of these small pouches. Hospital personnel or a member of a Graves Registration unit would fill out the form attached to the bag and it would be sent to the soldier’s next of kin back in the United States.

Read the form on the bag. Imagine it was your job to fill this form out. How would that make you feel? Imagine a parent or a wife receiving the contents of this bag with their deceased relative’s belongings inside. They would, of course, have already been notified of the death before receiving the bag. How do you think they would feel handling these belongings?

Questions for further inquiry

1. How do you account for fact that this artifact is in mint condition after 65 years?

2. What do you think would be the hardest part about working in a graves registration unit during WWII?

3. What do the things you carry around in your pocket and backpack say about you?

4. If you had to fill one of these bags with possessions that best described you, what would you put in?
Artifact Description: **Wartime License Plate**

Here is an example of how the war affected an everyday part of life on the Home Front.

During WWII there was a metal shortage. The iron used in making license plates was needed to make ships, tanks, helmets, airplanes, and thousands of other items needed to fight and win the war. Scrap metal drives were a common sight in America during WWII. Children especially helped with this effort, collecting old bed springs, radiators, and pots and pans from their neighbors and hauling them to a central pick-up point to be recycled for the war effort.

One method to save metal was to only make a single license plate per car, instead of the usual two plates. And by 1943, instead of issuing a new plate each year, many states’ motor vehicle departments issued only a small metal date tab to be affixed to the old license plate.

Some states even started making plates out of soybean pulp. These soybean plates are like press board fiber. They were made by the thousands, but most deteriorated soon after the war. Another problem with these fiberboard soybean plates: goats seem to have liked the taste of them so often times they are found with bites taken out of them.

**Questions for further inquiry**

1. Recent studies have shown that most of the recycled, or scrapped, metal that was collected by Americans for the war effort was never used—mostly because it was of inferior quality or because it just wasn’t really needed. But the US government continued to encourage Americans to support scrap drives. Why do you think that is?

2. How important do you think it is that Americans participate in their country’s challenges? Should it be mandatory?

3. Do you recycle? What do you recycle? Why do you recycle?
Artifacts Description: **Cloth Map**

The US Army and Navy both produced cloth maps to aid their personnel in escape and evasion should they be shot down, separated from their unit, or captured by the enemy. Although many people identify these maps as being made of silk, they were actually printed on rayon-acetate cloth. The material was chosen for its durability: it can get wet without running and it is not easily torn. Other advantages of cloth maps are that they can be sew into pilot’s clothing and they do not make noise when handled the way paper maps do.

These cloth maps were produced by both the Army Air Force and the Navy’s NACI-HO (Naval Air Combat Intelligence-Hydrographic Office). They were often printed on both sides to maximize the amount of geography displayed.

Take a good look at the map. Can you tell what part of the world it represents? If you are not sure, what clues can you use? What other resources can you use to determine this map’s location?

What kind of information is found on this map? How might that information be useful to a downed pilot or lost soldier?

**Questions for further inquiry**

1. What skills would a soldier need to use this map? Do you have these skills?
2. Can you find the Equator on your map?
Artifact Description: Gas Mask

During World War I, both the Allied and the Central Powers used chemical warfare on the battlefields of Europe. This new type of weapon—artillery shells filled with a variety of poisonous gasses and substances—was both terrifying and deadly. Tens of thousands of soldiers were killed or seriously burned, blinded, or otherwise injured from these gas attacks. Both sides quickly adapted to this new battlefield threat by carrying and using gas masks.

In the interwar years, most countries signed international agreements banning the use of chemical warfare (many of those agreements are still in place today). Despite these agreements, both the Allies and the Axis countries feared that the other side would break the agreement and use gas weapons (two countries did: Japan used chemical weapons against Chinese troops and Italy used them during their Ethiopian campaign). That is why many WWII soldiers carried gas masks—just in case.

On the Home Front, Americans also feared that Germany or Japan would somehow attack the United States with chemical weapons (people in Hawaii were especially nervous about this). The government had civilian gas masks produced for such an eventuality.

Take a look at this gas mask (but don’t try to put it on). What does “noncombatant” mean? What does OCD mean? Do you think the government made child-sized gas masks too?

Questions for further inquiry

1. What can this artifact tell us about the Home Front?

2. What do you think about the idea that countries sign agreements telling them that some ways of killing each other are OK (bullets and bombs), but others ways are off limits (chemical warfare)?

If you were in charge of a country at war and your country was losing that war, would you break your agreement and use chemical warfare to try to defeat your enemy?
Artifact Description: **Philippine occupation currency**

If a military force in a foreign country is overwhelmingly stronger than the native force, it may be said that the military is “occupying” the country. During World War II, for example, Japanese forces occupied the Philippines.

Military forces constantly need food and other supplies. If operating in another country, those must be acquired—often from civilians. Considerate occupation forces will purchase their needs, rather than taking them by force.

Therefore soldiers sometimes receive the currency of other countries before they enter. If the forces are fighting to return the country to home rule, the money will be that which is considered valid by the legitimate government. This happened in WWII when invading Allied forces were given pre-war French francs prior to D-Day. The idea was that the money made and used by the Nazi occupation forces was going to be forced out—along with the Nazis!

If the entering forces are hostile, they have 2 conflicting issues. Money has symbolism—look at all the symbols on our American dollar bills! The hostile forces must insure that the currency signifies them as the victors in the struggle. Yet, they must also provide a currency which is familiar to the populace to provide economic continuity and prevent anarchy.

As simple as a piece of paper or a coin is, the design and usage of money has important propaganda value in war.

**Additional Items of Interest**

Take a close look at this money. The money used in the Philippines in the 1940’s, which the Japanese chose to modify during their occupation, very closely resembled American money in its basic design.

The Philippines had been an American possession, acquired from the former Spanish masters in the 1898 Treaty of Paris, which ended the Spanish-American War. Guam and Puerto Rico were also indefinitely ceded to America at the time. Americans had been the occupying force in the Philippines before the Japanese arrived. A student may wish to research either the Spanish-American or consequent Philippine-American War.

**Questions for further inquiry**

1. Why would conquering forces choose to purchase food and other supplies, rather than take them?

2. Why do you think the occupation money isn’t in coin form?
The advantage, and disadvantage, of being in a tank or other armored fighting vehicle (AFV) in combat is that the combatant is enclosed. He (in World War II all AFV personnel were men) is not as vulnerable to the same weapons as someone on the outside. The difficulty lies in trying to observe the surroundings, and potential targets, while remaining concealed within the tank. The key to this dilemma was found aboard submarines. A periscope system was designed, but one which was fixed so that it’s view (called a Line of Sight) moved with the tank’s main gun – able to change both elevation and direction.

Mirrors used in the first tank periscopes were replaced by prisms by the time of World War II, because of their better light-transmitting and improved optical qualities. Each periscope had a removable head made of a lightweight plastic material, made to shatter (and which could be replaced), rather than shake loose and become wedged in the mechanism.

### Additional Items of Interest

For night firing, a light was provided to illuminate the periscope reticle, the network of fine lines placed in the focus of the eyepiece. Many eyepiece reticles on American optical equipment during the war, including tank and submarine periscopes and bombsights were made from the strong but thin silk of the black widow spider.

### Questions for further inquiry

1. As a soldier, where would you rather be – on the inside, or outside, of an AFV? Why?

2. A film coating on some tank periscopes reduced reflections which could bother the viewer. Many eyeglasses also have this film, but some don’t. If your teacher allows, look through each type – can you tell the difference? How would you describe it?

3. What problems would a soldier in an AFV have to deal with?
Artifact Description: Waste fat collection jar

The efforts made by our fighting forces during the war deservedly get the most recognition. However, we all should be aware of the efforts that were made back at the Home Front – America itself – to help support them. Every town, every school, every home contributed something to the war effort, including something as basic as saving your waste fats after cooking.

The supply of vegetable fats from the Far East was reduced during World War II. The Japanese invaded many agricultural areas and funneled much of their production back to the Japanese home islands. In addition, there was the problem of shipping items through active war zones. However, animal fats could be used as a substitute. This was important in the production of food for use back home and at the war front.

Also, animal fats contain glycerin, a key ingredient in many explosives, including nitroglycerin. In America, the public was asked to collect waste fats from frying bacon, meat drippings, etc. These were strained to separate out meat particles, then collected in wide mouth metal cans. Simple tin cans were used at the start, but as the war progressed, cans designed for waste fat collection were created. When full, cans were brought to local butchers or other collection points.

Questions for further inquiry

1. Would this system of waste fat collection work for microwave bacon? Why or why not?

2. What material needs to be added to glycerin to create nitroglycerin?
Artifact Description: Savings bond stamp book

Financing a global war required huge amounts of money. Lots of large, technologically-advanced equipment was produced on a mass scale, not just for the United States, but also for our Allies. We also had to produce very basic needs such as food.

In 1947, after the war, the Treasury Department estimated the cost for World War II at $350 billion. All previous U.S. wars together had only cost $33 billion!

Although the Federal public debt grew by a factor of 5 from 1941-1945, much of the war costs were met by levying taxes on the public, including income, sales and other kinds. Higher taxes also kept inflation under control. This was important in an era of high employment and wages (even with taxes and increased living costs, household incomes rose).

Federal securities were sold to divert some of those household monies back to the war effort. Federal securities included non-marketable Savings Bonds and Savings Stamps. These could not be transferred, but could be redeemed on demand – i.e. the government would pay their value when requested. However, the longer they were held, the more value they would earn.

The public was encouraged to buy them during War Bond Drives, of which there were eight between November, 1942 and December, 1945 (after the war). During these national fund-raising efforts, celebrities, businesses and government leaders would promote the sales of Savings Bonds and Stamps. Even schools and youth groups sold bonds in their hometowns to help the war effort overseas.

Additional Items of Interest

The Eighth (also known as the Victory) Drive was held from October 29 to December 31, 1945. The war was over, but the government still needed to pay for the materials they had purchased from American manufacturers for the war effort.

Questions for further inquiry

1. What denominations were the stamps of WWII? What levels of stamps do you think the U.S. government should sell today?

2. Savings bonds and stamps accrued value over the years. A $25 savings bond from 1945 was worth $111.45 forty years later. Why might some people cash theirs early?
Artifact Description: **World War II era wooden toy**

Children have always enjoyed toy transportation models such as toy trains or trucks. The same was true for American children during World War II, though their toys might include vehicles their relatives might be using to help fight the war, such as jeeps or tanks. One notable difference between then and now was the composition of these toys. Metal was in short supply during the war. The expense needed to mine and refine it was prohibitive. Also, the metal that was available was needed to produce the real airplanes and tanks needed to fight a global war on two fronts. Formulation of plastic was in its infancy. Even though the United States was an oil-exporting country at the time, scientists and engineers had not developed the industrial capacity to convert petroleum into plastics suitable for toys. Wood, especially pine, was used instead. Although bright primary colors, particularly red and yellow, aided toy sales before the war, many toys were painted in American military olive drab. Even toys that were still painted in bright colors might have a military tie-in during World War II – a time when “We’re All In This Together” was part of everyday life, even for kids!

**Additional Items of Interest**

WWII was also a time when many small toy companies flourished, as pre-war woodworkers turned their hands (and lathes) to producing quality toys. It is important to consider the childhood experiences of children in other areas of the world impacted by World War II. Many had no toys at all, and had to use their imaginations to play, even as the war was raging all around them.

**Questions for further inquiry**

1. What age do you think this toy was designed for? Would you be inclined to play with this toy? What if it was your only toy?

2. If this was your toy, would you rather have it colored military olive drab, or a bright primary color? Why?
Artifact Description: **Ship recognition slides**

***These are fragile objects. Do not drop. Do not attempt to display by projection***

Wars are not just won by courage or strength. Many times in World War II battles were won by the side that identified a problem and then analyzed and implemented a solution. Training often made the difference. Ship’s officers and crews were required to attend both large assembly programs and small classes. In these “drills” they would review various functions of their ship, and how to combat enemy forces. Crews certainly were drilled to learn the “look” of enemy ships. Being able to determine – often by eyesight alone and at a distance – the type, size and strength of an enemy ship was crucial when determining how to proceed. Were oncoming ships friends – or foe? Have they noted our presence? If enemy, should they be attacked immediately? Should the enemy be kept in sight while we signal for reinforcements? What are our options? Knowing the opponent was key to these decisions.

**Questions for further inquiry**

1. Why do many of the slides contain the words “discard all previous slides bearing this number?”

2. Why are merchant ship slides included with combat ship slides? What advantages might be gained in war by attacking merchant shipping?

3. The images are small and blurry if you hold them up. How do you think these viewed? (Hint – more than one person could see them at a time)
Artifact Description: **Airplane recognition images and viewer**

There were 2 types of airplane recognition systems used in World War II. One, used by observers on the ground, focused on learning the outline of airplanes high in the sky, as viewed from the ground. Civil defense workers were among those trained in this system. A supplementary system was taught to pilots, who might encounter enemy aircraft from any angle. The images in your Footlocker were used to help train American aviators about the rapidly changing images they might encounter high above the earth.

Both systems included a focus on the W.E.F.T. of various airplanes – the Wings, Engine, Fuselage, Tail. These major structural features were the most important for observers to focus on, whether they were safe on the ground or in an airplane cockpit far, far overhead. Aircrew staff briefings included training “drills” on aircraft recognition. Being able to determine – by eyesight alone, at a distance and possibly from an upside-down position (!) – the type and numbers of aircraft was crucial when determining how to proceed. Were the oncoming planes friends – or foe? Have they seen us?

### Additional Items of Interest

The View-master system we are using to view these images, was originally designed in the early 20th century as a way to view tourist attractions. The general public was introduced to the system at the 1939 World’s Fair. During World War II, American military planners realized the system could help in training the military. Over 100,000 viewers and six million viewing disks (like the one in the footlocker), were purchased by the military between 1942 and the end of the war in 1945.

### Questions for further inquiry

1. Compare and contrast the naval and air recognition aids. Why do you think they are in different formats? Why are the airplane pictures in color?

2. Being a pilot requires a very specific skill set. What skills/abilities do you think a pilot needs? Which of those you listed are natural? Which can be taught?
Artifact Description: Army garrison cap

In 1939, a new field cap - adapted from a World War II shape – was adopted for barracks and field use. It was then standardized on February 19, 1941. Olive drab serge material was used for winter uniforms, and tan cotton was used for summer/tropical wear. Officers often wore caps made of “elastique” material.

For enlisted individuals garrison caps had colored “piping” around the folds (called the “curtain”). Sometimes these colors were in special designs. Each arm of the Army had its own design. For officers, caps had gold (for generals), or gold/black (for other officer ranks) braiding. In addition, each unit’s distinctive insignia was placed on the left front, until August 25, 1942, when it was replaced by insignia designating the rank of the wearer.

Additional Items of Interest

Military uniforms have changed throughout history. Both the materials used, and decorations/colors have changed radically, depending on how warfare was viewed by those fighting, and those who weren’t. Consider the difference between the linen and bronze protective breastplates of ancient Greek warriors, the multi-colored and feathered finery of Napoleon’s cavalry, and the easy-wearing, yet durable, camouflaged clothing of World War II (and today!) These were all indomitable warriors – what caused the differences?

Questions for further inquiry

1. What is the function of a uniform? Why don’t soldiers wear civilian clothes?

2. Why didn’t soldiers wear helmets all the time?
Artifact Description: World War II “computers” or “tables”

Several devices in use during World War II were labeled as computers, or tables. Technically, a computer is just a device to aid in making calculations. An ancient Chinese abacus could be considered a computer. Throughout history, including World War II and today’s military, individuals have been screened to determine the best fit between a person’s talents and the jobs the military needs performed. Since the Renaissance, navigation, engineering and artillery functions in the military have often been filled by people with strong mathematical ability and interest. Regardless, determining calculations could take much valuable time, sometimes in difficult – possibly life-threatening - situations.

Before electronic computers, those calculations were simplified by non-electronic (often hand-held) computing or measuring devices. The functions, and varying answers, to a mathematical equation were built into the device. If the hands of the device were turned (or slid) to certain settings, the “computer” would show the results. Each made complicated mathematical calculations easier for the servicemen and women who were using them.

Additional Items of Interest

The foundations of today’s electronic computers were established during World War II. The Germans had produced a code which was considered unbreakable. Polish codebreakers, joined later by the British at their famous Bletchley Park site, started to solve the millions of letter and number combinations used. Their job was made easier by the use of “bombes” (not bombs), electro-mechanical machines. Later, they developed the Colossus machines, the world’s first programmable, digital, electronic computing devices to decipher encoded German messages.

Questions for further inquiry

1. What is one similarity between this WWII artifact and a modern computer? What is one difference?

2. What are the advantages of using a device to help with calculations? What are the disadvantages?
Artifact Description: **Spotting mirror**

World War II was a global war which required servicemen and women to cross oceans to carry on the war effort. Enemy action, mechanical failure or just plain mistakes sometimes meant that an airplane or ship crew could be forced into life vests, rafts or lifeboats on the open ocean or in hostile territory. Depending on availability, air and sea rescue forces might be mobilized to look for the lost. Signal mirrors were issued in many survival kits. Light flashes from sunlight reflected in the mirror might enable the lost to signal the rescue forces.

In order to provide the most accurate signaling, a clear (no mirrored silver paint) crosshair was built into signaling mirrors. The lost serviceman had to follow the directions on the back of the mirror to best insure the light flashes were directed toward the rescue airplane or ship.

**Additional Items of Interest**

Sending rescuers after lost servicemen or women depended on knowing that:

1) They were lost, or at least overdue.
2) Which area they were last reported in.

In 1945, the cruiser U.S.S. *Indianapolis* was sunk by a Japanese submarine after it had carried critical parts for the first atomic bomb across the Pacific Ocean to the island of Tinian. Because of the secrecy surrounding the *Indianapolis* and its cargo, no one knew that the ship was overdue at its next stop, nor, once it was finally reported missing, where in the Pacific Ocean to concentrate rescue operations.

**Questions for further inquiry**

1. Using gloves to handle this artifact, try to follow the directions for use. Do you think this would be easy to use, or hard? Why?

2. What conditions might prevent a person in need of rescue from following the directions effectively?
Artifact Description: **US Army field manual**

***Manuals are about 70 years old, so may be previously damaged, and are prone to more wear and tear, please turn pages carefully.***

The US War Department issued field manuals to every soldier in the military. This manual was a set of instructions on how to be a soldier.

The information contained gave descriptions on what to do in certain situations: how to act in front of an officer, what the symbols on different insignia meant, and the basic code of conduct.

The manuals also had extremely important directions such as how to repair a jammed rifle or put on a gas mask in addition to first aid, and survival information.

These are only a few examples of the information given in the manual.

There were many different types of field manuals to cover the various duties within the military.

### Questions for further inquiry

1. Soldiers have always needed information on how to perform the tasks they perform. How do they get that information today? How did they get it in the past?

2. If you were a new recruit today, what information would be useful for you to have in a manual?

3. Which of the topics explained in the manual might help save a soldier’s life?
Artifact Description: “Yank” Magazine

*** Magazines are about 70 years old, so may be previously damaged, and are prone to more wear and tear, please treat them carefully.***

*** Yank magazines also contained Cheesecake (pin-up girls of the 1940’s) Centerfold images that were thought at the time to improve soldier’s morale. These remain in our magazines***

After first appearing in June 1942, Yank became the most widely read magazine of the army in WWII. In fact it was only available to military personnel. By the end of the war, the weekly magazine had many different editions printed all around the world. Its popularity came from the variety of different contents and “morale boosters”: such as puzzles, comic strips and cartoons, pin-up girl pictures, and news articles. Yank magazine sent reporters and photographers all over the world during WWII to write stories about and take photographs of the war and of the men and women fighting it.

These articles included stories of other events happening in the war but also about the US. Specific tales of soldiers, popular entertainment, politics, sports, and more, were all covered.

Look for stories about people and places you have heard of. Are any from around your home town?

Yank magazine was last published in December 1945.

Questions for further inquiry

1. What kinds of news or stories would you want to read about if you were away for months at a time?

2. What magazines do you read and what type of news is included in them? Do you think the soldiers enjoyed getting and reading these magazines while away?

3. Today we have instant access to news 24 hours a day. Do you think people are better informed about their world today than they were during WWII?

4. Where and how do you find out news, locally, nationwide, and globally?
Artifact Description: **US Army First Aid Packet**

*** This packet **CANNOT** be sealed once opened — **DO NOT** attempt to open it due to the contained Sulfanilamide. ***

Every American soldier during the war carried a "First-aid Packet, U.S. Government Carlisle Model" was in a pouch on his belt. It was one of the most common items among the American military during WWII. A pouch was even specifically made for the Carlisle First-aid packet.

Dressing inside of the packet was intended as an immediate compress to stop bleeding from a wide variety of wounds and establish a clean and sterile covering. The packet contained a white linen gauze pad with very long gauze tails so it could be tied around a soldier’s arm or leg, and if necessary the chest. Instructions in red ink were stenciled on the bandage. There were two sizes and if a large wound needed treatment then multiple bandages were used.

In 1941 a huge leap forward in battlefield medicine took place: sulfanilamide, a sulfa based drug was introduced to prevent wound infections. A small envelope of sulfanilamide powder was enclosed with each first-aid packet (to be sprinkled on the wound). Later packaging had "with sulfanilamide" stamped on the bottom of the metal box. Boxes in which bandages were pre-coated with sulfanilamide were painted red.

To protect the dressing from gas Carlisle bandage packets were originally encased in a brass "sardine tin", however brass shortages caused plastic containers or foil bags to be used instead.

**Questions for further inquiry**

1. Do you think this was one of the most important items a soldier carried, if so, why? If no, why not?

2. First aid has always been important in war, what are other situations where knowing first aid techniques may be useful?

3. How have bandages and first aid supplies changed, and what might be used in place of the sulfanilamide powder?