

Aboard the Intrepid: Life at Sea



Pre-Session Lessons Provided by:



Lesson: How Long is the USS Intrepid?

Grades: 3-8th Grade

Duration: One class period (approximately 45 minutes)

National Learning Standards:

Measurement

NM-MEA.3-5.2, NM-MEA.6-8.2

Apply appropriate techniques, tools, and formulas to define measurements.

Number and Operations

NM-NUM.3-5.3, NM-NUM.6-8.3

Compute fluently and make reasonable estimates

Algebra

NM-ALG.3-5.3, NM-ALG.6-8.3

Use mathematical models to represent and understand quantitative relationships.

Problem Solving

NM-PROB.PK-12.2

Solve problems that arise in mathematics and in other contexts.

Overall Goal:

Students will understand the relative size of the Intrepid's flight deck in comparison to airport runways.

Objectives:

Students will:

- Discover the length of the Intrepid and the length of familiar airport runways*
- Graph the lengths*
- Use mathematical equations to determine the relationship in length of Intrepid and other runways to mile measurement and to each other*

Background Information on Aircraft Carriers:

An aircraft carrier acts as an airport to allow aircraft to launch (take off), be recovered (land) and stored on its 900 foot long decks. An aircraft carrier's flight deck is much shorter than a runway on land, therefore, carriers are equipped with catapults that assist the planes in acquiring enough speed to launch from the flight deck in a quick fashion. To land on a carrier's flight deck, tailhooks located on the back of an aircraft hooked onto arrestor cables which allowed planes to stop quickly, similar to a controlled crash. For storing and maintenance Intrepid was built with a hangar located below the flight deck which could hold up to ½ of its contingent of up to 100 aircraft. Other technologies similar to an airport were housed aboard the Intrepid including radar, air traffic control and an array of communication devices to keep the ship connected with its pilots.

Background Information on World War II:

The Second World War commonly known as World War II, was a global conflict from 1939 to 1945 that was fought between two alliances: the Axis and the Allied powers. While joining together with their alliances, each side participated in a “total war” where both the military and civilians helped the war effort for their particular country. With the assistance of Japan and Italy, the country of Germany formed the Axis powers and began military operations in Europe with the invasion of Poland and within a year proceeding to France in 1940. Along with their military ally, Japan began operations in China and started to invade smaller islands through out the Pacific, attacking the United States naval base in Pearl Harbor on December 7, 1941. After this attack the United States joined Great Britain and the Soviet Union to form the Allied powers helping in Europe against Germany and in Asia against the Japanese military.

In 1944 the Allied forces participated in the invasion of Europe known as D-Day in Normandy, France. Due to their success, Germany began fighting a two front war with the Allies who attacked from both the East and the West. Following years of conflict, Germany and Italy both lost key battles and surrendered to the Allies leaving Japan by itself to fight the rest of the way. Later that year in 1944 the United States along with its Navy began “island-hopping” Japanese strong holds getting closer to the island of Japan each step of the way. With tactics like kamikaze attacks the Japanese military held out from U.S. attacks until 1945 when the United States dropped the first of two nuclear bombs on a Japanese town called Hiroshima and later on Nagasaki. After devastating losses the Empire of Japan surrendered to the United States in September of 1945.

Note: This lesson should be conducted first.

Materials Teacher to provide:

Pencils

Crayons

Materials Package from Intrepid:

Pictures of USS Intrepid

Work Book Pages 1 and 2

Procedure:

- Teacher will introduce the students to the USS Intrepid by handing out pictures of the ship.
 - Trigger questions:
 - *What kind of ship is the Intrepid?*
 - *How big do you think it is?*
 - *What is its function?*
 - *What do you think happens on the flight deck?*
 - *Where else do aircraft take off and land?*
- Teacher will ask students to think about different airports that they know of in the United States. Some examples are given to you on a supplemental page with this packet.
 - Trigger questions:
 - *Are there any airports near us?*
 - *Where are they?*
 - *How do you think the lengths of their runways compare to the length of the Intrepid?*
- Students will take out their graph paper and pencils to graph the length of Intrepid compared to runways at major airports in the United States. If desired, the students can research airports in nearby areas. Students will use bar graphs to show their results and include a legend on the side of their paper.

- The y-coordinate will show the increment lines for each 1000 feet. Increment lines are supplied on the worksheet and have been started for the students. Students will continue to fill in the rest.
- Teachers will provide students with a list of airport runways and the longest runway lengths by writing them on the board or allowing the students to pick from a list you provide. Use the suggestions in this lesson plan or find your own airport runway lengths.
 - Some suggestions for Airport Runways to research can be seen below.

Airport Runway Lengths

Name	Longest Runway*
Denver International Airport, Colorado	16,000 feet
George Bush International Airport, Texas	12,001 feet
John F. Kennedy International Airport, New York	14,572 feet
Laguardia Airport, New York	7003 feet
Lambert-St. Louis International Airport, Missouri	11,019 feet
Los Angeles International Airport, California	12,091 feet
Minneapolis-St. Paul International Airport, Minnesota	11,000 feet
O'Hare International Airport, Illinois	11,900 feet
Palm Beach International Airport, Florida	10,008 feet
Philadelphia International Airport, Pennsylvania	10,506 feet
Phoenix-Sky Harbor International Airport, Arizona	11,489 feet
Raleigh-Durham International Airport, North Carolina	10,000 feet
Seattle-Tacoma International Airport	11,900 feet

*Source: www.wikipedia.com

- On the x-coordinate, students will write the Intrepid and the names of the three (3) airports. Lines beneath the x-coordinate are provided for the students to write the names of the airports.
- Once the bar graphs are filled in, the students will interpret their results and hypothesize why airport runways are long while Intrepid's flight deck is short. They will be required to answer the questions below.

Lesson: Living on Intrepid

Grades: 4-8

Duration: 1 class period

National Learning Standards:

Social Studies

NSS-USH.K-4.1

*Understands family life now and in the past, and family life in various places long ago
Understands the history of the local community and how communities in North America varied long ago*

NSS-USH.5-12.8

Understands the causes and course of WWII, the character of the war at home and abroad, and its reshaping of the US role in world affairs

Overall Goal:

Students will discover the way that men lived on the Intrepid during WWII and recognize the similarities and differences between themselves and the sailors.

Objectives:

Students will:

- Brainstorm what their personal essential items are*
- Determine from their list if these essential items would be the same as the sailors*
- Draw or write these essential items on the worksheet provided titled “Living on Intrepid!”*
- Determine which if any of their items would have been available during the 1940’s*
- Discuss cultural differences between the 1940’s and present day*

Background Information:

Men who lived aboard the Intrepid did not have a lot of room to keep personal items. The average sailor kept his uniforms, work clothes and personal items in a three-man locker. All clothes were Navy issued, so essentially crew members only had small drawers in side their locker where they could keep their personal items. According to former crew members that we interviewed, this was limited to smaller items such as shaving kit, pencil, paper, wallet, photographs, letters, etc. Because of the limited amount of room on a Navy ship, even an aircraft carrier, space had to be maximized, hence using vertical space for suspended beds or “racks” and lockers.

The pictures below give one a good sense of what the living areas of a ship would look like for the average sailor.



Materials:

Giant post-it notes or tag board

Markers

Worksheet: "Living on Intrepid!"

Procedure:

- Teachers will break students up into groups or pairs.
- Students should brainstorm some of the items they would consider to be essential in their lives and write these down on their post-it notes/tag board. If it helps the students to conceptualize their list, they can first write down things they do during the day first and then decide what items they would need to complete those tasks. Example: they need a toothbrush and tooth paste to brush their teeth.
- Teachers will bring students back together to share ideas and write these ideas on the board.
- Teachers will introduce the three-man locker and ask students what, if anything from their lists would be able to fit into the drawers. Some may list i-pod or hand held gaming devices.
- Students can either write or draw these items into the space provided on the three-man locker worksheet.
- For an extension lesson or discussion, teachers can discuss with students what items on their list were available during the 1940's and discuss how people lived without the items that we find so necessary today.

Glossary

Amenity: A thing or circumstance that is welcome and makes life a little easier or more pleasant; convenience

Berthing: an enclosed room generally on a ship or an aircraft

Chapel: A place of worship in a civil institution such as an aircraft carrier

Crew: the men who man a vehicle or a ship: seafarers

Enlisted: in the Military of the United States this is any rank below a commissioned officer or warrant officer.

Essential: basic and fundamental, absolutely necessary.

Liberty Card: Card that is used for identifying sailors that are part of a ship's crew when they are off ship for R&R (Rest and Relaxation).

Mess: On a ship, this area is what is used for a main eating area for crew members.

Quarters: area on a ship designated for people to live in

Racks: literally, a framework for holding objects. On the Intrepid they were suspended bunks where enlisted men slept.

Sick Bay: On a ship, this area is the equivalent of a hospital or where people go when sick or wounded to be brought back to health.

Three-man locker: a storage compartment for clothes and valuables that are stacked one on top of the other totaling three. One locker was assigned to each enlisted man.

Lesson: Alex Vraciu WWII Ace Pilot

Grade: 4-8

Duration: 1 class period

Standards:

- Understands the history of the local community and how communities in North America varied long ago*
- Understands the causes and course of WWII, the character of the war at home and abroad, and its reshaping of the US role in world affairs*

Essential Questions: Who was Alex Vraciu and what role did he play on the Intrepid in WWII?

Objectives:

- Students will be able to learn about Alex Vraciu, a WWII American flying ace.
- Students will be able to discover what Alex did on the Intrepid when he was not flying planes

Materials: “Alex” graphic organizer, background info about Alex, historic pictures

Procedure:

- Explain that sailors would not only work aboard this ship but live there too.
- Describe the Intrepid as a “community”, similar to their own community.
- Hand each group a page of historic pictures and ask them to analyze the photographs.

Trigger Questions:

- What sports do you think they played?
- What do you think they are reading?
- What do you think the naval aviators are learning?
- Who do you think the men are writing to?
- Why do you think Alex is smiling in this picture?

Background Information:

Alexander Vraciu (born November 2, 1918) was a leading United States Navy fighter ace and Congressional Medal of Honor nominee during World War II.

Born of Romanian immigrant parents in East Chicago, Indiana, Vraciu lived briefly in Romania as a child. He graduated from DePauw University in 1941 and enlisted in the Navy that June. He was commissioned a naval aviator in August 1942, and at the end of March 1943, as a Naval

Reserve Ensign, he joined Fighting Squadron Six under Lieutenant Commander Edward O'Hare, the navy's first ace of WW II. Butch O'Hare made Ensign Vraciu his wingman, and taught him everything he knew.

Vraciu entered combat in October 1943, flying from USS Independence (CVL-22) with Butch O'Hare as commander of Fighting Six. Vraciu scored his first victory during a strike against Wake Island on October 10, 1943. Alex Vraciu was O'Hare's wingman - both scored that day. When they came across an enemy formation O'Hare took the outside airplane and Vraciu took the inside plane. O'Hare went below the clouds to get a Japanese Mitsubishi Zero and Vraciu lost him, so he kept an eye on a second Zero that went to Wake Island and landed. Vraciu strafed the Zero on the ground, then saw a Mitsubishi G4M Betty bomber and shot it down. Alex Vraciu later told, "O'Hare taught many of the squadron members little things that would later save their lives. One example was to swivel your neck before starting a strafing run to make sure enemy fighters were not on your tail." Vraciu also learned from O'Hare the "highside pass" used for attacking the Japanese Mitsubishi Betty bombers. The highside technique was used to avoid the fatal 20-mm fire of the Betty's tail gunner.

The squadron later embarked aboard USS Intrepid (CV-11). Flying from "Evil I", Vraciu began scoring in multiples: three Mitsubishi G4M Bettys on January 29, 1944 and four fighters downed at Truk Atoll on February 17. With nine victories, he remained VF-6's leading ace throughout the war.

Rather than rotate home, Vraciu requested additional combat duty and joined VF-16 in USS Lexington (CV-16). By mid June he had run his score to 12 "kills", a record for carrier aviators at the time.



Lt. Vraciu signals six "Judy" kills (June 19, 1944).

Vraciu's greatest day in combat occurred during the First Battle of the Philippine Sea, the "Great Marianas Turkey Shoot" on June 19. Despite a malfunctioning supercharger, he intercepted a formation of Japanese dive bombers and "splashed" six in a period of eight minutes. When he landed, the Lexington's ordnancemen discovered that he had used a total of only 360 rounds of ammunition, which works out to less than a five-second burst per "kill."^[1] The next day, escorting bombers in an attack on the Japanese Mobile Fleet, he downed his 19th victim, making him the #1 Navy Ace by a considerable margin (a position he would hold for four months).

For his actions at the First Battle of the Philippine Sea Vraciu was nominated for the Congressional Medal of Honor. This nomination was approved all the way up the chain of command until reaching the desk of Admiral Murray at Navy Headquarters in Hawaii. Murray downgraded the nomination to a Navy Cross (which was awarded) using incomplete data.

Upon return the U.S., Vraciu was assigned to war bond sales, married his sweetheart Kathryn Horn, and wrangled a return to the Pacific. Joining VF-20, he flew only two missions before his Grumman Hellcat was shot down by anti-aircraft fire over the Philippines in December. He was picked up by a guerrilla band and returned to safety six weeks later as the leader of the group. He ended the war as the Navy's fourth-ranking ace.

Subsequently Vraciu became a test pilot and was instrumental in forming the postwar Naval Air Reserve program. Commander Vraciu led VF-51 from 1956 to 1958, winning the Navy's individual gunnery championship in 1957. He retired in 1964 to begin a career in banking.

As of November 2008 Alex Vraciu is retired in Danville, California, the father of three daughters, two sons, and several grandchildren. He continues to be active on the lecture circuit and is a very popular speaker. He made an appearance in a January 2007 episode of the History Channel's "DOGFIGHTS" TV Series titled "The Zero Killer."

Independent Practice:

Activity #1:

- Students will work on their picture webs to reinforce what Alex did during his day.

Activity #2:

- Students will write a letter pretending they are Alex, writing home to his best friend about his experiences on Intrepid. Date the letter February 18, 1944.

Closure: Share your graphic organizer or your letter with the class.



Picture Index



Intrepid Crew members playing basketball

Facts about free time:

- The crew members of the USS Intrepid participated in many different activities:
 - Basketball teams
 - Baseball teams
 - Volley ball teams
 - Swimming
 - Bands
 - Religious services

- Intrepid Ice cream shop/concession
- Famous visitors (such as Mickey Rooney, Pete Rose and Joe DiMaggio have been on board Intrepid

Points to talk about with the students:

- USO (United Service Organizations) shows- the original intent of Congress (and enduring style of USO delivery) is to represent the American people by extending a touch of home to the military.



Facts about Mail Service:

- Mailroom

Points to talk about with students:

- Today military personnel have the same luxuries as we do when it comes to keeping in touch with loved ones. They as we do have access to using e-mail which keeps down the wondering and anxiety associated with being away from a loved one for long periods of time



Naval Aviator Ready Room

Facts about the Naval Aviators:

- Air Group Commanders had the responsibility of leading, instructing and inspiring their men
- Experienced naval aviators were able to become Landing Signal Officers (LSO's)- those men who directed airplanes to land on the flight deck
-

Points to talk about with the students:

- Gender issues
 - Only men served aboard the Intrepid
 - Women were integrated with the regular Navy service in 1976- two years after the Intrepid was taken out of service
 - There are still two parts of Navy service that women are not permitted to take part in: Navy Seals and Submarine
- Life-long learning:
 - Naval Aviators had to do their “homework” to learn about newest tactical maneuvers
 - Needed to go into ready rooms to learn how to execute their assignments affectively



Berthing and Communication

- Sailors aboard the Intrepid were allowed to write to family members while they served to protect the U.S.
- Many sailors lived in small areas with up to 20 people at a time.
- On average sailors spend approximately 10 months aboard before having leave time off from the ship.
- There were over 3,000 people who lived on the Intrepid at one time.



Naval Aviator Alexander Vraciu

Facts about Naval Aviation:

- All ship's activities are directed to the end that the pilots be enabled to function effectively
- If it were not for the naval aviators flying the planes off the flight deck, an aircraft carrier would simply carry aircraft rather than being a functioning airport on the sea

Facts about Alexander Vraciu:

- Born in East Chicago, Indiana, Mr. Vraciu was a leading U.S. Navy fighter ace during World War II
- A flying ace or fighter ace is a military aviator credited with shooting down five or more enemy aircraft during aerial combat
- Mr. Vraciu had become a WWII flying ace before joining the Intrepid's crew in January, 1944 (when the Intrepid first saw action in the Pacific at the Marshall Islands)
- Mr. Vraciu helped in the raid on Kwajalein and there shot down three Mitsubishi G4M's on January 29th and then shot down four fighters on February 17th
- Interestingly, it was on February 17, 1944 that Intrepid was struck by an aerial torpedo. With several flooded compartments and a rudder jammed hard to port, Intrepid needed to head back to Pearl Harbor for repairs
- It seems that once Intrepid was damaged and went to Pearl, that he left and did not return to Intrepid
- During his service in WWII Mr. Vraciu shot down a total of 19 enemy aircraft during aerial combat