



**PART V
NLCC PETTY OFFICER FIRST CLASS**

OBJECTIVE: PREPARING FOR THE FUTURE

- 1. Navy Traditions and Heroes – 1950 to 1990**
- 2. Navy Traditions and Heroes – Astronauts and the Space Program**
- 3. Advanced Leadership – The 10 Commandments of Leadership**
- 4. Compasses and Bearings**
- 5. Service to the Community**
- 6. Nautical Charts and Piloting**
- 7. Morse Code/Phonetic alphabet**
- 8. Signal Flags, Pennants and Semaphore**
- 9. First Aid – Swimmer Rescue**
- 10. Navy Career Opportunities, Setting Goals**

“NAUTILUS”, the first nuclear submarine, was first put to sea 17 January 1955. Under Commander Eugene P. Wilkinson, the “NAUTILUS” transmitted the historic signal, “Underway on nuclear power”.

On its shakedown cruise in May 1955, the “NAUTILUS” steamed submerged from New London, Connecticut, to San Juan, Puerto Rico. It traveled over 1300 miles in 84 hours – a distance ten times greater than the record for continuously submerged travel by any previous submarine.

After more than two years of operation and evaluation, the “NAUTILUS” was refueled in April 1957. On its first nuclear core, it steamed a total of 62,562 miles. It made more than half of that cruise while totally submerged. A conventionally powered submarine the size of the “NAUTILUS” would have required over two million gallons of fuel to duplicate that feat. A train of tank cars over a mile and a half long would have been necessary to transport that amount of fuel.

On 12 August 1958, the “NAUTILUS” completed a history making trans-polar voyage from Pearl Harbor, Hawaii to Portland, England. After diving under the ice near Point Barrow, Alaska on 1 August 1958, it became the first submarine to reach the geographic North Pole.

Nuclear submarines produced after the “NAUTILUS” continued to pioneer new areas of submarine operations. “USS SEAWOLF”, the Navy’s second nuclear powered submarine, operated as an active unit of the Atlantic Fleet. On 6 October 1958, it completed a record breaking 60 day run, traveling a distance of 13,761 miles submerged.

While the “NAUTILUS” was still undergoing operational testing, the Navy began development of a ballistic missile of intermediate range. Brought from conception to initial operation in five years’ time, the Polaris Fleet Ballistic Missile (FBM) weapons system was mated with nuclear propulsion. That development produced a virtually invulnerable missile-firing submarine. Today the missile firing submarine constitutes one of the highest priority elements of the United States deterrent capability – that is a deterrent to nuclear conflict.

Each Polaris submarine could launch 16 two-stage ballistic missiles powered by solid fuel rocket motors with a self-contained inertial guidance system. The Polaris provided a combined explosive power greater than the total of all the bombs dropped by all aircraft during World War II. Nuclear propulsion enabled these Polaris submarines to remain on patrol for extended periods, hidden beneath the surface of the sea, ready to launch their missiles.

On station, a Polaris submarine maintained complete radio silence, receiving radio messages while submerged but not transmitting to prevent giving away its location. Each ship had two complete crews, the Blue and the Gold, of about 130 men each. The Polaris operated on a system that reflected a major change in the Navy’s traditional ship-manning methods. The crews alternated on approximately three month long deployments, providing maximum on-station time for the submarine. Its endurance was limited only by the limitations of its personnel.

Submarines were followed by the world’s first nuclear powered surface warships. They were the guided missile cruiser “USS BAINBRIDGE”, launched at Long Beach, California and commissioned 9 September 1961, and the carrier “USS ENTERPRISE” commissioned 25 November 1961. On 3 October 1964 those ships ended Operation Sea Orbit, a 64 day long, around the world, unreplenished cruise.

In another area, space exploration, the Vanguard with a 3 ½ pound payload was developed by the Naval research laboratory. On 17 March 1958 it was placed into orbit to test a system designed to launch earth satellites during the International Geophysical Year (IGY). Now the oldest man-made satellite in orbit, it is expected to remain aloft for 2,000 years.

Naval officers also participated in space exploration. On 5 May 1961 Commander Alan B. Shepard, Jr. made America's first suborbital flight. The 15 minute shot in Freedom 7 went 116.5 miles into space.

VIETNAM

Although the United States was at peace following the Korean War, events were building that would plunge the country into another conflict. Since 1959 the French had been involved in fighting in a country most Americans had never heard of, Vietnam.

Vietnam became known to Americans in 1965. That is the year the United States entered the Vietnam War. That war, which caused conflict at home as well as on the battlefield, lasted until January 1973.

The Navy's operations in support of South Vietnam's struggle against communist military aggression consisted mainly of gunfire support and carrier aircraft operations. These operations included coastal interdiction patrols against North Vietnamese ships moving troops and supplies to the south. They also included riverine operations by a swarm of various types of patrol craft in the maze of waterways in South Vietnam's delta area. By early 1972 all boats and the responsibility for delta operations had been turned over to the South Vietnamese Navy. Naval Construction battalions (Seabees) built several military bases and constructed water and sanitary facilities for local communities. Often, as in World War II, they engaged in fighting as they worked. Navy medical personnel served in the field with Marine Corps and Seabee units, as they did in World War II and in the Korean War. They often performed their duties under fire and many times sacrificed themselves to protect their charges from further harm.

As in previous wars, U.S. Navy service and amphibious forces transported over 90 percent of the personnel and supplies used in support of that conflict.

During the Vietnam era, five new attack carriers joined the fleet, including the world's first nuclear powered carrier "ENTERPRISE" (CVN-65).

Vietnam was a different kind of war, a war in which the Navy's role was ever-changing. The Broncos, propeller driven Skyraders, attack planes like A-4 Skyhawks and A-7 Corsairs and fighter planes like F-8 Crusaders were used as various support aircraft for ASW, early warning and advance communication links.

Even during the Vietnam War, the Navy was involved in exploration and development. Former Navy pilot Neil Armstrong became the first man to set foot on the moon on 20 July 1969. On 14 November 1969, the all Navy Apollo 12 crew lifted off from the Kennedy Space Center on the second lunar expedition. The crew consisted of Commanders Charles Conrad and Richard Gordon and Lieutenant Commander Alan Bean. Another all Navy crew, Captain Charles Conrad, Jr., and Commanders Joseph P. Kerwin and Paul J. Wietz, splashed down on the first Skylab mission on 22 June 1973. The crew set numerous records and accomplished virtually all of its objectives.

The Navy stands tall in the first ten years of manned space exploration. Records show that five of the six men to walk on the surface of the moon during that time had formerly been trained as naval aviators.

In the past several years, Navy scientific endeavors have occurred in yet another element under the sea. The “ALVIN”, the Navy’s first deep diving vehicle, was successfully tested at 6,000 foot depths on 20 July 1965. The next month, ten aquanauts, including astronaut Commander M. Scott Carpenter, entered the Sealab II capsule 205 feet below the surface of the sea off the coast of LaJolla, California. Carpenter remained under water for 30 days in a successful experiment of submerged living and working conditions. On 25 January 1969 the first nuclear powered, deep submergence research and ocean engineering vehicle NR-1, was launched. The five man vessel can operate for weeks at a time at great depths.

On 19 July 1974 construction of the new Trident undersea nuclear weapons system commenced. The trident system consists of three principal elements: a nuclear powered fleet ballistic missile submarine (SSBN), a strategic weapons system (the missile) and an integrated logistics support system. The first Trident submarine. “USS OHIO” was delivered to the Navy in 1981. Since then, the Navy has accepted delivery of ten more Trident submarines.

U.S. Navy ships continued to change with even greater momentum, ushering in another new era, that of nuclear propulsion, jet power, rockets and guided missiles. Along with those types of ships which had proven themselves in the past have emerged ship categories such as guided missile cruisers, tactical command ships and helicopter flat tops. The era of the 50’s 60’s, 70’s, 80’s and on into the 90’s has seen the emergence of the nuclear Navy.

THE PERSIAN GULF AND BEYOND

As with other wars, conflicts of areas of military aggression, U.S. naval forces operate in the hostile area of the Persian Gulf. U.S. naval forces have been present in this vital oil-rich region for many years.

The events leading to an increased number of U.S. naval units in the Persian Gulf began in the mid 1980’s. Iran and Iraq were at war. Iraq had begun attacking Iranian oil facilities and tankers. In response, Iran began attacks against ships flying flags of countries sympathetic to Iraq. U.S. Navy ships quickly began escort and protection operations for U.S. flagged tankers.

As the war between Iran and Iraq widened, so did the dangers to U.S. Navy ships operating in the Gulf. Iran started laying mines in the gulf and began using small suicide boats to raid U.S. Tankers and naval units. Iraq also possessed weapons that could cause tremendous damage and casualties. These weapons proved costly to the United States in May 1987. An Iraqi aircraft mistakenly fired two missiles that struck “USS STARK” (FFG-31). Until that time the U.S. Navy’s presence was largely defensive. When forced to take offensive action, the United States acted quickly. U.S. Navy ships bombarded an Iranian oil platform being used as a command post and sank a mine-laying vessel carrying out operations.

After the war between Iran and Iraq ended in 1989, our naval presence decreased until August 1990. At that time Iraq invaded Kuwait and began taking U.S. citizens hostage. The rapid increase in naval units began and resulted in the largest number of U.S. Navy ships deployed to one area since Vietnam.

SUGGESTED EXTENDED LEARNING/HANDS ON TRAINING
PART V LESSON 1
NAVY TRADITIONS AND HEROES – 1950 TO 1990

1. Develop a time line for this period listing events and technological advances.
2. Have cadets choose one major event or important person and do further research. Cadets could then use the information to role play present events, write a report, a shout play or set up a news interview of the people who helped lead the nation at this time.
3. Obtain a video featuring the Seabees.
4. Ask local recruiters if they would loan any films or videos covering this time in history.
5. .
6. .
7. .
8. .
9. .
10. .

NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 1 QUESTIONS
Navy 1950 – 1990

1. On 29 June 1950, which of the following ships fired the first bombardment of the Korean War?
 - a. USS JUNEAU
 - b. USS MISSOURI
 - c. USS DEHAVEN
 - d. Both A & B
 - e. Both A & C
2. Helicopters were first studied and developed during _____.
 - a. WWI
 - b. WWII
 - c. Korean War
 - d. None of the above
3. During the Koran War a program was established giving outstanding enlisted women the opportunity to receive commissions in the regular Navy.
 - a. true
 - b. false
4. The first nuclear submarine went to sea under the command of Commander Eugene P. Wilkinson on _____.
 - a. 17 Jan 1955
 - b. 26 May 1955
 - c. 10 Feb 1947
 - d. 26 May 1955
5. The first nuclear submarine to reach the geographic North Pole was _____.
 - a. SEAWOLF
 - b. NAUTILUS
 - c. OHIO
 - d. LANGLEY
6. The Polaris submarine provided a combined explosive power greater than the total of all the bombs dropped by all aircraft in WWII.
 - a. true
 - b. false
7. The USS ENTERPRISE (GVN-65) was the first nuclear powered surface warship commissioned by the U.S.
 - a. true
 - b. false
8. America's first suborbital flight was made by which of the following naval officers?
 - a. Alan Shepard
 - b. Charles Conrad
 - c. Charles "Chuck" Yeager
 - d. John Glenn
9. Naval operations in Vietnam consisted mainly of gunfire support and carrier aircraft operations.
 - a. true
 - b. false
10. During Vietnam, U.S. Navy service and amphibious forces transported over _____.
 - a. 80% of personnel & supplies used
 - b. 85% of personnel & supplies used
 - c. 90% of personnel & supplies used
 - d. 95% of personnel & supplies used
11. The VANGUARD was developed by the Naval Research Laboratory.
 - a. true
 - b. false
12. The first man to set foot on the moon was Air Force Pilot Neil Armstrong.
 - a. true
 - b. false
13. All crew members of the Apollo 12 mission were from which branch of the service?
 - a. Marine Corps
 - b. Air Force
 - c. Navy
 - d. None of the Above
14. Five of the six men to walk on the surface of the moon in the period of 1969 to 1979 were Naval Aviators.
 - a. true
 - b. false
15. The first U.S. Trident submarine was _____.
 - a. USS OHIO
 - b. USS LOS ANGELES
 - c. USS SAN FRANCISCO
 - d. USS TENNESSEE

weighing him down, along with his space suit. Finally, one helicopter got the capsule Liberty Bell 7 and another got him. The weight of the water in the capsule made it too heavy and it had to be cut loose. Next, Captain Grissom went to work in the Gemini program and was chosen to be one of the two pilots on the first Gemini launch. 23 March 1965 Grissom and John Young lifted off in Gemini 3, nicknamed "Molly Brown" for the musical The Unsinkable Molly Brown. The flight was near perfect. Only with splashdown did a problem arise and Molly Brown almost sank. On 27 January 1967 Gus Grissom and two other astronauts, Ed White and Roger Chaffee were undergoing a routine test which was to be the first Apollo manned flight. They were in the space craft and fire suddenly engulfed them. There was no escape and they died in minutes.

JOHN H. GLENN: The first man to orbit the earth began his pilot training in the Naval Aviation Cadet program and was commissioned in the Marine Corps one year later. History was made 20 February 1962 when Lt.Col. Glenn orbited the earth three times in 4 hours and 56 minutes from lift-off to touchdown at speeds averaging 17,500 miles per hour. Astronaut Glenn is now a U.S. Senator from Ohio serving in Washington, D.C.

MALCOM "SCOTT" CARPENTER: Navy Lieutenant Carpenter was the fourth man up in space in the Aurora 7 on 24 May 1962. Lieutenant Carpenter's flight had several errors in his judgment and equipment. He had used a manual system to allow him to turn around and take photographs from different angles during the orbiting, but he had forgotten to switch off the automatic controls and he lost fuel by leaving them both on. There was concern at ground control about the loss of the fuel. When time came to retrofire another error was made and in the end he landed 250 miles beyond where he should have. That made him out of range for the communications system and so there was a period of tension until the patrol plane spotted him.

WALTER "WALLY" SCHIRRA: The fifth flight was made by Navy Commander Schirra on 3 October 1962 aboard the Sigma 7. This flight was a six orbit flawless flight that landed five miles from his target, the carrier "KEARSARGE". This was the first flight that landed in the Pacific Ocean.

The objective of NASA Mercury projects was to get men into space. Next came the Gemini project whose mission was to answer the questions necessary to put a man on the moon. Not only did more than one astronaut go up but they stayed for extended time in space and little problems, like food and sanitary conditions, had to be addressed. Men also had to learn how to maneuver in those large space suits and changes had to be made. The original seven astronauts, plus two more groups of nine in September 1962, and fourteen more in October 1963 were chosen. The third project was the most famous. The Apollo project put men on the moon.

Apollo 7 was the first manned mission after the accident that killed Gus Grissom and the other astronauts. It lasted 11 days and was highly successful. The most famous Apollo mission 16-24 July 1969 was Apollo 11 when Neil Armstrong and Buzz Aldren became the first men on the moon. Mike Collins was the command pilot in the orbiter. The next most notable flight was Apollo 13 when after being launched on 11 April 1970, Jim Lovell, Fred Haise and Jack Swigert were making a routine flight until they heard a bang and a warning light came on in the command module. They moved into the lunar module Aquarius and began to complete their journey to the moon, then go around completely circling the moon and hopefully return. They made it by living in the lunar module and only returning to the dead command module for re-entry. The last Apollo mission was 17 with Navy Captain Eugene Cernan, Navy commander Ronald Evans and Harrison Schmitt aboard. The last flight was 7 December 1972 and the longest of all the missions. Now the space program was ready to establish a base in space.

Skylab was the next project for NASA. On 14 May 1973 the Skylab was launched. It was in trouble from the start but the crew of astronauts were able to do a temporary fix on it. Mission Commander was Pete Conrad and the two pilots were Paul Weitz and Joseph Kerwin. They spent 28 days and 58 minutes in space. The next crew to go up spent 59 days in Skylab and the third and final crew spent 12 weeks in space. After the mission it was left to orbit for five more years to then fall out of the sky and land in an uninhabited ocean or Australian desert. Among the nine astronauts were several Navy Commanders and one naval medical officer.

Next in the space program came the joint mission with the Soviet Union. The Apollo-Soyuz link-up was a culmination of three years work.

The next phase in space exploration was the shuttle (Fig. V-1-1). It was the first spacecraft designed by the U.S. to land on land, not in the ocean. It was also designed to be used more than one time. The most famous shuttle was the Challenger. On 28 January 1986 the Space Shuttle Challenger blew up minutes after take off. The first teacher in space was on board and it set the space industry back for many years.

A civilian, Sally Ride, was the first woman in space for the U.S. when in June of 1983 she was a member of the crew. When space travel first began it was only in the hands of the military. The Navy had many astronauts and was among the first trail blazers. The National Aeronautics and Space Administration was established because both the Navy and the Army wanted to control the space industry.

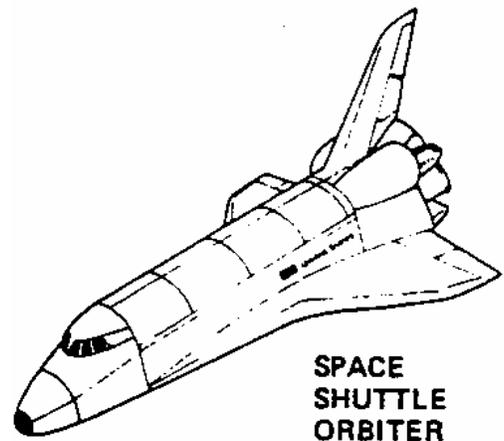


Fig. V-1-1

The Navy provided many pilots and other personnel to support the space industry. The ships of the Navy picked up and returned the first astronauts because of the water landings and the pilots were fearless men who served their country well.

SUGGESTED EXTENDED LEARNING/HANDS ON TRAINING
PART V LESSON 2
ASTRONAUTS AND THE SPACE PROGRAM

1. Schedule a unit visit to a NASA facility. They have museums and guides to explain the displays.
2. Use instructor's room at a nearby NASA facility. They will make videos of former flights, have pictures about space subjects, and have lesson plans of related subjects.
3. Research astronauts – what are they doing today.
4. Make a space shuttle model.
5. Obtain video depicting early space program.
6. Contact your library or local schools. Many of them have excellent films on the astronauts and the space shuttle program.
7. Write to NASA and ask for materials, pictures of the astronauts and information about becoming an astronaut.
8. .
9. .
10. .

**NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 2 QUESTIONS
ASTRONAUTS AND THE SPACE PROGRAM**

1. What was the name of the Soviet satellite that launched the U.S. into the space race?
 - a. Skylab
 - b. Sputnik 1
 - c. Spacelab
 - d. Vanguard
2. Of the seven original astronauts, how many were Navy officers?
 - a. 7
 - b. 4
 - c. 3
 - d. 0
3. The first U.S. astronaut to go up in space was:
 - a. Wally Schirra
 - b. John Glenn
 - c. Alan Shepard
 - d. Scott Carpenter
4. Who was the first Astronaut to orbit the earth?
 - a. Wally Schirra
 - b. John Glenn
 - c. Alan Shepard
 - d. Scott Carpenter
5. The first space missions were called the :
 - a. Apollo projects
 - b. Skylab
 - c. Shuttle
 - d. Mercury projects
6. What Apollo project put a man on the moon?
 - a. Apollo 1
 - b. Apollo 7
 - c. Apollo 11
 - d. Apollo 13
7. The first space station was called _____.
 - a. The Molly Brown
 - b. Skylab
 - c. Spacelab
 - d. Kearsarge
8. The Soviet Union and the United States never worked on a joint space mission.
 - a. true
 - b. false
9. The space shuttle was designed to _____.
 - a. make more than one trip into space
 - b. not land in the ocean
 - c. none of the above
 - d. all of the above
10. The first woman in space was Sally Ride. She was from which branch of the military
 - a. Navy
 - b. Air Force
 - c. Marines
 - d. None of the above

Are there any other examples that you can give me? (give cadets a chance to suggest other examples).

ESTABLISH GOALS

During your time as Petty Officer, steer a clearly defined course, make all unit members aware of division goals and how important their individual contributions are toward the achievement of those goals.

Once you have established a goal and had it approved by your unit officers, tell the unit and make a plan for achieving it. Perhaps attendance has been a problem and your goal for attendance is 80% for a year. Try displaying a graph plotting the attendance for each month. Let cadets know when they reach it, go over it or go under it. Establishing goals, setting a plan and then plotting the success of the goals contribute to the welfare of the unit.

MANAGE TIME

Do not let time manage you. Dedicate time to important tasks and leave some slack time in your schedule to handle the unexpected. Clearly establish priorities and allow time to address routine matters so that little management time will be required. Plan for emergencies. Delegate tasks to the lowest appropriate level of the unit.

One of the best ways to manage time is to make sure everyone knows their job. As a Petty Officer you must be able to delegate authority. This will free you to do your duties and still have time for the unexpected. The Plan of the Day is the most valuable tool for anybody who has to work with time. An example is scheduling people for showers and coming and going to the chow hall. Can you think of any others? (Give cadets time to share ideas).

USE THE CHAIN OF COMMAND

Direct communications up and down the chain of command. Operate in the chain of command and if you must by-pass someone, pass the word as soon as possible. The Chain is there to make sure people are informed so they can do their jobs. An example is an E-1 talking to the Captain about a problem that the Leading Petty Officer can handle. It throws the Captain off schedule and the Leading Petty Officer does not know you have a problem. Do you have any other examples? (Give cadets a chance to brainstorm ideas).

PROVIDE FOR THE WELFARE OF SUBORDINATES

Ensure that the basic needs of subordinates are met. A good leader knows his or her subordinates and knows when they are having problems and tries to help. For example, if a cadet is having trouble getting to drills because his parents are working, help him by checking to see if anyone in the unit lives nearby and can give him a ride. Any other ideas?

PLAN FOR ADMINISTRATIVE REQUIREMENTS

Plan for your deadlines and set your own deadlines before a response is required. Set up your own system to meet your deadline. Missed deadlines cost money, cause confusion and make people lose opportunities. Navy League Orientation is a good example. Some cadet's applications were not in on

time and so the CO had to call Washington and go to extra trouble to get their orders. Sometimes there might not even be berthing spaces for them.

Another example is if you do not meet your deadline at work you might lose your job. Another is if you do not turn your paper in on time it can cause your grades in school to fall. What are some examples of deadlines that have to be met and what might happen if they are not?

BE INNOVATIVE

Encourage initiative among subordinates by remaining open to suggestions. Give timely feedback on the progress of proposed changes. Be flexible and promote that quality in subordinates.

A good leader is willing to try new ideas and is willing to encourage his subordinates. When problems come up, do not just assume nothing can be done or that it is not your responsibility. Make an effort. Get together with your shipmates and brainstorm ideas. Try something different. You never know if you don't try.

IMPROVE YOUR OWN PROFESSIONAL SKILLS

In training the unit you should not forget yourself. Give particular attention to developing strong communication skills in both writing and speaking. Aggressively improve your value to the command team. All of you have shown that you are working to improve your skills by making your promotions and taking leadership positions in the unit. Another way you can improve your skills is by practicing the Ten Commandments of Leadership.

LEAD THE DIVISION

Set an example in military appearance and behavior. Do not defer your responsibility to even the most competent subordinate. Involve yourself in the decision making process and remain aware of all division functions. Take positive action and maintain a positive attitude even in the worst of crises. Be a human being, but work harder and smarter.

CLOSURE

Quickly review each of the Ten Commandments of Leadership on the overhead, saying a few key words about each. Then go on to say.....

Being a leader in your unit is a big responsibility. It requires hard work, commitment and a determination to get the job done. Use the Ten Commandments as a guide to helping you improve your skills. However, these leadership skills will not help if you do not practice them. They are like bike riding, playing baseball or swimming; you don't get better if you do not practice.

I would like for each of you to look over the Ten commandments and pick one you would like to work on for the next two drills. Write it down and list some ways you are going to practice the skill. We will discuss our successes at a later class meeting.

Ten Commandments of Leadership

- 1. Know yourself**
- 2. Know your subordinates and seniors**
- 3. Establish goals**
- 4. Manage time**
- 5. Use the chain of command**
- 6. Provide for welfare of subordinates**
- 7. Plan for administrative requirements**
- 8. Be innovative**
- 9. Improve your own professional skills**
- 10. Lead the Division (SQD)**

“It is a well know fact that leaders are not born. Although you may have the talent to become a good leader, you need to develop it and practice this talent to use it effectively.”

- Author Unknown

Fig. V-3-3

NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 3 QUESTIONS
ADVANCE LEADERSHIP

1. Leaders are born not made.
 - a. true
 - b. false

2. League Cadets should work to improve their weaknesses.
 - a. true
 - b. false

3. When cadets know their jobs they assist in managing time.
 - a. true
 - b. false

4. What happens when we miss deadlines?
 - a. cost money
 - b. cause confusion
 - c. make people lose opportunities
 - d. All of the Above

5. Being a leader in your unit is
 - a. big responsibility
 - b. requires hard work
 - c. requires commitment
 - d. All of the Above

Look at Fig. V-4-1. The dotted line which runs from the top to the bottom edge of the globe represents the Earth's axis. At the top is the North Pole, our reference point for True North. Note, however, that the magnetic compass point to the left of the axis. Near the top of the Earth are large iron deposits buried deep underground. Since iron attracts magnets, the compass needle actually points toward them instead of the pole. We call these deposits Magnetic North. Iron and steel used in ship construction, along with other factors, affect the compass in the same way. The difference between True and Magnetic North is "variation"

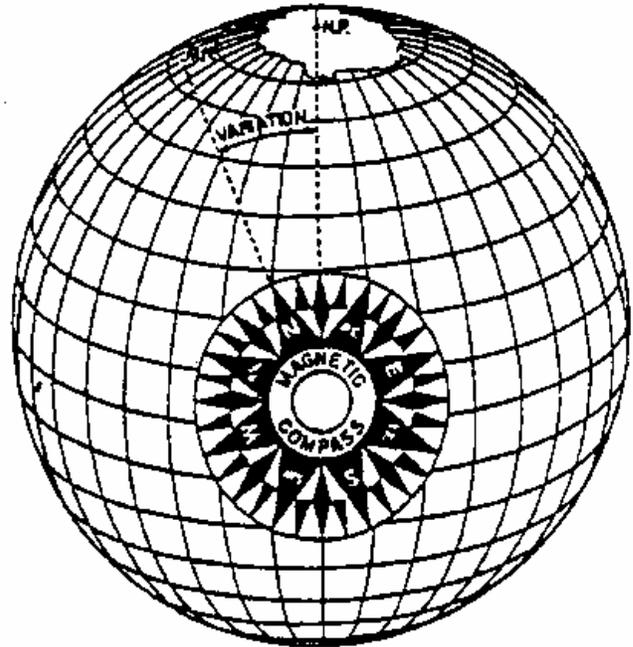


Fig. V-4-1 True and Magnetic North

The magnetic deposits rest on the Earth's liquid core, shifting from place to place each year. Like a chip of wood on a pond, the magnetic deposits "float" slowly around the North Pole. This causes the variation to change slightly each year.

DEVIATION

If your magnet hangs where you left it, take a piece of iron or steel and pass it nearby. Notice that the "north" of your magnet follows. Your piece of iron is closer to the magnet than the Earth's magnetic field and attracts the magnet more strongly. If you stand still near the magnet, it will align itself with your piece of iron. This is "deviation".

COMPASS ERRORS

Because variation and deviation both affect magnetic compasses, mariners must make corrections in order to remain on proper course.

SHIPBOARD COMPASSES

Most modern ships carry both magnetic and gyro compasses. Should an electrical failure render the gyro compass useless, the magnetic compass serves as a backup. By calculating variation and deviation, the mariner selects the proper course to steer.

CARDINAL POINTS

Fig. V-4-2 shows the eight cardinal points of the compass. These are simply handy directions used as references. For precise navigation, the mariner uses degrees (or bearings) numbered clockwise around the compass, beginning at North. Note that the cardinal points always correspond to certain bearings on the compass.

North	-000	Spoken "ZERO, ZERO, ZERO"
Northeast	-045	Spoken "ZERO, FOUR, FIVE"

East	-090	Spoken “ZERO, NINER, ZERO”
Southeast	-135	Spoken “ONE, THREE, FIVE”
South	-180	Spoken “ONE, EIGHT, ZERO”
Southwest	-225	Spoken “TWO, TWO, FIVE”
West	-270	Spoken “TWO, SEVEN, ZERO”
Northwest	-315	Spoken “THREE, ONE, FIVE”

MAGNETIC COMPASS ACTION

Compass bearings are printed on a card and mounted on a sort of half-ball which floats on an alcohol-water solution. When a ship turns, the compass card does not move. Instead, the ship actually turns “under” the compass. Unless it is affected by additional deviation, the magnetic compass always indicates Magnetic North.

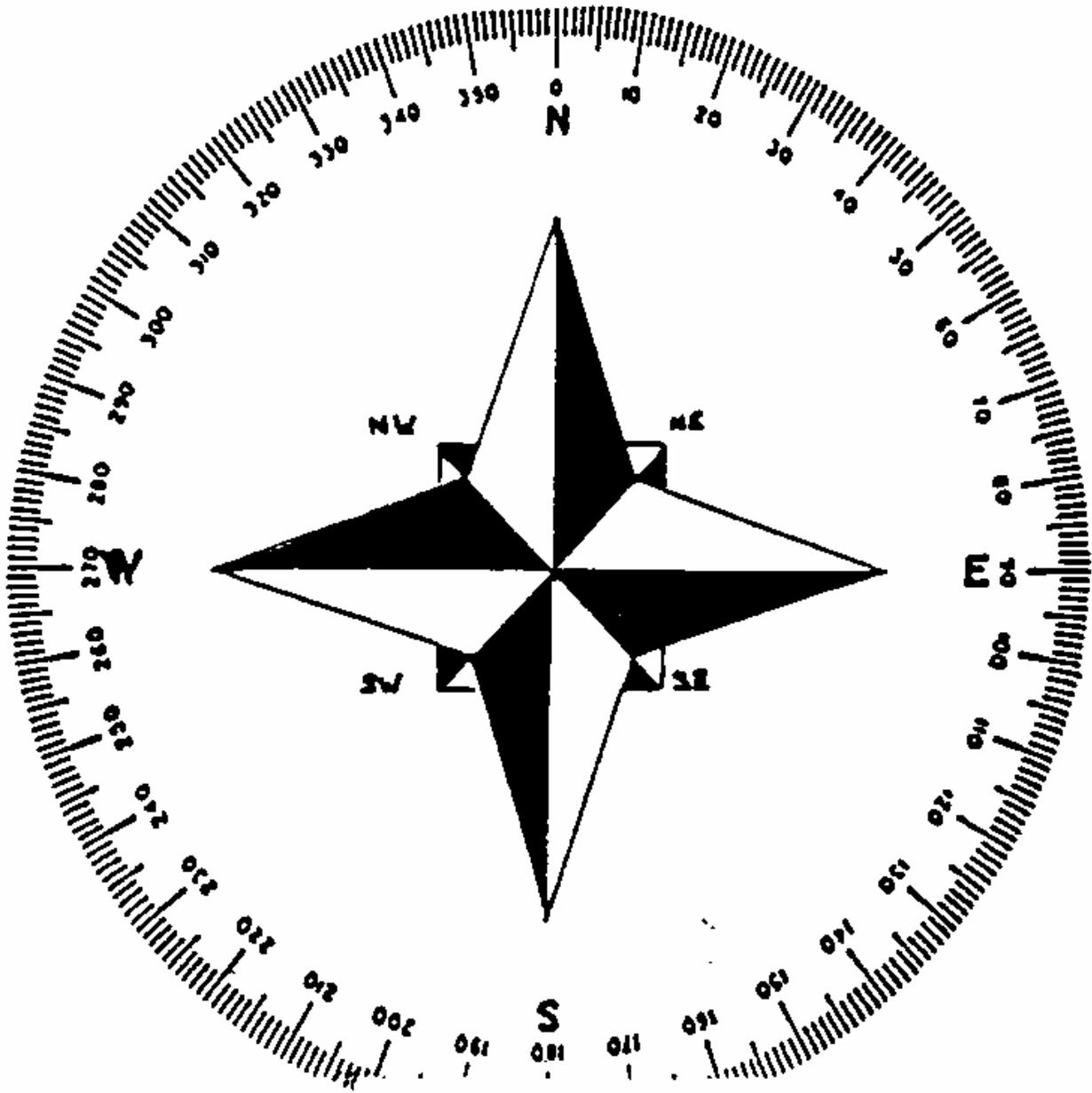


Fig. V-4-2 Cardinal Points

SUGGESTED EXTENDED LEARNING/HANDS ON TRAINING
PART V LESSON 4
COMPASSES AND BEARINGS

1. Have Cadets do the simple experiment in the first paragraph of the lesson.
2. Have cadets plot a course from one part of the drill site to another using the bearing degrees on the compass.
3. .
4. .
5. .
6. .
7. .
8. .
9. .
10. .

**NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 4 QUESTIONS
COMPASSES AND BEARINGS**

1. Magnets always line up in the same direction
 - a. true
 - b. false
2. No one knows for sure if the compass was invented by the Chinese.
 - a. true
 - b. false
3. The compass needle points to _____.
 - a. true north
 - b. magnetic north
 - c. the North Pole
 - d. none of the above
4. The difference between true north and magnetic north is called _____.
 - a. the float
 - b. the deviation
 - c. the variation
 - d. none of the above
5. Variations and deviations both affect the magnetic compass.
 - a. true
 - b. false
6. Should an electrical failure occur, mariners can check their course by using _____.
 - a. gyro compass
 - b. magnetic compass
 - c. both of the above
 - d. none of the above

7. The cardinal point 000 is _____.
 - a. south
 - b. west
 - c. east
 - d. north

SUGGESTED EXTENDED LEARNING/HANDS ON TRAINING
PART V LESSON 5
COMMUNITY SERVICE

1. Help with Christmas Toys for Tots program.
2. Collect food for community food banks.
3. Organize regular visits of cadets to local rest homes or visits to shut-ins at veteran's hospitals.
4. Act as chairman of the unit telephone tree.
5. Assist unit sponsors with planned activities.
6. Provide a color guard for local Veterans and Civic Organizations.
7. Help get out the vote for local elections by helping non-political organizations such as the League of Women Voters.
8. Participate in local parades.
9. Take part in local clean up of parks and roadsides and graffiti on buildings.
10. Help the forest service plant trees in reforestation areas.
11. Help with crowd control or pass out information at air shows, base open houses, or other community gatherings.
12. .
13. .
14. .
15. .
16. .

NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 5 QUESTIONS
SERVICE TO THE COMMUNITY

1. The NLCC Promise and the Navy Core Values teach cadets.
 - a. true
 - b. false

2. League Cadets have a responsibility to make a positive contribution to their community.
 - a. true
 - b. false

3. As a senior petty officer, the cadet should be able to assume more responsibility
 - a. true
 - b. false

4. League Cadets should develop a lifelong habit of community service.
 - a. true
 - b. false

5. What is a first step toward developing skills to be used in more responsible leadership roles in the future for your community?
 - a. Concern
 - b. Interest
 - c. Both a & b
 - d. None of the Above

DEPTH: The amount of water beneath a vessel's keel. Charts usually indicate the depth at average low tides

CURRENT: The direction and speed water travels, current changes with the rise and fall of tides

SET: The direction a vessel travels off course due to the action of wind and current

DRIFT: The speed at which a vessel travels off course due to the action of wind and current

CHANNEL: A "roadway" near land usually marked by buoys or other navigation aids

SHOAL: Shallow water near land which presents the risk of running a vessel aground

NAVIGATION

When preparing charts for navigation and piloting, mariners first make certain that they are up to date and that all important information is available. For practice, you should mark all prominent land features represented on the chart such as visible structures, natural features (cliffs, points, hills, rocks, capes, etc.) Fig. V-6-1 shows how such features may be indicated on a chart. You should also study the chart to locate such hazards as shoals or underwater objects, and mark them in red pencil or ink. Then, in pencil, mark the course you intend to steer and the speed you intend to make.

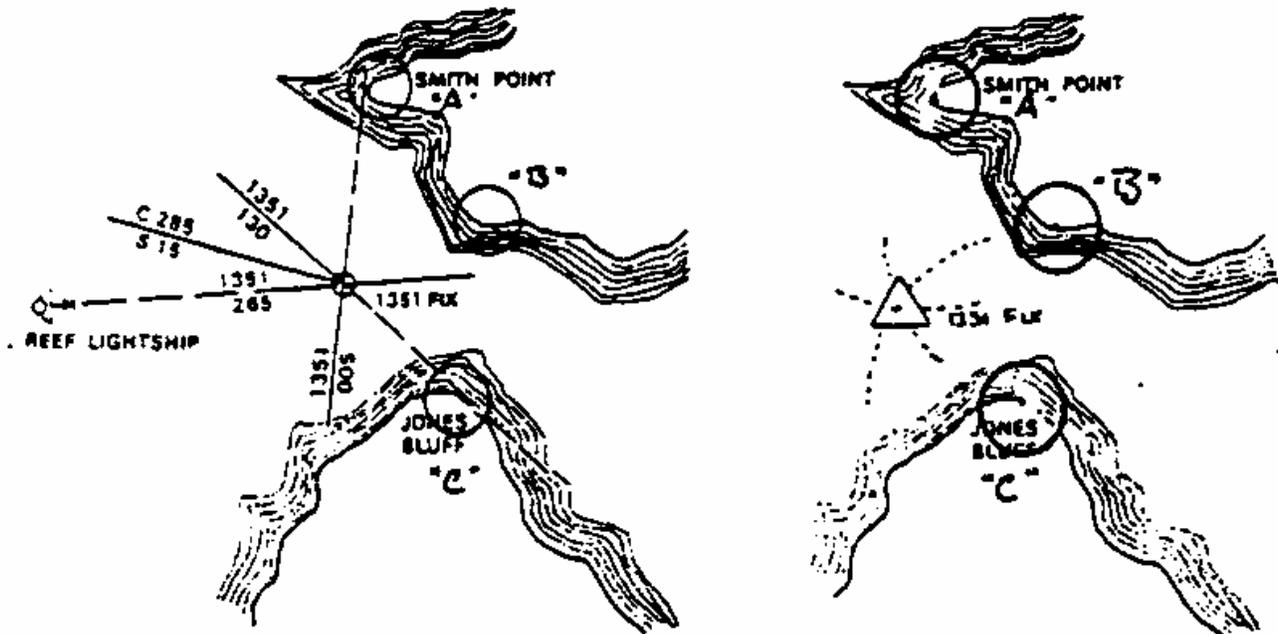


Fig. V-6-1 Plotting

PLOTTING

Accurate plotting (locating a vessel's position on a chart) requires teamwork. No matter which of the following methods you use, two or more people make up the plotting team.

VISUAL BEARINGS

Near land, when visibility is good, visual bearings provide the best method of safe piloting. One or more members of the plotting team sights prominent land features or structures and relays their bearings to the plotter. Observers sight the features through an alidade, a small telescope that fits over a compass repeater. Using parallel rulers or a parallel motion protractor, the plotter locates the bearings on the compass rose, moves the ruler(s) to the point where the feature sighted is indicated on the chart and draws a line from the feature across the ship's proposed course line. He then repeats this process with all other bearings recorded. The point at which the bearings intersect (cross one another) indicates the vessel's position. When the position, or "fix", is determined, the plotter marks it with a small circle and records the time the bearings were taken.

BEARINGS

At night, or when visibility is poor, you can determine the vessel's position by radar. Because radar tends to distort bearings and because radar does not show objects on land, radar fixes are determined by measuring the distance (range) to prominent shoreline features which reflect well on the screen.

The radar operator reads the distance to selected shoreline features and relays them to the recorder. With a mechanical (drafting) compass, the plotter measures the distance on the chart's range scale, places the point of the compass on the feature indicated on the chart, and draws an arc across the vessel's projected track, repeating the process until all ranges are marked. The point where the arcs intersect represent the vessel's position and is marked with a small triangle.

DEAD RECKONING

To keep charts from becoming cluttered with excessive bearing lines or range arcs, plotters normally mark the position where they expect the vessel to be for several minutes ahead. These estimated positions are called "dead reckoning positions" and are very easy to determine. From the vessel's last known position, project the course ahead. Then using the "three minute rule" (below), mark the distance the vessel should travel in three minutes time. This rule states that the distance a vessel travels in three minutes, divided by 100, provides the vessel's speed.

Example: Distance traveled in 3 minutes – 1000 yards $1000/100 = 10$ knots

Thus, a vessel that travels at 10 knots will cover 300 yards in three minutes.

Dead reckoned positions are marked with a half circle. The following figure shows a series of positions determined by radar ranges.

SUGGESTED EXTENDED LEARNING/HANDS ON TRAINING
PART V LESSON 6
NAUTICAL CHARTS AND PILOTING

1. Make a plot and position board
2. Use a navigation chart to plot position
3. .
4. .
5. .
6. .
7. .
8. .
9. .
10. .

NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 6 QUESTIONS
NAUTICAL CHARTS AND PILOTING

1. On nautical charts, longitude shows position east or west of _____.
 - a. Rome, Italy
 - b. Greenwich, England
 - c. Parris, France
 - d. New York City, USA
2. The direction a vessel travels off course due to wind and current action is _____.
 - a. drift
 - b. bearing
 - c. set
 - d. range
3. If a ship travels 1200 yards in three minutes, its speed is _____.
 - a. 1.2 knots
 - b. 12 knots
 - c. 120 knots
 - d. none of the above
4. When visibility is good, _____ provide(s) the best method for safe piloting.
 - a. radar ranges
 - b. dead reckoning
 - c. visual bearings
 - d. radar bearings
5. In general, maps and nautical charts display the same geographical features, except that maps do not show (the) _____.
 - a. latitude and longitude
 - b. true and magnetic north
 - c. hills, valleys and rivers
 - d. depth of the water
6. Nautical charts usually indicate the depth of the water _____.
 - a. at average low tide
 - b. beneath the ships keel
 - c. at average high tide
 - d. at the average between tides
7. A radar fix is obtained when two or more _____ intersect.
 - a. bearings
 - b. ranges
 - c. knots
 - d. courses
8. Lines which show geographic position North or South of the Equator are called _____.
 - a. longitude
 - b. latitude
 - c. ranges
 - d. bearings
9. A nautical mile measures _____.
 - a. 1000 yards
 - b. 1500 yards
 - c. 2000 yards
 - d. 2500 yards
10. Latitude never exceeds _____.
 - a. 90 degrees
 - b. 180 degrees
 - c. 270 degrees
 - d. 360 degrees
11. _____ is the speed at which a vessel travels off course due to wind and current action
 - a. Set
 - b. Drift
 - c. Range
 - d. Bearing
12. Accurate plotting whether by radar ranges or visual bearings, requires _____.
 - a. concentration
 - b. up to date charts
 - c. teamwork
 - d. all of the above

Letter	Code	Phonetic Alphabet	Pronunciation
A	.	ALFA	AL-FAH
B	...	BRAVO	BRAH-VOH
C	..	CHARLIE	CHAR-LEE
D	. . .	DELTA	DEL-TAH
E	.	ECHO	ECK-OH
F	..	FOXTROT	FOX-TROT
G	..	GOLF	GOLF
H	...	HOTEL	HO-TEL
I	..	INDIA	IN-DEE-AH
J	..	JULIETT	JU-LEE-ETT
K	..	KILO	KEE-LOH
L	..	LIMA	LEE-MAH
M		MIKE	MIKE
N	.	NOVEMBER	NOH-VEH-MBER
O		OSCAR	OSS-CAHR
P	..	PAPA	PAH-PAH
Q	..	QUEBEC	KAY-BECK
R	..	ROMEO	ROH-ME-OH
S	..	SIERRA	SEE-ERR-AH
T	.	TANGO	TANG-GOH
U	..	UNIFORM	YOU-NEE-FOH
V	..	VICTOR	VICK-TOR
W	..	WHISKEY	WISS-KEE
X	..	XRAY	ECKS-RAY
Y	..	YANKEE	YANG-KEE
Z	..	ZULU	ZOO-LOO
1		ONE	WUN
2	..	TWO	TOO
3	..	THREE	THUH-REE
4	..	FOUR	FO-WER
5	..	FIVE	FI-YIVE
6	..	SIX	SICKS
7	..	SEVEN	SEH-VEN
8	..	EIGHT	ATE
9	..	NINE	NI-NER
0		ZERO	ZEE-ROH

Expectations for Morse Code and the Phonetic Alphabet

The lesson on Mores Code and the Phonetic alphabet is one that can be started at any time in a cadet's career. Like knot tying, it is ongoing and not intended to be completed before going on to the next lessons. It is intended to be introduced and then practiced on a regular basis in order to build mastery of the skill.

There are no specific questions for this lesson but there are suggested levels of mastery for cadets to work toward.

When cadets have achieved these levels of mastery, the unit might want to present the cadet with a Certificate of Achievement for the Phonetic Alphabet and one for Morse Code.

Suggested Levels of Achievement

A cadet has reached the suggested level of achievement when:

MORSE CODE

- The cadet can identify 60% of the symbols on flash cards
- The cadet can send a simple message with the message day or flashlight (suggest S O S).

PHONETIC ALPHABET

- The cadet can identify and correctly pronounce 80 % of the Phonetic Alphabet and numbers

SUGGESTED EXTENDED EXTENDED LEARNING/HANDS ON TRAINING
PART V LESSON 7
MORSE CODE/PHONETIC ALPHABET

1. Have cadets complete activity sheet.
2. Make a morse code key
3. Use a flashlight to send and receive morse code.
4. Send and receive Morse Code (DVD available from local music store, military catalogs).
5. Have Cadets make flash cards with Morse Code on the cards. Practice Morse Code flash cards with a partner or use cards with one of the game boards.
6. Have cadets make flash cards for Phonetic Alphabet and numbers
7. Practice Phonetic Alphabet with a partner or use cards with one of the game boards.
8. .
9. .
10. .
11. .

**NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 7 QUESTIONS
MORSE CODE/PHONETIC ALPHABET**

1. Merchant shipping still use International Morse Code.
 - a. true
 - b. false

2. To avoid errors in copying messages, each letter and number has a phonetic word to identify it.
 - a. true
 - b. false

3. What is the phonetic alphabet for "A"?
 - a. Alpha
 - b. Albert
 - c. Alfa
 - d. Almost

4. Decipher this word? 
 - a. Navy League
 - b. Honor
 - c. Cadet
 - b. None of the Above

5. Which items are represented by combinations of dots and dashes
 - a. letters
 - b. numbers
 - c. punctuation marks
 - d. All of the Above

U.S. COAST GUARD Thirteen vertical stripes, alternating red and white, with Coast Guard shield centered on the seventh stripe. Arms of the USA in dark blue on a white field in upper corner nearest the staff.

PERSONAL FLAGS

Personal flags are blue with white stars – one to five according to rank of Line Officers.

Personal flags are white with blue stars – one to three according to rank for Staff Officers

SPECIAL FLAGS AND PENNANTS

COMMISSIONING PENNANT A narrow strip with a blue field and white stars at the staff and a red stripe above a white stripe for the length of the fly.

RED CROSS A white flag with a Geneva Cross in the center.

CHURCH PENNANT A white pennant with a blue cross. Flown above the National Ensign when Christian divine services are in progress.

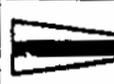
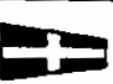
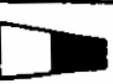
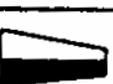
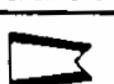
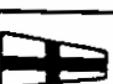
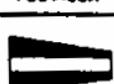
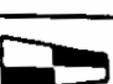
SEMAPHORE

Semaphore requires very little equipment. Signalmen need only two flags, approximately 18 inches to a side, attached to staffs. When two ships are alongside, good signalmen can send and receive 25 to 30 five-letter groups per minute.

Fig. V-8-2 shows the hand positions for letters and certain types of messages.

FLAG and NAME	Spoken	Written	FLAG and NAME	Spoken	Written	FLAG and NAME	Spoken	Written
 A	ALFA	A	 M	MIKE	M	 Y	YANKEE	Y
 B	BRAVO	B	 N	NOVEMBER	N	 Z	ZULU	Z
 C	CHARLIE	C	 O	OSCAR	O	 1	ONE	1
 D	DELTA	D	 P	PAPA	P	 2	TWO	2
 E	ECHO	E	 Q	QUEBEC	Q	 3	THREE	3
 F	FOXTROT	F	 R	ROMEO	R	 4	FOUR	4
 G	GOLF	G	 S	SIERRA	S	 5	FIVE	5
 H	HOTEL	H	 T	TANGO	T	 6	SIX	6
 I	INDIA	I	 U	UNIFORM	U	 7	SEVEN	7
 J	JULIETT	J	 V	VICTOR	V	 8	EIGHT	8
 K	KILO	K	 W	WHISKEY	W	 9	NINE	9
 L	LIMA	L	 X	XRAY	X	 0	ZERO	0

Fig. V-8-1a Signal Flags and Pennants

PENNANT and NAME	Spoken	Written	PENNANT or FLAG	Spoken	Written	PENNANT or FLAG	Spoken	Written
 1	PENNANT ONE	p1	 CODE or ANSWER	CODE or ANSWER	CODE or ANS	 NEGAT NEGATIVE	NEGAT	NEGAT
 2	PENNANT TWO	p2	 SCREEN	SCREEN	SCREEN	 PREP PREPARATIVE	PREP	PREP
 3	PENNANT THREE	p3	 CORPEN	CORPEN	CORPEN	 PORT	PORT	PORT
 4	PENNANT FOUR	p4	 DESIG- NATION	DESIG	DESIG	 SPEED	SPEED	SPEED
 5	PENNANT FIVE	p5	 DIVISION	DIV	DIV	 SQUAD	SQUAD	SQUAD
 6	PENNANT SIX	p6	 EMERGENCY	EMERGENCY	EMERG	 STARBOARD	STARBOARD	STBD
 7	PENNANT SEVEN	p7	 FLOTILLA	FLOT	FLOT	 STATION	STATION	STATION
 8	PENNANT EIGHT	p8	 FORMATION	FORMATION	FORM	 SUBDIVISION	SUBDIV	SUBDIV
 9	PENNANT NINE	p9	 INTER- ROGATIVE	INTER- ROGATIVE	INT	 TURN	TURN	TURN
 0	PENNANT ZERO	p0						
TACK LINE	TACK							

SUBSTITUTES					
 1st. SUBSTITUTE	FIRST SUB	1st.	 3rd. SUBSTITUTE	THIRD SUB	3rd.
 2nd. SUBSTITUTE	SECOND SUB	2nd.	 4th. SUBSTITUTE	FOURTH SUB	4th.

Fig. V-8-1b Signal Flags and Pennants

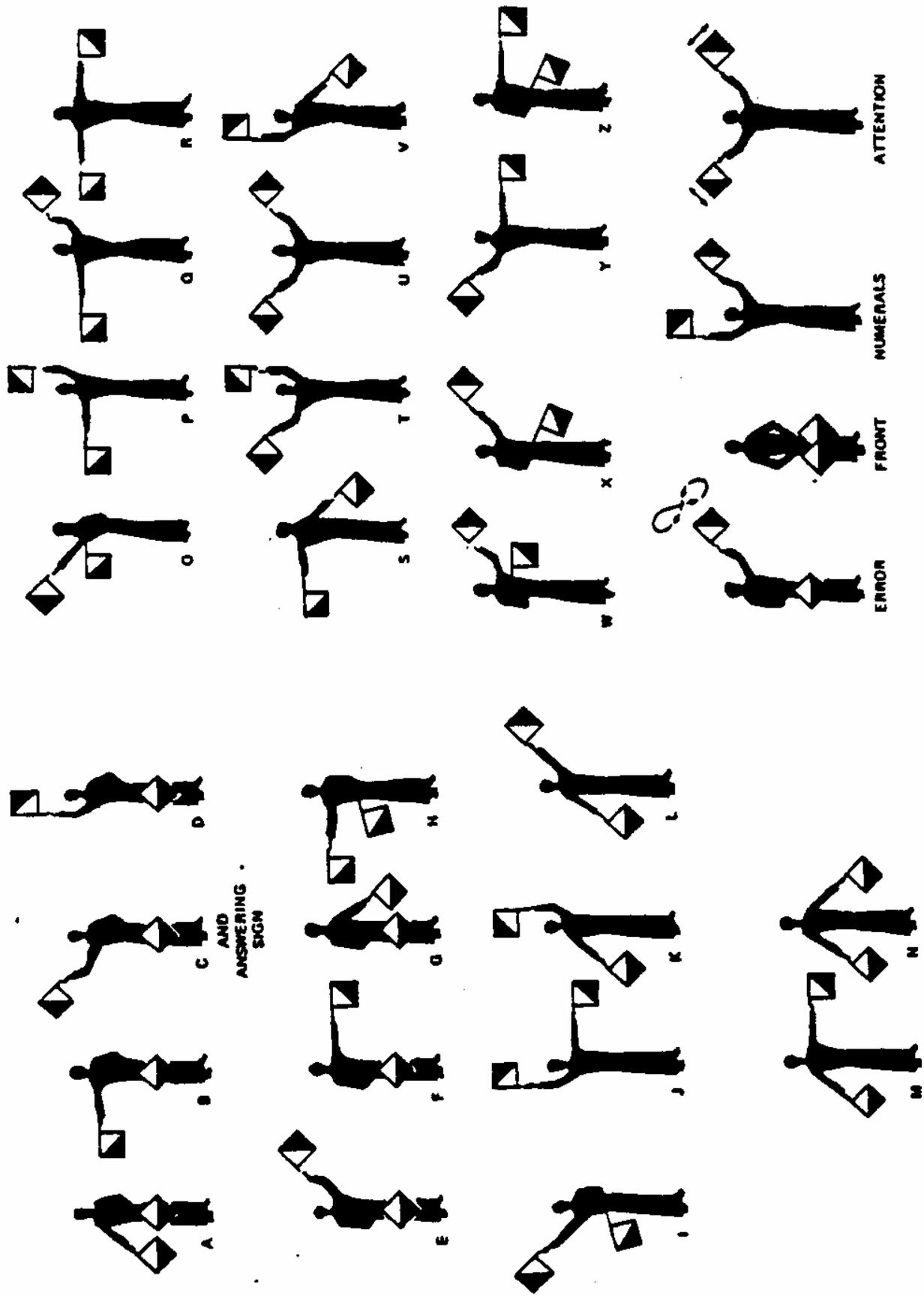


Fig. V-8-2 Semaphore

SUGGESTED EXTENDED LEARNING/ HANDS ON TRAINING
PART V LESSON 8
SIGNAL FLAGS PENANTS AND SEMAPHORE

1. Have cadets make semaphore flag set out of construction paper.
2. Make flash cards for use in recognizing flags
3. Prepare a “Welcome” sign or division name with flags.
4. Ask a signalman to drill – send and receive messages with flags.
5. Practice semaphore.
6. .
7. .
8. .
9. .
10. .
11. .

**NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 8 QUESTIONS
SIGNAL FLAGS, PENNANTS AND SEMAPHORE**

- | | |
|--|---|
| <ol style="list-style-type: none">1. A personal blue flag with two white stars identifies a/an _____.<ol style="list-style-type: none">a. Admiralb. Vice Admiralc. Fleet Admirald. Rear Admiral2. A white flag with the United States crest in a circle of thirteen stars identifies the<ol style="list-style-type: none">a. President of the United Statesb. Chief of Naval Operationsc. Secretary of the Navyd. Vice-President of the United States3. A flag with a blue and white field, divided diagonally, with a Navy crest and four stars identifies the _____.<ol style="list-style-type: none">a. Secretary of the Navyb. Chief of Naval Operationsc. Vice Chief of Naval Operationsd. Secretary of Defense4. The ____ flies above the National Ensign only at specific times.<ol style="list-style-type: none">a. Red Cross Flagb. Commissioning Pennantc. Presidents Flagd. Church Pennant5. The primary advantage for signal flags is that they may be used during periods of radio silence.<ol style="list-style-type: none">a. trueb. false | <ol style="list-style-type: none">6. The President of the United States does not have a personal flag, but flies the National Ensign.<ol style="list-style-type: none">a. trueb. false7. The Church Pennant is a white pennant with a blue cross.<ol style="list-style-type: none">a. trueb. false8. Since he is a four-star Admiral, the Chief of Naval Operations files a blue flag with four stars in a diamond pattern.<ol style="list-style-type: none">a. trueb. false9. A flag with a white anchor and four white stars on a blue field identifies the:<ol style="list-style-type: none">a. Secretary of the Navyb. Secretary of Defensec. Vice-President of the United Statesd. President of the United States |
|--|---|

BREAKING UP TWO VICTIMS: Decide which of the two to rescue first. Approach from the rear, place arms around the victim's shoulders, hands under the chin. Place a foot on the other victim's chest and apply pressure to break them apart.

CARRIES

HAIR: Grasp the victim's hair tightly. Using a sidestroke, swim with your legs and free arm.

HEAD: Swim on your back, holding the victim's head above water, with both hands under chin.

CROSS-CHEST: Place one arm over the victim's shoulder, across his chest, and under the opposite arm. Support the victim on your hip and swim with a sidestroke. Do not use this carry if the victim is in serious condition, nor for long distances.

TIRED SWIMMER: When the victim doesn't panic and can follow instructions, turn him on his back, spread your legs, and place both his hands on your shoulder with the arms stiff. Use a breast stroke, pushing the victim ahead.

SUGGESTED EXTENDED LEARNING/ HANDS ON TRAINING
PART V LESSON 9
FIRST AID – SWIMMER RESCUE

1. If possible, take cadets to a pool and practice methods for rescue.
2. Practice on the floor before going to the water.
3. Call the Red Cross or local schools or the Naval reserve for appropriate films or videos.
4. .
5. .
6. .
7. .
8. .
9. .
10. .
11. .

NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 9 QUESTIONS
MISCELLANEOUS FIRST AID – SWIMMER RESCUE

1. Lifesaving techniques are based on the idea that a drowning person _____
 - a. can swim
 - b. will remain calm
 - c. will panic
 - d. trusts the rescuer
2. The cross chest carry should not be used to transport a drowning victim _____
 - a. who has no serious injuries
 - b. for long distances
 - c. without a life preserver
 - d. in very deep water
3. When a drowning person is too excited to follow directions, a rescuer should approach from (the) _____
 - a. rear
 - b. underwater
 - c. front
 - d. side
4. When using the Head Carry, a rescuer swims with a _____
 - a. sidestroke
 - b. breaststroke
 - c. crawlstroke
 - d. backstroke
5. When breaking apart two people in danger of drowning, the rescuer must first decide _____
 - a. the direction of approach
 - b. which of the tow to rescue first
 - c. which carry to use
 - d. whether either will panic
6. In breaking a drowning person's hold, the rescuer's first step is to _____
 - a. give instructions
 - b. grasp the person's feet
 - c. use the hair carry
 - d. sink with the person
7. The best carry to use when rescuing a drowning person who is calm is the _____
 - a. hair carry
 - b. tired swimmer carry
 - c. head carry
 - d. cross chest carry

CLOSURE

Whether a cadet joins the service or not, this is an important area for cadets to know about. It gives them a better understanding of our sea services and the many and varied skills needed to get the job done.

SUGGESTED EXTENDED LEARNING/ HANDS ON TRAINING
PART V LESSON 10
NAVY CAREER OPPORTUNITIES, SETTING GOALS

1. Invite a Navy and a Marine Corps Recruiter (different drills) to be a guest speaker. Supply them with a list of questions you want answered (see list above for suggestions).
2. Invite a Blue and Gold Officer to speak to cadets about appointments to the Naval Academy. Be sure to have the officer cover the difference between meeting and qualifying for an appointment. Many meet the requirements but few meet the standards of those what are chosen.
3. Invite a representative from one of the Maritime Academies to speak. Use same guidelines as those listed for Naval Academy.
4. Invite someone representing the Coast Guard and the Coast Guard and the Coast Guard Academy. Follow same guidelines as listed for other services.
5. Ask recruiters about borrowing films or videos that might give information about different careers in the Navy.
6. Try to arrange opportunities for different cadets to “shadow” (follow for a day) active duty or reserve personnel as they work on the job.
7. Invite people who have service experience and whose skills in a particular rating are current to speak to cadets about their jobs and courses or activities cadets can do to learn more about these ratings.
8. Have cadets choose a rating that interests them and become the unit “expert” on that rating. Have them “research” the rating. They can gather all the information they can find on the rating; talk to people who are in the rating and shadow them. Cadets then make a report to the unit on job opportunities and requirements.
9. VERY IMPORTANT...have a Sea Cadet Petty Officer talk to the class about the Sea Cadets. They might discuss requirements for Recruit Training, promotions, TWT and week-end training. Be sure to mention advanced pay grade enlistment in the Navy.
10. Have cadets discuss their short-term and long-term goals. Encourage them to write them down and then list steps toward achieving them. Have cadets then share their progress towards these goals at CO conferences.
11. .
12. .
13. .

NLCC PETTY OFFICER FIRST CLASS
PART V LESSON 10 QUESTIONS
NAVY CAREER OPPORTUNITIES

1. It is too early to think about your future at 12 years old.
 - a. true
 - b. false

2. Getting information to the cadets early can reduce disappointments later
 - a. true
 - b. false

3. There are only career fields in the U.S. Navy?
 - a. true
 - b. false

4. It is a good idea for middle school students to know high school courses to take which would help cadets to qualify for special rates ?
 - a. true
 - b. false

5. Which topics would be beneficial for guest speakers to talk about?
 - a. Basic requirements to enter that service
 - b. Programs for minorities
 - c. Both a & b
 - d. None of the Above