



Civil War Navy Activity Book

Hands-on Activities

Pre-Visit Study Materials

Library & Online Research Materials



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Nautical Vocabulary

Abaft – Towards the stern.

Able bodied seamen – A member of the deck crew who can perform all the duties of an experienced seaman; certificated by examination; must have three years sea service. Also called Able Seamen and A.B.

Aboard – On or within the boat.

Aft – At, near or towards the stern.

Afterguard – Men assigned to duty on the quarterdeck.

Aloft – Up above the deck, up the mast or in the rigging.

“Ahoy” – Seaman’s call to attract attention.

Amidships – In the middle of the ship.

Anchor – A hook which digs in to the bottom to keep the ship from drifting 2) *The act of using an anchor.*

Astern – Behind the boat.

“Avast!” – The command to stop, or cease, in any operation.

Ballast – Heavy material, such as gravel, sand, iron, or lead, placed low in a vessel to improve its stability in the water.

Barnacle – A shell-fish often attached to the submerged parts of a vessel.

Batten down – Secure hatches and loose objects both within the hull and on deck.

Beam – The widest part of the boat.

Bearing – The direction of an object expressed either as a true bearing or as shown on the chart.

Belay - Change order or to make a line secure to a pin.

Berth – 1) A place for a person to sleep. 2) A place where the ship can be secured. 3) A safe and cautious distance.

Bilge – The lowest part of the interior hull below the waterline.

Boatswain – Also bosun, bos’n, bo’s’n, and bo’sun, all of which are pronounced “bosun.” A crewmember responsible for keeping the hull, rigging and sails in repair.

Bow – The forward part of the vessel.

Bright work – Varnished woodwork or polished metal.

Bulkhead – Below deck walls within a vessel.

Buoyancy – Degree of floatability.

Cabin – A compartment for passengers or crew.

Capstan – The drum-like part of the windlass, a machine used for winding in rope, cables or chain connected to an anchor or cargo.

Captain – The person in charge of a vessel and legally responsible for it and its occupants.

Casemate – A fortified enclosure usually on the upper portion of an ironclad ship.

Cockpit – The area, below deck level, that is somewhat more protected than the open deck from which the tiller or wheel is handled.

Compass – Navigation instrument, either magnetic (showing magnetic North) or gyro (showing true North)

Crow's Nest – Protected look-out position high on the foremast.

Davit – Small cranes, usually located astern, that are used to raise and lower smaller boats from the deck to the water.

Deck – A permanent covering over a compartment, hull or any part of a ship serving as a floor.

Ditty bag – A small bag for carrying or stowing all personal articles.

Draft – The depth of water required to float a vessel.

Duff – A food made of dough with raisins or prunes added, considered a delicacy on ship.

Fathom – Measurement of six feet.

Fo'c'sle/Forecastle – The extreme forward compartment of the vessel.

Fore – The forward part of the vessel.

Freeboard – The minimum vertical distance from the surface of the water to the gunwale.

Galley – The kitchen of a ship.

Gunwale (gunnel) – The upper railing of a boat's side.

Hardtack – A plain hard biscuit issued to sailors made of flour, water and salt.

Hatch – An opening in the deck for entering below.

Head – The ship's toilet.

Helmsman – The member of the crew responsible for steering.

Hull – The watertight body of a ship or boat; the hull is the surface of a ship that displaces water.

Ironclad – A warship armored with iron plating or rails.

Keel – Centerline of a boat running fore and aft; the timber at the very bottom of the hull to which frames are attached.

Knot – A speed of one nautical mile per hour (6076 feet per hour)

Larboard – The left side of a ship, looking forward. Also referred to as port.

Leeward – The direction away from the wind.

Line – The sailor's term for a rope.

List – Inclination of a boat due to excess weight on one side or the other.

Logbook – The official record of a ship's voyage documenting day to day events including weather and other observations.

Mainmast – The tallest mast of the ship; on a schooner, the mast furthest aft.

Mast – A large wooden pole used to hold up the sails.

Nautical Mile – One minute of latitude; approximately 6076 feet – about 1/8 longer than the statute mile of 5280 feet.

Pilothouse – A small cabin on the deck of the ship that protects the steering wheel and the crewman steering.

Port – Left side of the ship when facing forward.

Quarterdeck – The raised deck area at the stern of the vessel, usually reserved for officers.

Rigging – The lines that hold up the masts and move the sails (standing and running rigging).

Rudder – A fin or blade attached under the hull's stern used for steering.

Sail – A piece of cloth that catches the wind to power a vessel.

Salthorse – Dried beef that was heavily salted for preservation.

Scuppers – Holes through the ship sides that drain water at deck level over the side.
Scrimshaw – A sailor’s carving or etching on bones, teeth, tusks or shells.
Scurvy – A disease historically common to seamen caused by lack of vitamin C.
Spar – A pole or beam, sometimes with a torpedo attached to it.
Starboard – The right side of the ship when facing forward.
Stem – The timber at the very front of the bow.
Stern – The rear or after part of a vessel opposite the bow or stem.
Tide – The rise and fall of water level in the ocean as a result of attraction of the sun and the moon.
Turret – A round, iron-armored structure that can rotate 360’ that houses cannon on an ironclad.
Underway – Vessel in motion, when not moored, at anchor, or aground.
Wake – Moving waves, track or path that a boat leaves behind it, when moving through the water.
Watch – Period of time spent on duty, usually four hours.
Water-line – The line made by the water’s edge when a ship has her full proportion of stores and crew on board.
Windlass – A mechanical device used to pull in cable or chain, such as an anchor rode.

Rank Structure in the Civil War Navy

The lowest rank or “rate” in the Navy during the American Civil War was the rank of Boy. Sometimes even men in their twenties would be classified as Boys if they were not familiar with the Navy. Working up, the next rank is Landsmen, followed by Ordinary Seaman, Able Seaman and Seaman. In this group, you would also have Coal Heavers and Firemen.

Next, we have “Petty Officers” that served as Non-Commissioned Officers (NCO’s) on board a ship much as a Sergeant would in the Army. These ranks usually consisted of men who had many years of service at sea. These ranks include Quartermaster, Quarter-gunner, Captain of the Forecastle, Captains of the Tops, Captain of the Afterguard, Armorer, Cooper, Ships Corporal, Captain of the Hold, Boatswains Mate (“Bosun”), Gunners Mate, Carpenters Mate, Master at Arms, Ships Steward and Ships Cook. Carpenters and Sail Makers were considered “Warrant Officers” and were very specialized in their job duties.

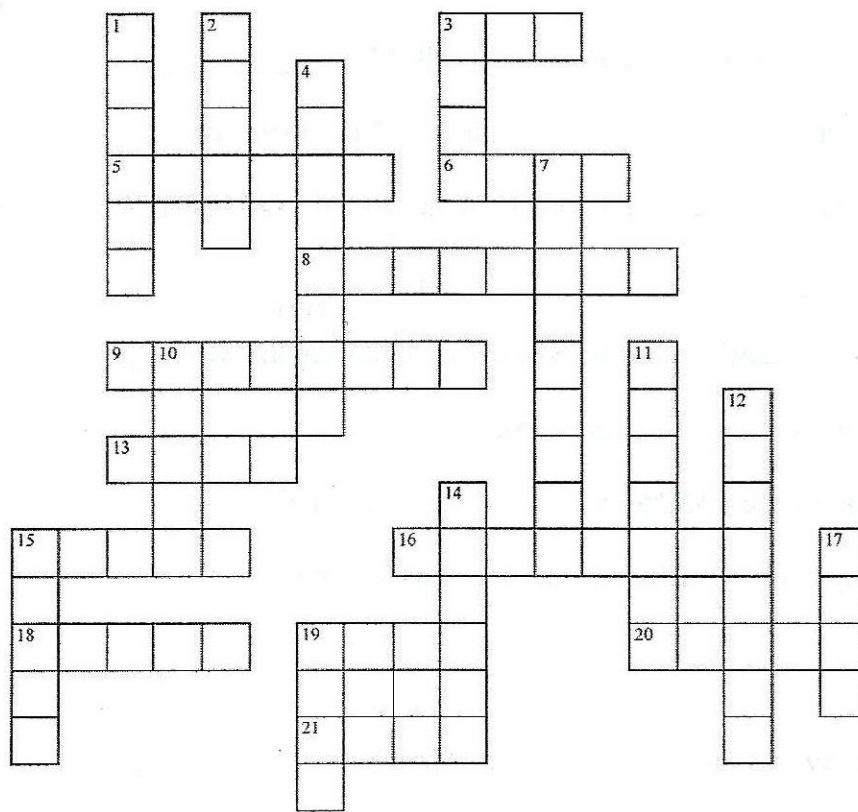
Finally, we have the Commissioned Officers. This means that they were issued a commission by the government and were usually very well educated and trained in how to operate a ship. There were two different kinds of Commissioned Officers; Engineers and Line. Engineers usually stayed below decks and were in charge of the boilers, engines and other machinery. Some of the most common Engineering ranks were Assistant Engineer and Passed Assistant Engineer. Line Officers were usually stationed on the deck for navigation or with the cannons to direct combat. It was here you would find Ensigns, Masters, Lieutenants, Commanders and, most importantly, Captains.

ACTIVITY: Use the following vocabulary words in the word search. All words listed will be used. Words can go any direction, backwards and forwards.

Q O D F K X T T M V S A Y D T
D U F R N N S P A I R F T U F
L J A D A A O M U A E T F F A
Z O B R L O I T S C P E A F S
E R G L T D B T T H P R B Z M
L D A B S E E R T H U G A A S
V B I H O R R R A E C U L M X
H M I T N O E D E L S A N F R
P P A T T B K H E D I R W A H
S C A P S T A N B C D D C T L
E S R O H T L A S A K U T H F
Z H E A D S E T I V A D R O C
L E E K Q K U X L X G G R M M
P S F N B A O Y N P Y E R U O
E F Z S R V W C P C I M Q Q X

Afterguard	Duff
Larboard	Logbook
Quarterdeck	Salt horse
Abaft	Aft
Amidships	Astern
Ballast	Berth
Capstan	Davit
Fathom	Fore
Head	Keel
Knot	Rudder Tide
Scuppers	

Navy Vocabulary Part I



ACROSS

- 3 The front end or forward part of the ship
- 5 A hook which digs in to the bottom to keep the ship from drifting
- 6 A large wooden pole used to hold up the sails
- 8 An armored enclosure on the upper portion of an ironclad ship
- 9 A shell-fish often attached to the submerged parts of a vessel
- 13 The left side of the ship
- 15 A small bag used for carrying or stowing personal items
- 16 A plain hard biscuit issued to sailors made of flour, water, and salt.
- 18 The command to stop or cease in any operation
- 19 A piece of cloth that catches the wind and so powers a vessel
- 20 The end or rear of a vessel
- 21 Seaman's call to attract attention

DOWN

- 1 On or within the boat
- 2 Period of time spent on duty, usually 4 hours
- 3 The widest part of the boat
- 4 Term for a warship that was armored with iron plate or rails
- 7 The right side of the ship
- 10 Up above the deck, up the mast or in the rigging
- 11 A navigation instrument used to tell direction
- 12 Below deck walls within a ship
- 14 The kitchen on a ship
- 15 The depth of water required to make a ship float
- 17 A sailor's term for a rope
- 19 A pole or a beam, sometimes with a torpedo attached

Museum Scavenger Hunt

ACTIVITY: Find the answers to the following questions in the museum's time line and artifact descriptions.

What other name was the CSS *Jackson* called? _____

What was the beam (width) on the CSS *Chattahoochee*? _____

What instrument is the sailor playing in the large USS *Hunchback* photograph? _____

How many casualties did the US Navy suffer during the war? _____

On what day did Georgia secede from the Union? _____

What ship did the USS *Merrimac* eventually become? _____

How many buttons (including cuff and rear) are on the uniform coat of Commander Catesby Jones? _____

On what day was the Battle of Memphis fought? _____

In what state was Admiral Franklin Buchanan born? _____

The surrender by Confederate forces of what city gave the U.S Navy control of the Mississippi River? _____

What is the name of the first ship to be sunk by a submarine? _____

How many ironclad monitors participated in the Battle of Mobile Bay? _____

On what day was the flag off the CSS *Arkansas* captured? _____

Ironclads vs. Sailing Ships

During the American Civil War both the United States Navy (also called the Northern or Union Navy) and the Confederate Navy (also called the Southern or Rebel Navy) used ironclads and traditional wooden sailing ships. Many sailing ships, in addition to sails, were equipped with steam engines. The first combat between armored warships occurred in March of 1862 at Hampton Roads, Virginia. It was fought between the United States Navy ironclad USS *Monitor* and the Confederate ironclad CSS *Virginia*. The *Monitor* was a brand new type of purpose built vessel that gave its name to an entire class of ships, “Monitors”. The *Virginia* had previously served in the Union Navy as a steam and sail frigate named USS *Merrimac* before. It is traditionally bad luck in the navy to rename a ship and many sailors continued to call it the *Merrimac* even though the name was officially changed.

A basic Southern ironclad usually included a RAM at the very front of the ship to run into enemy ships. They were also equipped with several GUNPORTS on the CASEMATE for the cannons to fire out of. The driver of the ship, the pilot, usually stood in a small enclosure called the PILOTHOUSE on top of the forward part of the CASEMATE. He would guide the RUDDER at the back of the ship to turn the ship to port or starboard. Some ironclads were propelled by a paddlewheel, but most were propelled by a SCREW at the stern of the ship. All ironclads were powered by steam engines and required a SMOKESTACK for the smoke left over from burning coal. For the crew to go below decks, they used HATCHES on the deck. The United States Navy used CASEMATE ironclads as well, though only on the western rivers such as the Mississippi. The main type of ironclad in the Union Navy was the MONITOR class. These had rotating TURRETS housing their guns, allowing them to aim their weapons without turning the whole ship.

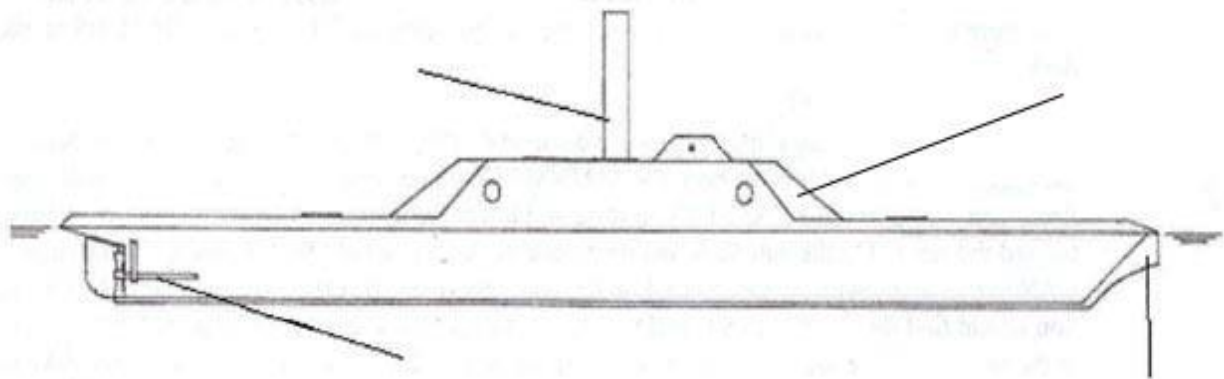
On a sailing ship the top deck is called the main deck; the biggest feature here was the MAINMAST in the center of the ship. Also, on the top deck, you would find the CAPSTAN to raise and lower the anchor, along with the ship’s WHEEL toward the stern. On the gun deck, the next deck down, you would find almost all the ship’s CANNONS along with an area to cook and prepare food on a STOVE. To the rear of this deck, is the area where the sailors sleep. At the stern on this deck you would find the officers WARD ROOM where the ship’s officers would eat and be quartered. The next deck below, the Orlop Deck, was below the ship’s waterline protected from enemy shells; here you usually find the COCKPIT, where gunpowder would be stored in FOREWARD and AFT POWDER MAGAZINES. On the very bottom of the ship, you would find most of the heaviest items on the ship including ballast and cannonballs that would be stored in the ship’s SHOT LOCKER. Much of the ship’s food and water was stored here.

ACTIVITY: On the next two pages, use the descriptions above to fill out the diagrams of both the Confederate ironclad and the Union sailing ship. Be sure to use all the words!

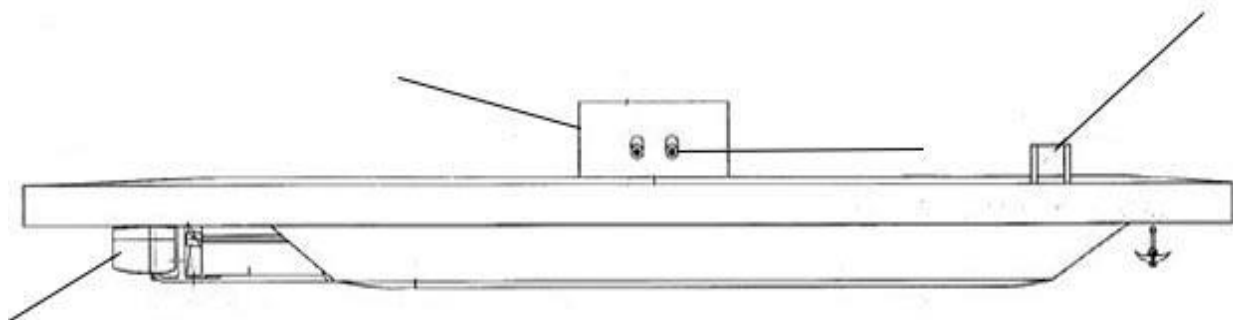
Ironclad

Words to Use:

Casemate	Gun port
Turret	Pilothouse
Ram	Rudder
Screw	Smokestack



CSS Albemarle

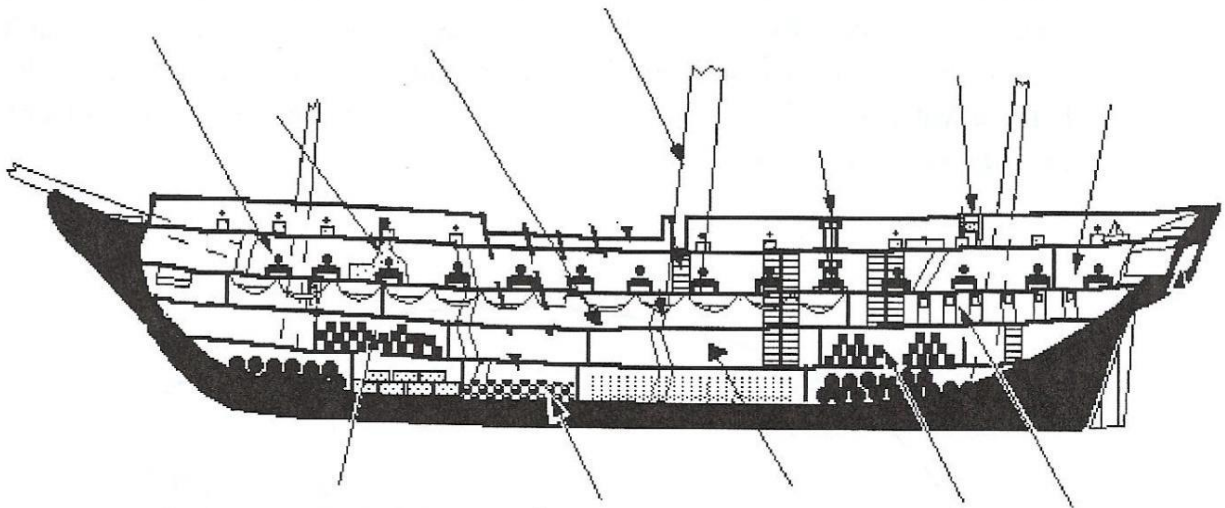


USS Monitor

Sailing Ship

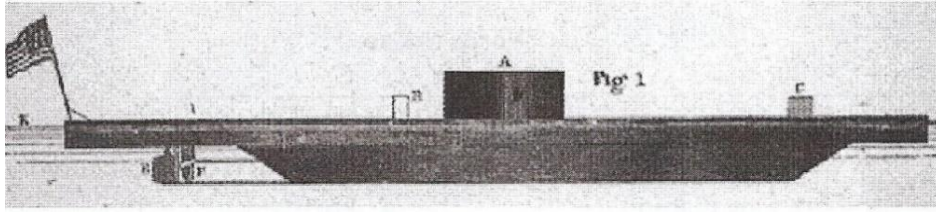
Words to Use:

Aft Magazine	Berth Deck
Cannon	Capstan (for the anchor)
Captain's Cabin	Forward Magazine
Mainmast	Cockpit
Shot Locker	Stove (on gun deck)
Wardroom	Wheel



WOODEN SAILING SHIP USS OHIO 1820-1883

Why Does an Ironclad (Or Anything) Float?



If an ironclad is made of millions of pounds of wood and iron, how does it float? It should sink, shouldn't it? Not if you follow **Archimedes' Principles of Displacement and Floatation**.

Archimedes, a Greek mathematician and inventor who lived over 2,225 years ago, was going to take a bath one day. When he got into his bathtub he noticed the water level rose, and when he got out the water level lowered.

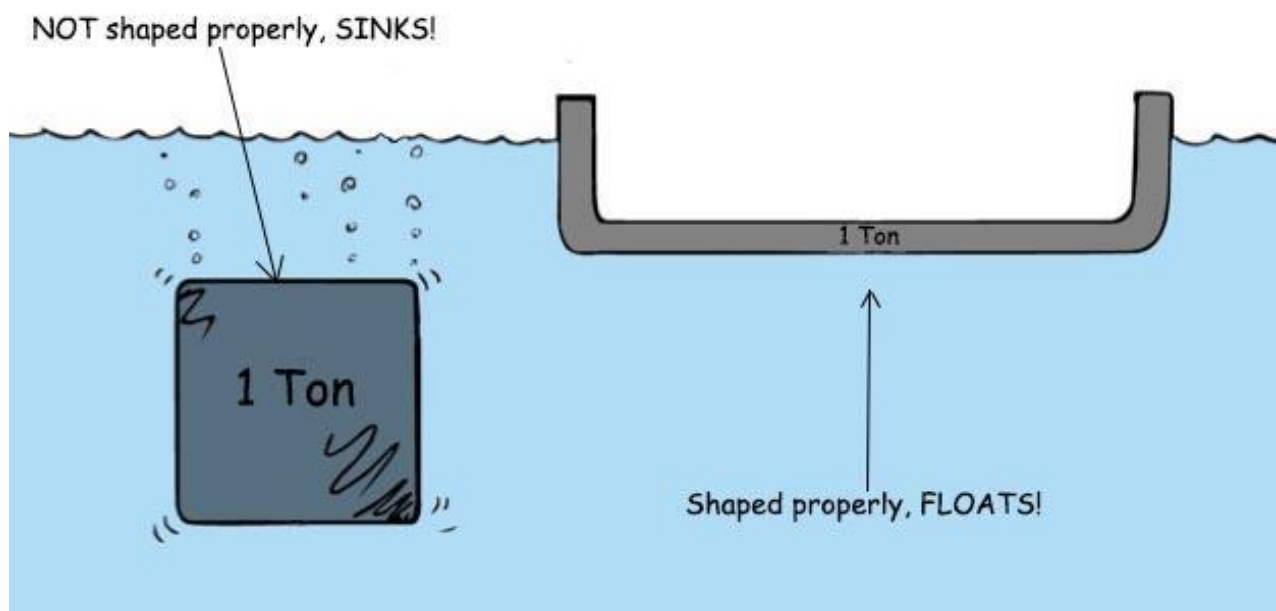
From this Archimedes realized that when anything is wholly or partially put into/**immersed** in water (or any fluid) it is held up/**buoyed** by a force (the **buoyant force**) equal to the weight of the water or fluid it pushes out of the way/**displaces** – this is his Principle of Displacement. He also realized that any floating object (like an ironclad ship) displaces or moves out of the way its own weight of water/fluid – this is his Principle of Floatation.

What all this means is that something heavy *will float* if its *shaped right*.

Consider a 1-ton block of solid iron; that's 2,000 pounds of iron. Iron is eight times denser than water, so it displaces only 1/8 ton of water; or $2,000 \text{ pounds} \div 8 = 125 \text{ pounds}$ – but it needs to displace 2,000 pounds, so it sinks.

Suppose the same iron block is reshaped to have more surface area, like a bowl shape. It still weighs 1 ton but it displaces more water than when it was a block - and when its shaped to displace 2,000 pounds, it floats.

So, when any ship (iron or wood) displaces a weight of water equal to its own weight, it floats.



ACTIVITY: Conduct your own Buoyancy Experiment!

Equipment:

1. Bucket
2. Water source to fill the bucket.
3. Air tight jar to fill with various size rocks.

Directions:

1. Fill bucket with water.
2. Place rocks in the water one at a time. Notice they do not float.
3. Take the empty jar with its lid closed tight and place it in the water. Notice that it does float.
4. Take the rocks out of the water and place the smallest rock in the jar. Close the lid and place the jar back in the bucket. Notice that it floats.
5. Continue to place more rocks in the jar one at a time seeing if the jar still floats.

If you can fill jar with enough rocks you will eventually sink the jar. Why?

Explanation:

Everything in or on water pushes water aside - this is called displacement.

The smallest rock sank. When it sank, it displaced some water. The water level went up slightly when this happened. If we could weigh the rock and the amount of displaced water, we would see that the rock weighs more than the water therefore it sank to the bottom of the bucket. Next, let's say we weighed our jar with the smallest rock inside and the water they both displaced. Our jar with the smallest rock floated therefore it weighed the same as the water it displaced. The more rocks we add to the jar, the more water is being displaced. As long as the jar and the displaced water weigh the same, the jar will float. Once the jar is heavier than the water it is displacing, the jar will sink. Notice the water level moves up when the jar is heavy enough to sink because the jar is displacing the water in the bucket.

Further Comments:

Want more to think about? So far, we have talked about weight, but what about shape and material? Experiment with different materials and shapes to learn more about buoyancy and displacement in the next activity!

ACTIVITY: Buoyancy of Varied Shapes and Materials.

Equipment:

1. Bucket
2. Clay and aluminum foil
3. Up to 10 Pennies or paperclips

Directions:

1. Fill the bucket with water.
2. Roll the clay into a ball then place it in the water. Notice the ball sinks.
3. Now shape the clay into a rounded cup and place it in the water with its rounded side in the water. Notice the clay floats though it is the same amount of clay used when it was a ball.
4. Place pennies, one at a time, onto your clay “vessel” and see if the vessel can hold all ten pennies without sinking.
5. Now take a sheet of aluminum foil (about a foot) and place the ten pennies in the middle of the sheet. Wrap the foil in a ball with the pennies inside and place it in the bucket. Notice the ball sinks.
6. Take the ball and pennies out and get a new sheet of foil, the same length. Shape the foil so it has a flat surface and blocks the water from entering the flat surface.
7. Place the pennies on the flat surface. Notice that the same amount of foil and pennies float this time.
8. Experiment with various shapes and sizes of foil and clay!

Explanation:

A ship will float as long as it weighs less than the water it pushes away or displaces. Like the clay ball and tin foil, there must be air that lowers the weight of the ship so that it floats. When the clay and foil with pennies sink to the bottom it is because there is no air to make the weight less. When the clay and foil are shaped so they can contain air, they float because they weigh less than the water they are displacing!

Further Comments:

So, we learned that shape and weight affect an object’s ability to float. An ironclad can float because of its shape allowing it to contain air making it weigh less than the water it displaces.

The CSS *Jackson* Exhibit



The CSS *Jackson* was built in Columbus, Georgia at the Naval Shipyard between 1863 and 1865. The hull of the ship was made of pine and the casemate above was made of 4 inches of iron backed by 2 feet of oak and pine. The Naval Shipyard was a little over a mile away from the museum along the Chattahoochee River. The ship was built to protect the Chattahoochee/Flint/Apalachicola River system and to break the US Navy blockade at Apalachicola. The ship was launched in December of 1864 but was still not completed in April of 1865 when Columbus was taken by US Cavalry forces. The *Jackson* was set on fire and all the ship that was above the waterline burned away. The missing portions of the ship have been recreated using a metal frame, so you can see its outline, shape, and size.

Critical Thinking Questions:

Notice the bottom of the ship. What shape is it? Why do you think it is this shape?

What type of engines did the CSS *Jackson* use? How can you tell?

The *Jackson* weighed 4 million pounds; how does a ship that heavy float?

What features do you see on the casemate?

How many men do you think it would take to crew the CSS *Jackson*?

The CSS *Chattahoochee* Exhibit



Columbus was an ideal location for Confederate manufacturing and dozens of factories and warehouses produced uniforms, shoes, accoutrements, swords, cannons and firearms. To protect this valuable base, the Confederate Navy contracted to have the CSS *Chattahoochee* built in Saffold, Georgia, just north of the Florida border. This sail and steam powered ship entered service in January of 1863. The *Chattahoochee* suffered a boiler explosion on May 27, 1863, which killed 19 men and sank the ship. The ship was raised and towed to Columbus for repairs. It was still out of action in April of 1865 when US Cavalry forces took the city. *Chattahoochee* was then sunk by her own officers to keep the ship from being captured.

Critical Thinking Questions:

What part of the *Chattahoochee* is on display?

What do you think the large bolts in the wooden beam were used for?

Look at the propeller shaft. What do you notice about it and how do you think it got that way?

The USS *Hartford* Exhibit



The USS *Hartford* was a steam & sail frigate commissioned in 1859, two years before the beginning of the Civil War. The ship was 225 feet long, had a crew of over 300 men and weighed almost 3,000 tons. She served as the flagship of the West Gulf Blockading Fleet under the command of Admiral David Farragut.

The ship saw action during the Battle for New Orleans when it was almost rammed by the southern ironclad CSS *Manassas*. After the battle, the ship served in the Mississippi River and along the coast until it went to New York for refit in August of 1863. It was put back to sea in January and sailed to the Gulf Coast where it was involved in the Battle of Mobile Bay in August of 1864. In that battle the *Hartford* and seventeen other Union warships fought and defeated the southern ironclad CSS *Tennessee*.

Critical Thinking Questions:

Notice the sailor standing on the top of the ship. What part of the ship is he holding onto?

What do you think the long beams coming out from the top of the ship would be used for?

How many port holes can you find? What do you think their purpose was?

Welcome aboard the USS *Hartford*

The Civil War sailor, regardless of whether he fought for the Union or the Confederacy, shared a common experience of life on board ship. This consisted of cleaning equipment, maintaining machinery, drilling on the cannons, mixed with occasional moments of humor, excitement, terror, and homesickness. However, one of the most commonly shared experiences was that of “messaging” or eating onboard ship.

Hardtack was one of the basic foods of the Civil War Sailor and an important source of protein. It was a simple recipe of flour, water and salt. Factories were set up to produce hardtack in large quantities. Cost of hardtack to the government was 5 to 8 cents per pound.

The hardtack biscuit was so hard that sailors had to soak it in coffee or tea to soften it up, so it would be edible. Hardtack could stay edible for years unless moldy or infested with insects.

“With every meal we have hard bread and I am so sorry to say, it is not as good as expected. It is allowed to become old and moldy with maggots, block bugs, about the size of a flea crawling thro’ them. It was so bad that the officers had it condemned and today we had a fresher biscuit...”

--Seaman H.A. Thomas, USS *Miami*, October 5, 1862

MAKE YOUR OWN HARDTACK

Ingredients:

4 cups flour (preferably whole wheat)

4 teaspoons salt

Water (about 2 cups)

Pre-heat oven to 375 degrees F

Mix flour and salt together in a bowl. Add just enough water (less than two cups) to make the mixture stick together. This will produce dough that will not stick to hands, rolling pin or pan. The dough will have to be mixed by hand. Roll the dough out and shape it into a rough rectangle. Cut the dough into squares about 3 X 3 inches and 1/2 inch thick. After cutting, press into each square a pattern of four rows of four holes. (Note: just “press” into the dough, don’t punch through it.) Turn each square over and repeat. Place on an ungreased cookie sheet in the oven and bake 30 minutes. Turn each piece over and bake for another 30 minutes. The crackers should be slightly brown on both sides.



The Life of the Sailor in the Civil War Navy

In addition to hardtack, the Navy provided salted beef, salted pork, beans, dried fruit, dried vegetables, potatoes, sugar, tea, coffee, molasses, flour, rice, cheese, and butter. Resourceful sailors added to their diet by buying or trading eggs, fresh fruit, fish, oysters, and crabs. Sailors would also sometimes receive packages from home containing sweets such as pies, fruitcakes, and plums.

Sailors were divided into assigned “messes” of 8-12 men. Each mess would designate one man to retrieve the food from the ship's galley (kitchen) and then cook it. Often raw foods were made into flour based dishes with various things like meat, vegetables, fruit, or sugar added.

The normal pay scales in both navies ranged from \$12 a month for Landsmen and other inexperienced hands to \$14 a month for Ordinary Seamen and \$18 a month for Seamen. Boys were rated as Third, Second, or First class in ascending order according to their knowledge and physical ability. Third-class Boys were paid \$7 a month, Second Class \$8, and First Class \$9.

In both navies the daily routine was somewhat the same, depending on the size of the ship, the preferences of the Captain, the season of the year, or the needs of the moment. Sailors begin their day as early as 4 A.M. if the ship had to be thoroughly cleaned for an inspection. Otherwise, a typical day might have gone as follows:

5:00 AM- The Marine Bugler sounded reveille. The Master at Arms or one of the Corporals and the Boatswain's Mate from the current watch ran around the berth deck shouting at the sleeping men and slapping their hammocks. The men were ordered to get up and lash up their hammocks and bedding into a tight, round bundle. They were then carried up to the spar, or upper deck. Here the hammocks were stored uniformly behind heavy rope nets, called netting, along the bulwarks.

5:10 AM- The crew got out sand, brooms, holystones, and buckets and washed down the decks. Usually the berth deck was scrubbed with saltwater, and the spar deck was holystoned by teams of men working under the direction of a Boatswain's Mate. In addition to the decks, the brass fittings and other bright work were polished. Metal tracks on which gun carriages turned were burnished. The guns themselves were cleaned. On ships that carried sails, the rigging, halyard (ropes for hoisting yards and sails), and blocks were checked and maintained as necessary. Once the ship was cleaned, the sailors might fill buckets with saltwater to wash themselves and to shave, if they desired.

7:30 AM – In a man-of-war, Boys assemble at the port gangway for inspection by the Master at Arms. The Boys were expected to have clean faces and hands, hair combed, and clothes clean and tidy. Their pants were supposed to be rolled up. After the inspection, each Boy was expected to climb to the top of the masthead and come down. Each Boy did his best to get up and down first. Sometimes the last Boy down had to climb up and down again. The theory behind this routine was that it made the Boys agile and gave them a good appetite for breakfast.

8:00 AM – The Boatswain piped breakfast. Cleaning equipment was put away and buckets were returned to their racks. Each man reported to his respective mess, which consisted of from eight to twelve men. Members of a gun crew, Coal Heavers, and Firemen, and Topmen would have their own messes, often determined by the watch to which they belonged. Marines and Petty Officers messed separately, and the Boys were distributed among the messes.

9:30 AM – Call to quarters. Guns were inspected to see that they were properly secured and ready for any emergency throughout the day. Once this was done, the men relaxed at their stations by writing letters, reading newspapers or books, or dozing.

12:00 Noon – The men would return to their messes to have lunch, the largest meal of the day. After lunch the men might return to the stations they had left, or portions of the afternoon would be filled by various kinds of drills.

4:00 PM – A light evening meal was served by the various messes. In this and the other meals, the timing was related to the watch sequence of four hours on and four hours off. Mealtimes were when the watch was relieved.

5:30 PM – The drum called men to their quarters for inspection. Once the inspection was finished, the Boatswain's pipe announced that the hammocks could be removed from the nettings and prepared for sleeping; then came the period of relaxation for all who were not on watch. On some ships it was a common practice to allow time after dinner for general horseplay, tomfoolery, and skylarking as a means of relieving tension. Other Captains thought that tension was relieved by scheduled boxing matches in the afternoon. On more sedate ships, the hours after dinner were the time for a quiet smoke, for telling or listening to a yarn, or for writing and reading. At this time and in other free periods during the day they repaired their clothing. Dominoes were a popular pastime. Cards and gambling were strictly forbidden, but play went on covertly. At idle times in the afternoon or evening the men might also listen to music if they were fortunate enough to have a banjo or fiddle player on board. In this as in every war, mail from home and loved ones was looked forward to with great anticipation.

8:00 PM – Tattoo – This was the signal for the men to go to their sleeping quarters and retire. Lights and fires were put out and there was to be no noise.



The USS *Monitor* Exhibit



The USS *Monitor* was named by its inventor John Ericsson. He believed his ship would “monitor” the actions of the Southern Navy.

The most unique feature of the *Monitor* was the turret which you can see beside the crew in the photograph above. It was a round structure which held two cannons and about twenty sailors. The turret could rotate 360 degrees so that the cannons could be aimed in any direction to fire at enemy ships. The turret was made from eight layers of one-inch iron plating. One cannon would be pushed out of a gun port while the other was pulled back in for loading.

Because of its odd design, the *Monitor* attracted many nicknames such as “cheese box on a raft” and “tin can on a shingle.”

Critical Thinking Questions:

Why is there a sailor on top of the turret? What do you think his job is?

Do you see any evidence that the *Monitor* has been in battle?

Make up your own nicknames for the *Monitor* based on how it looks.

The CSS *Albemarle* Exhibit

The CSS *Albemarle* was one of the smaller ironclad ships built by the Confederacy. It was constructed in a cornfield next to the Roanoke River. The chief builder, Gilbert Elliot, was only 19 years old. It carried only two cannons and a small crew, but achieved considerable success, sinking one US Navy ship and helping the Confederate Army re-take the town of Plymouth. The exhibit shows the ship docked in Plymouth, North Carolina the evening it was sunk in a daring night-time torpedo boat attack led by US Navy Lt. William B. Cushing. *Albemarle* was later raised and repaired by the US Navy.



Critical Thinking Questions:

Make a list of supplies you think you might need for a trip on the *Albemarle*.

Notice how thick the sides of the ship are. Do you think you would be safe from cannon fire inside the *Albemarle*?

What do you think the small platform inside the ship was used for?

Boys in the Civil War Navy

During the 19th Century, a male would begin to think about his career at a young age. Many would apprentice a trade or profession and begin studying under a carpenter, mason, printer, lawyer, etc. Many dreamed of going to sea and shipped out in the Union and Confederate Navies. Policies on joining up varied widely, but generally a boy could sign up in the Navy at age 13, with parental permission, and many did.

Every ship had a portion of boys on board. They acquired the nickname “powder monkey.” Since they were small and agile, their job during battle was to retrieve cannon charges from the powder magazines below the waterline. They would then take these charges up to the men working the cannons on deck. When a ship was not engaged in battle these boys performed a variety of tasks onboard the ship. These included working the sails, maintaining the ships equipment, cleaning, servicing the officers, and assisting in keeping the ship ready for action at all times.

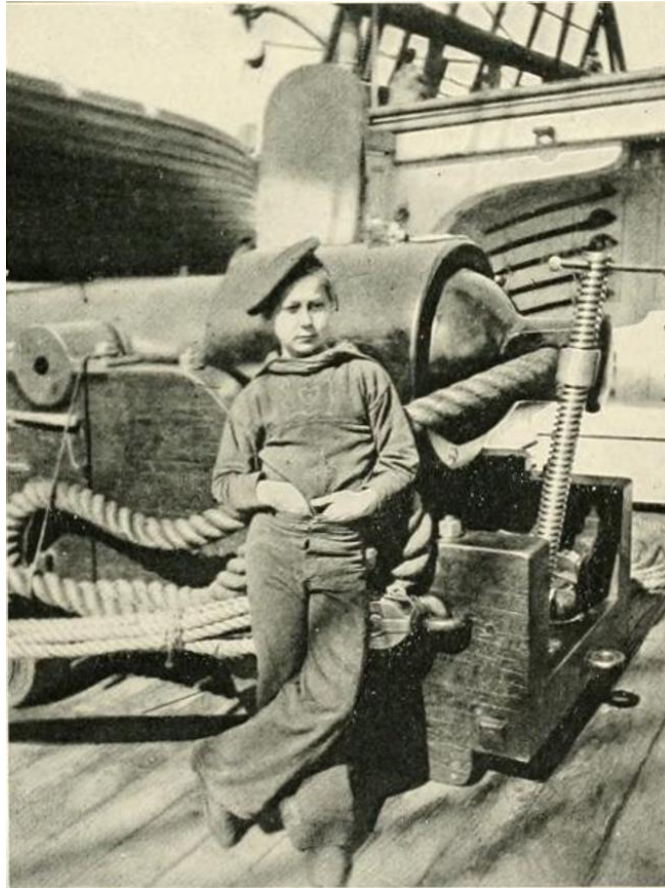
“...The boys on a Man of War are assembled every morning with their pants rolled up above their knees and their faces and hands clean, their hair combed, and clothes in clean and tidy order. This being done they go over the masthead (climb the rigging) for the good of their health and to give them a good appetite for breakfast. It is the policy for each boy to try and get up and down first, the one that comes down last has to try it over again. Many a morning I have nearly been thrown off the rigging by the roll of the ship for they are determined to make sailors of all the boys...” Sailor Charles Mervine, 15 years old, USS *Powhatan*. Died 1865.

These young men served in both navies and were killed and wounded in battle, just as their adult counterparts were. A few even received the Medal of Honor for their actions during combat. One boy, James Machon of the USS *Brooklyn*, was only 16 years old when he was awarded the Medal of Honor. During the battle of Mobile Bay, he performed his duties “steadfastly” as a powder monkey in the midst of bursting shells and severe casualties. The result was the capture of the Confederate ironclad CSS *Tennessee*.



Photo # NH 59431 Loading 12-pdr howitzer on USS Hunchback

Powder Monkeys at cannon drill,
USS *Hunchback*.



The famous photo above is believed to picture a First Class Boy named Aspinwall Fuller, who served on the USS *New Hampshire*. He enlisted in Baltimore on May 9, 1864 and to serve until March 29, 1867 in United States Navy. Records indicate that he was 13 years old and was born in New York. The muster roll further indicates that he had blue eyes, black hair, and a fair complexion and stood 5 foot ½ inch tall.

Critical Thinking Questions:

If you were living in the 1860s, what job would you want to apprentice in?

During your museum visit, notice that there are boys in many of the pictures. Are they dressed like the other sailors? Can you tell what their jobs might be?

Imagine you are a powder monkey and you have just witnessed the battle portrayed in the museum's film. Write a letter home describing your experiences in battle. What would you write to your parents?

Are boys allowed to serve in the US Navy today? Why or why not?

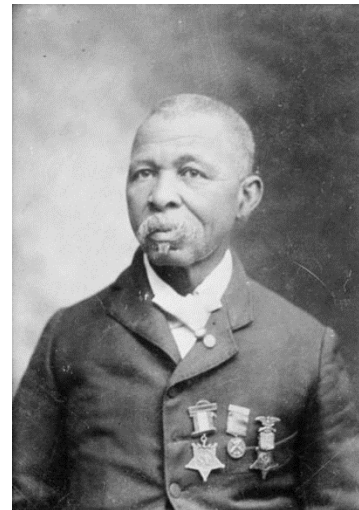
Would you have served on a ship during the war? Why or why not?

African-Americans in the Navy

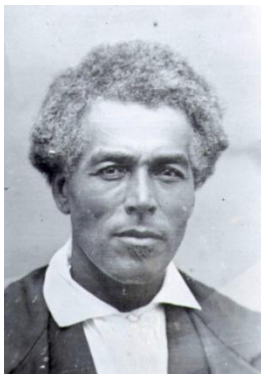


African-Americans had served in the US Navy since it began during the American Revolutionary War and had always received equal pay and served as part of integrated crews – unlike those African-Americans wishing to serve in the US Army, who had to fight for both the right to enlist and for equal pay.

Of the total of 118,000 sailors who served during the war in the US Navy, approximately 20,000-25,000 were African-American - about 15% - 20% of the US Navy. Nearly all the 600 ships in the US Navy were integrated. African-Americans also saw service in the Confederate Navy, although in far smaller numbers, with estimates being several dozen.



A few African-American sailors in the US Navy were awarded the Medal of Honor, the highest recognition for bravery. John Lawson (pictured right), an African-American sailor onboard the USS *Hartford*, was awarded the Medal of Honor for his actions at the Battle of Mobile Bay. During the battle the *Hartford* fought the ironclad CSS *Tennessee*, and an enemy shell exploded at his cannon crew. Lawson severely wounded in the leg, returned to his station and continued to fight, refusing medical treatment until the badly crippled *Tennessee* surrendered.



Horace King (pictured left), an engineer, architect, and formerly enslaved African American, worked at the Confederate Naval Yard in Columbus GA – and spoke out against secession and voiced his loyalty to the United States or Union. Though free, he was under considerable pressure to use his talents for the Southern war effort. He also had to look after his family: when his sons were about to be drafted into the Confederate Army, he got them jobs at the Navy Yard, so they wouldn't have to fight for the Confederacy.

Critical Thinking Questions:

What would you have done if you were Horace King? What choices did he have in the time and place he lived?

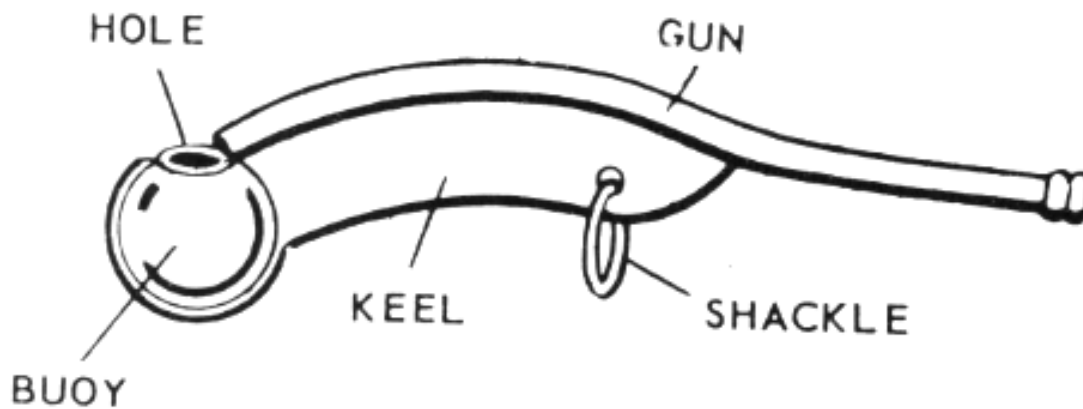
“Now Hear This!”



Communications on board ship were very important. Commands had to be given and recognized so sailors knew what tasks to perform. Orders could be given on a ship in many ways.

A drum could be used when verbal commands could not be heard. There were over 50 distinct drum beats which gave specific commands like dinner, supper, assembly, mail call, church call, battle stations, etc.

Other signal devices used on the ship were the gong, the battle rattle, the bell, and the Bosun's pipe. The Bosun's pipe (pictured below) produced a high, piercing whistle which could be heard even in battle, and was capable of many different tones, each one designating a specific order.



Critical Thinking Questions:

What signal do you have at school that immediately tells you to leave the building?

What else does the bell at school tell you?

On your first visit, locate the gong, the battle rattle, and the bell in the time line exhibit. Find out what ships these came off of.

Make your own drum out of a coffee can or oatmeal container. Create your own signals for your class.

“8 bells and all is well!”

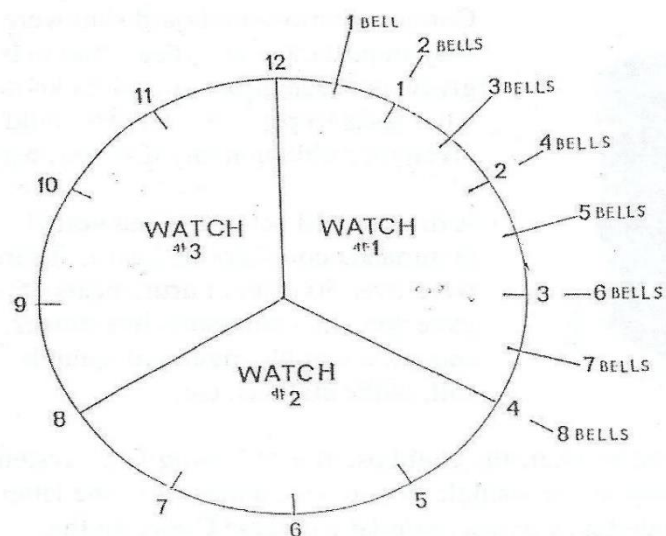


The sailors on board ship lived to a different schedule than people on land. The day was divided into “watches” and sailors would be on duty or off duty for a particular watch. To keep track of time, bells were rung to announce the official ship time.

During a watch it was the duty of one sailor to keep track of time and to sound the bells. He started with one bell for the 1st half hour of his watch, two bells for the 2nd half hour, and continued to a bell as each half hour passed. At 8 bells the watch would be over and a new watch would begin. There are three watches in a twelve-hour period. The bells would chime the same in the last twelve hours of a day as they did in the first twelve hours of the day.

WHAT TIME IS IT?

1. How many bells are rung at 3:00?
2. How many bells are rung at 6:30 am?
3. How many bells are rung at 6:30 pm?
4. How many bells are rung at noon?
5. If you rang 8 bells on the 2nd watch, what time would it be?
6. If you rang 4 bells on the 3rd watch, what time would it be?
7. If you rang 7 bells on the 1st watch, what time would it be?



The Navy in Song



During the Civil War there was no such thing as recorded music, so all music that was made was either played or sung. Sea chanteys, or sea songs, were very popular in the navies of both sides. In the merchant navies, men could sing while they were working, and the beat of the songs helped to give them a pace

to their work. For example, songs with a steady beat would be sung while raising the anchor. Sailors also sang about other things in their life such as alcohol, money, ladies, food, home, and combat.

Below is an example of a popular navy song called “Farewell to Grog”. It was a song about the US Navy halting the “grog” or alcohol ration to the sailors on September of 1862.

<p>Come, messmates, pass the bottle „round Our time is short, remember, For our grog must stop, And our spirits drop, On the first day of September</p> <p><i>For tonight we'll merry, merry be, For tonight we'll merry, merry be, For tonight we'll merry, merry be, Tomorrow we'll be sober.</i></p> <p>Farewell old rye, „tis a sad, sad word But alas! it must be spoken, The ruby cup must be given up, And the demijohn be broken.</p> <p><i>For tonight we'll merry, merry be, For tonight we'll merry, merry be, For tonight we'll merry, merry be, Tomorrow we'll be sober.</i></p> <p>Jack's happy days will be gone soon, To return again, oh never! For they've raised his pay five cents a day, But shopped his grog forever.</p>	<p><i>For tonight we'll merry, merry be, For tonight we'll merry, merry be, For tonight we'll merry, merry be, Tomorrow we'll be sober.</i></p> <p>Yet memory oft' will backward turn, And dwell with fondness partial, On the days when gin and not a sin, Nor cocktails brought courts-martial.</p> <p><i>For tonight we'll merry, merry be, For tonight we'll merry, merry be, For tonight we'll merry, merry be, Tomorrow we'll be sober.</i></p> <p>All hands to splice the main brace, call, But splice it now in sorrow For the spirit-room key will be laid away Forever, on tomorrow.</p> <p><i>For tonight we'll merry, merry be, For tonight we'll merry, merry be, For tonight we'll merry, merry be, Tomorrow we'll be sober.</i></p>
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Using Rope in The Navy

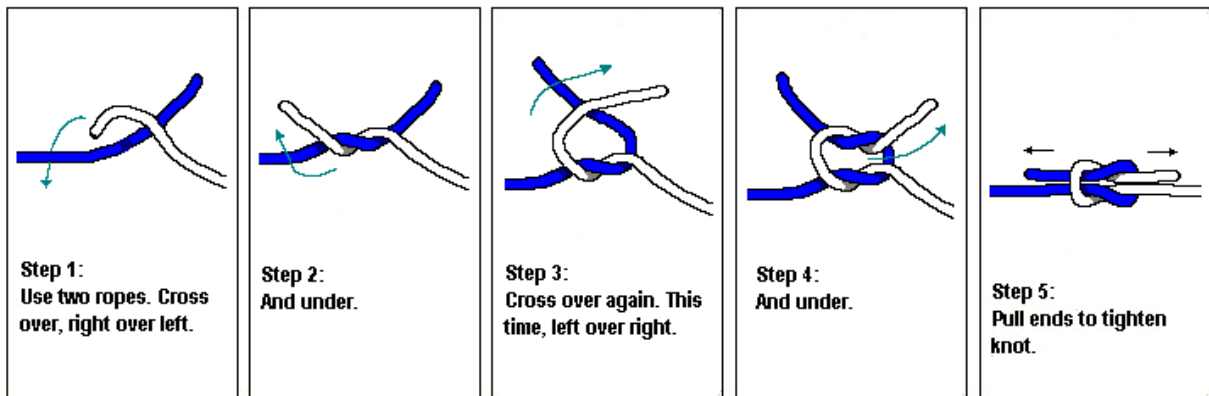
When you visit the Museum, notice all the ropes located in the USS *Hartford* and in the CSS *Albemarle*. Why do you think there is so much rope onboard a ship?

A ship could not operate without rope, and certainly not without knots. Sailors would be use a variety of knots for different purposes and would practice in their spare time with “condemned” rope. They would even make decorative knots to tie their sea bags, sea chests, and other personal equipment.

Sailors used Marlinspikes and Fids to tie and untie knots. These were large wooden spikes used to wedge loose a tight knot. The ability to work line or rope was referred to as “Marlinspike Seamanship”.

So, what exactly is the difference between a line and a rope? Well, rope was the term used for large quantities of line while it was in storage. When the rope was pulled out of storage and put into use, it was called a line.

Reef Knot



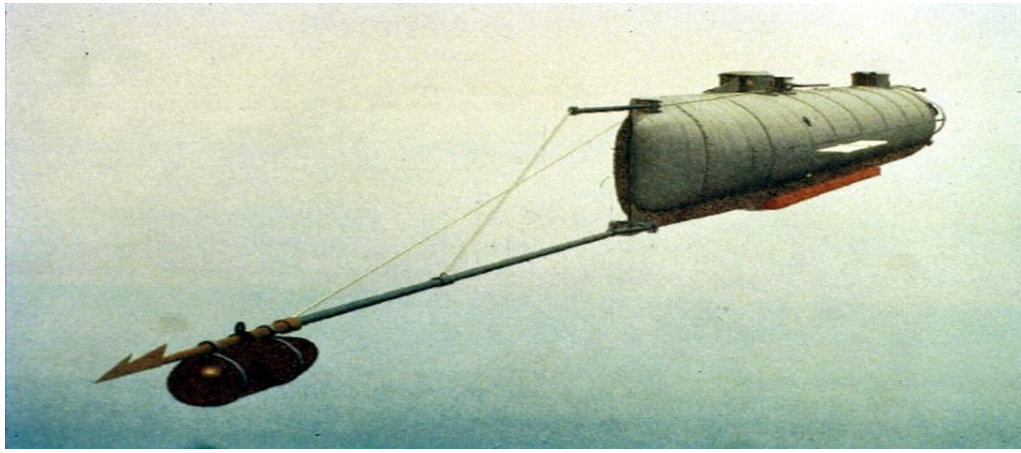
Bowline Knot



New Uses of Technologies in the Civil War

Many technologies saw widespread military use for the first time in the Civil War. While steam engines were not new in 1861, this was the first major war which saw the widespread use of steam engines on ships. Torpedoes, which meant any explosive device used underwater (including what we would call “mines”), were developed, as were torpedo boats and submarines.

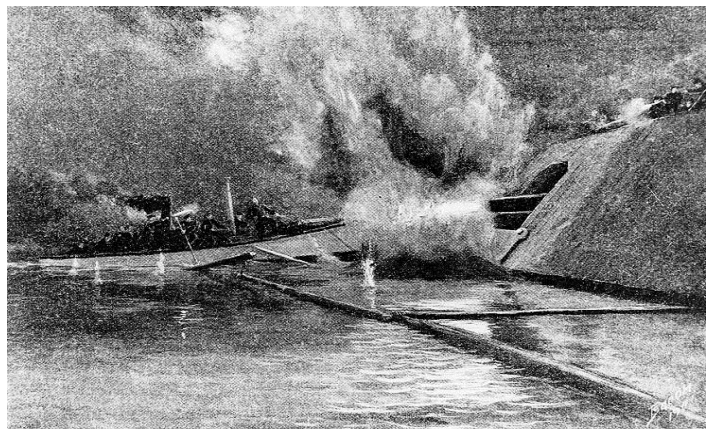
Prior to the Civil War a submarine had never sank an enemy ship. That changed in February 1864 when the Confederate submarine *HL Hunley* sank the USS *Housatonic* at Charleston, South Carolina. The *Hunley*, while successful in her mission, sank with the loss of all hands.



Modern illustration of the *H.L. Hunley*, showing torpedo attached to the bow.

Today we think of torpedoes as self propelled underwater missiles. However, during the Civil War, a torpedo could be an explosive device attached to the end of a spar/pole, like the *Hunley* used, or an explosive device that floated by itself waiting for a ship to bump into/pass over it.

Torpedoes were primarily used by the Confederate Navy, sinking the USS *Cairo* and the USS *Tecumseh* (left). However, the Union sank the CSS *Albemarle* using a torpedo boat (right).



Index of Civil War Navy Resources

Books

A Year on a Monitor and the Destruction of Fort Sumpter – by Alvah F. Hunter, University of South Carolina Press, 1987

Bluejackets: Uniforms of the United States Navy in the Civil War Period, 1852-1865 - by Ron Field, Schiffer Publishing Ltd., 2010

Bridging Deep South Rivers: The Life and Legend of Horace King – by John S. Lupold and Thomas L. French, The University of Georgia Press, 2004

The Confederate Navy: The Ships, Men and Organization, 1861-65 – edited by Dr. William N. Still, Naval Institute Press, 1998

Kedge-Anchor or Young Sailors' Assistant – by William Brady, Dover Publications, 2002 (reprinted from the original published in 1849)

Lincoln's Navy: The Ships, Men and Organization, 1861-65 – by Donald L. Canney, Naval Institute Press, 1998

Navy Gray: Engineering the Confederate Navy on the Chattahoochee and Apalachicola Rivers – by Maxine Turner, Mercer University Press, 1999

Slaves, Sailors, Citizens: African Americans in the Union Navy – by Steven J. Ramold, Northern Illinois University Press, 2002

Internet Resources

National Civil War Naval Museum- <http://www.portcolumbus.org>

Naval History and Heritage Command - <http://www.history.navy.mil>

USS *Monitor* Center - <http://www.marinersmuseum.org/uss-monitor-center/uss-monitor-center>

Friends of the *Hunley* (Submarine) - <http://www.hunley.org>

National Park Service Civil War Soldier and Sailor Database - <http://www.nps.gov/civilwar/soldiers-and-sailors-database.htm>