

INSTRUCTOR GUIDE  
FOR  
AVIATION RESCUE SWIMMER SCHOOL

Q-050-0600  
Q-050-0602

PREPARED BY  
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TABLE OF CONTENTS

CONTENTS

Change Record.....2  
Security Awareness Notice.....5  
Safety/Hazard Notice.....5  
UNIT 1.0 RSS Overview/Course Introduction  
1.1 RSS Overview/Course Introduction  
1.2 Pool Safety Regulation  
UNIT 2.0 Physical Conditioning  
2.1 Principles of Physical Fitness and Dry Land Conditioning Program  
2.2 Swimming Proficiency and Conditioning  
2.3 Open Water Laboratories  
UNIT 3.0 Lifesaving and Parachute Disentanglement  
3.1 Approaches and Carries  
3.2 Releases and Escapes  
3.3 Water Entry  
3.4 Parachute Canopy Escape  
3.5 Direct Deployment  
3.6 Disentanglement Procedures (Free-Floater/Helicopter Aircrew)  
3.7 Disentanglement Procedures (Back Pack)  
3.8 Disentanglement Procedures (Jet)  
3.9 Combative Survivor  
UNIT 4.0 Rescue Equipment and Procedures for Use  
4.1 Rescue Swimmer's Equipment  
4.2 Mask, Fins and Snorkel  
4.3 Primary Rescue Devices and Procedures  
4.4 Alternate Rescue Devices  
4.5 Aviation Life Support Systems

- 4.6 Survivor Marker Locator Devices
- 4.7 SAR Publications and Reports
- 4.8 Helicopter Operations
- 4.9 SAR Tactics
- 4.10 Overland SAR Operations

UNIT 5.0 First Aid and American Red Cross CPR for the Professional Rescuer

- 5.1 American Red Cross CPR For The Professional Rescuer
- 5.2 Level "A" Medical Kit
- 5.3 Practical First Aid
- 5.4 Primary Survey
- 5.5 Secondary Survey

## SECURITY AWARENESS NOTICE

This course does not contain any classified material.

## SAFETY/HAZARD AWARENESS NOTICE

All personnel must be aware that personal injury, death, or equipment damage can result from carelessness, failure to comply with approved procedures, or violations of warning, cautions, and safety regulations.

Review fire and environmental emergency procedures with class.

## SAFETY NOTICE

There is great potential for mishap during in-water training evolutions. For that reason, special care must be taken to ensure that all safety measures contained in the Instructional Management Plan of the Curriculum Outline and specific device operation manuals are stringently adhered to. Be alert for students who appear to be experiencing difficulty and do not hesitate to exercise the training time out policy as stated in the Instructional Management Plan, Annex E, of the Curriculum Outline of Instruction.

## MISHAP/HAZARD REPORTING

a. Safe training is the number one goal at Naval Aviation Schools Command. Each year at training commands lives are lost, and thousands of man-hours and millions of dollars are wasted as the result of accidents. Most accidents could have been prevented. They are the result of actions performed incorrectly, either knowingly or unknowingly, by people who fail to exercise sufficient foresight, lack the requisite training, knowledge, or motivation, or who fail to recognize and report hazards.

b. A near mishap is any unplanned or unexpected event causing personnel injury, occupational illness, death, material loss or damage or any explosion whether damage occurs or not.

c. A hazardous condition is any situation where if allowed to go unchecked or uncorrected has the potential to cause a mishap.

d. A near miss is when a mishap is avoided merely by chance.

e. It is the responsibility of all Department of Defense personnel to report all mishaps and near misses. If a mishap, hazardous condition or near miss occurs let your instructor know immediately.

f. Instructors will report all hazardous conditions and near misses to the command high-risk safety officer via their divisional/departmental high-risk safety officer. Reports can be hand written on a "Safety Gram" form or on a "Report of Unsafe Unhealthy working Conditions" form. Injuries will be reported via NAVAVSCOLSCOM 6310/1, Personnel Accident/Injury Notification (PAIN) form.

#### DROP ON REQUEST (DOR)

##### For Instructors:

Ensure all students are briefed on DOR policy and procedures voluntary high/moderate-risk courses. The following briefing shall be given prior to commencing the course (i.e., course indoctrination, welcome aboard brief, etc.) and should not be repeated unless there is a long break in the course (e.g., Christmas holidays):

##### For Instructors and Students:

1. Policy. In all cases where a student states a desire to DOR from voluntary training based on concern for personal well-being, appropriate action shall be initiated, including removal from training, referral of the student for medical, counseling, or remedial action as appropriate, and review of the training environment, including training techniques. The scope and depth of these actions shall be determined by the nature of the complaint and the risk incurred in the training. A written summary of actions taken shall be made a permanent entry to the student's service record. In no case shall a student be coerced or threatened to induce him or her to return to training following a DOR.

2. Procedures. After removal from voluntary training, the student shall submit a written request detailing the reasons for DOR. The request should clearly indicate that the student wants to DOR (e.g., I, (name), desire to be removed from training in XYZ course for the following reason(s): A standard Special Request/Authorization Form (NAVPERS 1336/3 (Rev. 9-75)) may be used. The request shall be submitted directly to the training or division officer and shall become a part of the student's training record. If a student was being processed for an Academic Review Board (ARB) action prior to the DOR, the ARB shall take precedence. In any case, the student shall be removed from training.

a. Training or Division Officer's Interview. The loss of an able student from training or the continuation in training of a student who is unlikely to complete the program represents a waste of valuable resources, assets, time, and effort. Often, students who DOR do not give the real or complete reasons for their requests. The interviewer, using no overt or implied coercion or threats, shall make a reasonable effort to determine:

(1) The real motivation for the request;

(2) If the decision to DOR is the result of some training factor which may lead other students to DOR. If so, can training be changed to alleviate this factor without adversely affecting program objectives?

(3) If the student desires to reenter the program.

(4) If student retention is warranted, are there actions (counseling, change of instructor, or special assistance) which might cause the student not to DOR? Are such actions justified in view of the impact upon the overall training program and upon other students?

b. The interview need only be detailed enough to satisfy the CO, OIC, or DOT that the student understands the gravity of DOR, and that the reasons for the DOR are known or that further questioning is unlikely to reveal additional information.

c. No one in the DOR chain shall refuse to forward a request or to remove the student from training, nor shall anyone delay a request in an effort to arrive at the cause of the DOR, or threaten/coerce a student to reconsider.

3. Post-Interview Procedure. If, after the interview, a student still desires to DOR, the interviewer shall refer him/her to the reviewing officer for further interviews or administrative action. The interviewing officer shall provide a signed, written summary of the interview and recommended actions to the reviewing officer.

4. Administrative Procedure. The administrative procedures for disposition of a DOR attrite are the same as those for a disenrollment. There is, however, no requirement for a formal ARB.

## TRAINING TIME OUT (TTO)

### For Instructors:

1. Ensure all students are briefed on TTO policy and procedures prior to each high or moderate-risk evolution or laboratory. For multi-day or all-day evolutions, TTO shall be re-briefed prior to the start of training following major breaks, such as mealtimes. Evolution-specific TTO procedures should be added where needed. These procedures should be standardized to conform with established fleet distress indicators where appropriate (e.g., standard small arms range procedures, diving distress signals, etc.). Emphasis shall be placed on specific verbal and nonverbal signals to be used by students and instructors.
2. A TTO may be called in any training situation where a student or instructor expresses concern for personal safety or requests clarification of procedures or requirements. TTO is also an appropriate means for a student to obtain relief if he or she is experiencing pain, heat stress, or other serious physical discomfort.
3. Instructors are responsible for maintaining situational awareness and shall remain alert to signs of student panic, fear, extreme exhaustion, or lack of confidence that may impair safe completion of the training exercise. Instructors shall cease training immediately when they consider such action appropriate.
4. Following a TTO, the situation shall be examined and additional explanation and instruction shall be provided as needed to allow safe resumption of training. Once the lead instructor on scene is fully apprised of the problem, he/she shall direct all training to cease or training with unaffected students to continue, based on the situation.
5. If a student refuses to participate in training after being instructed or after an unsafe condition has been corrected, or uses TTO excessively to disrupt training, that student shall be removed from training and referred for further counseling or administrative processing.

### Basic TTO Student Briefing:

A Training Time Out (TTO) may be called by any student or instructor in any training situation where they are concerned for their own or another's safety, or they request clarification of it, procedures or requirements. TTO is also an appropriate means for a student to obtain relief if he or she is experiencing pain, heat stress, or other serious physical discomfort. The purpose of the TTO is to correct the situation of concern, provide clarifying information, or remove the student or instructor from the possible hazardous environment. A TTO may be signaled with the abbreviation TTO, the words Training Time Out, crossed hands in a (T), a raised clenched fist, or other specific signals which will be briefed prior to a specific lab, test, or exercise. If the TTO signal is not acknowledged, the signaler shall shout "Time Out" (or other action as required by the training activity). The instructor shall attempt to relieve and remove the student from the possible hazardous environment. If an adequate number of instructors are available to allow training to continue safely, the lead instructor may elect to do so. However, if this is not practical, training will be stopped until the situation is corrected.

## FOREWORD

This Instructor Guide contains Lesson Plans and other materials necessary for conducting training for Naval Rescue Swimmer Instructors.

The information contained in the Lesson Plans is to be considered essential and may not be deviated from. Instructors are free to personalize their presentations with amplifying information provided such personalization does not detract from the training experience or cause the training day to go beyond the time allotted.

Where conflict occurs between a technical publication and the information contained herein, the technical publication shall take precedence. In the interest of standardization, it is requested that all such conflicts be brought to the attention of the Aviation Rescue Swimmer School Model Manager as expeditiously as possible.

## HOW TO USE THE INSTRUCTOR GUIDE

1. This Instructor Guide is designed to fit in a standard three ring binder, from which the Instructor may teach.
2. Following the completion of training, students shall be offered the opportunity to complete a student critique. Space has been provided for the student to give their name but if the student desires anonymity, they shall be allowed to respond anonymously.

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 1.1

LESSON TOPIC: RSSTP Overview/Course  
Introduction

ALLOTTED LESSON TIME: 2.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. OPNAVINST 3710.7 series, General NATOPS
3. OPNAVINST 3130.6 series, Naval Search and Rescue (SAR) Standardization Program.
4. CNETINST 1500.20, Safety Procedures for Conducting Training

INSTRUCTIONAL AIDS:

Course Schedule

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 1.0 Upon completion of this unit of instruction, the student will define the requirements for RSS training, the Drop on Request (DOR)/Training Time Out (TTO) policies, and safety procedures used during Aviation Rescue Swimmer training.

Enabling Objectives:

Completely supported by this lesson topic:

- 1.1 Discuss OPNAVIST 3130.6 and NWP 3-50.1 series requirements for RSS training.
- 1.2 Describe all safety precautions used during RSS training.
- 1.3 State the remedial training policy.
- 1.4 State the DOR/TTO policies and procedures.

CRITERION TEST: None

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self; give rank, current job.
2. State background, schools, duty stations, etc.
3. Take class muster.
4. State question and answer policy.

Check for new students, students at risk, and rollbacks.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

- a. Lesson Topic: RSSTP Overview/Course introduction

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Major Teaching Points:
- (1) Course Overview
  - (2) Drop On Request/Training Time Out Policies
  - (3) Administrative Procedures and Regulations
  - (4) Safety Precautions
  - (5) Mishap/Near-Miss/Unsafe Condition Reporting Procedures

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. Course Overview

1. **Applicability:** The Rescue Swimmer Course is designed for individuals who have not previously graduated from Rescue Swimmer School and are reporting to a rescue swimmer billet.
2. **Goals:** This course provides students with the initial training and hands-on experience in First Aid, CPR, Rescue Equipment, Life Saving Techniques, Day\Night Water Entries, Parachute Disentanglement, Search and Rescue Tactics, Night and Multiple Rescue Situation, and Helicopter Operations. Students will undergo physical training consisting of calisthenics, swimming, and running.
3. The NWP 3-50.1 is the Naval Search and Rescue manual. It promotes and maintains standardization of SAR procedures, equipment, and techniques. Course content is mandated by this manual and should be used in conjunction with Trainee Guide.
4. **Evaluations:**
  - a. Academic exams to test knowledge.
  - b. Practical exams to demonstrate correct rescue swimmer procedures.
  - c. Graded Physical Training events to verify effective conditioning.

Provide one copy of the NWP 3-50.1 to each student for use during the course.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. Extra Instruction and Remediation

a. Extra Instruction (EI)

1. Designed to assist students having difficulty attaining Course Objectives.
2. In comparison to standard instruction, EI consists of a lower student-to-instructor ratio and is taught at the pace of the slowest student.
3. Students are strongly encouraged to seek EI. Instructors may also assign EI.

b. Remediation

1. Assigned to students in response to failure of a criterion test; preparation for re-test.
2. Same instructional characteristics as EI.

6. Schedule.

Review locally prepared schedule with students. Emphasize evaluations, graduation, etc.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

B. Drop On Request/Training Time Out Policy

1. Drop On Request (DOR) Policy

All RSSTP courses are designated as high-risk training and are voluntary. Accordingly, students have the option to individually request termination of training.

Read verbatim the DOR policy written in this curriculum's Front Matter or from CNET Instruction 1500.20D.

Discuss thoroughly with IUT's this policy from the standpoint of students and as future instructors.

Emphasize DOR is in effect for the duration of the course.

Solicit questions.

2. Training Time Out (TTO) Policy

A TTO may be called in any training situation whenever a student or instructor expresses concern for personal safety or a need for clarification of procedures or requirements exists.

Read verbatim the TTO policy written in this curriculum's Front Matter or from CNET Instruction 1500.20D.

Discuss valid signals for a TTO in the RSSTP, including: verbal statements such as "TTO", or nonverbal statements such as hands crossed in a "T", pinching of a training partner while

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

submerged, grabbing the pool edge. When an instructor gives life saving aid to a student it MUST be accepted.

Instructors are responsible for maintaining situational awareness and shall remain alert to signals of student panic, fear, extreme exhaustion, or lack of confidence that may impair safe completion of the training exercise. Instructors shall immediately cease training when they consider such action appropriate.

Following a TTO the training situation shall be examined and additional explanation/ instruction will be provided as necessary to allow safe resumption of training.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. Administrative Procedures and Regulations

1. Purpose of Pre-requisite screens, Student Screening forms, "medical up chits".
2. Students will complete instructor, course and quality of life critiques.
3. Security precautions for personal valuables.
4. Following participation in rescue swimmer training, entries shall be made in the appropriate training jacket.

D. Safety Precautions

1. Hazardous conditions may exist in the training environment; students have a responsibility to report any unsafe/unhealthy condition they may discover.
2. In the event of an in-water emergency, signaled by multiple blasts on the whistle or sounding of applicable alarm, students will exit the pool immediately and proceed to the predesignated location, and follow the directions of staff.

Inform students of known hazards.

Inform students of emergency equipment location, fire exits, and the local procedures used in the event of a fire or other emergency.

Designate the appropriate location for muster after pool exit in case of an emergency.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

E. Mishap/Near-Miss/Unsafe Condition Reporting Procedures

1. A mishap is any unplanned or unexpected event causing personnel injury, occupational illness, death, material loss or damage, or an explosion of any kind whether damage occurs or not.
2. A hazardous condition is any situation which if allowed to go unchecked or uncorrected has the potential to cause a mishap.
3. A near miss is when a mishap is avoided merely by chance.
4. It is the responsibility of all Department of Defense personnel to report all mishaps, near misses, and any unsafe or unhealthy (hazardous) condition(s). If a mishap, hazardous condition or near miss occurs the student shall inform the instructor immediately. OPNAV 5100/11 with instructions is available for formal reporting.

Explain mishap and unsafe condition reporting options and locations of drop boxes for anonymous report submission.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION: None

EVALUATION: None

ASSIGNMENT: None

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 1.2

LESSON TOPIC: Pool Safety Regulations

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCE:

Standard Operating Procedure

INSTRUCTIONAL AID: Trainee Guide.

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

1.0 Upon completion of this unit of instruction, the student will define the requirements for RSS training, the Drop on Request (DOR)/Training Time Out (TTO) policies, and safety procedures used during Aviation Rescue Swimmer training.

Enabling Objectives:

Completely supported by this lesson topic:

1.5 Explain the general pool safety regulations per Rescue Swimmer School Standard Operating Procedures (SOP).

CRITERIA TEST: None

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Pool Safety Regulations

b. Major Teaching Points:

- (1) General Pool Safety Regulations
- (2) Water Exit
- (3) Emergency Situations
- (4) Shallow Water Blackout

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. General Pool Safety Regulations

1. No person with any type of skin fungus or disease is allowed in the pool without consent of the SAR Corpsman.
2. No running or skylarking.
3. Glass containers are not allowed on the pool deck or locker room at anytime.
4. Prior to entering the pool, all personnel shall take a shower.
5. Students will wear swim trunks and T-shirt during pool training. Additionally, a LPU-28 will be worn during mask, fin, and snorkel training.
6. No smoking.
7. Whistle Blasts:
  - a. One Whistle Blast - Instructor is seeking student's attention.
  - b. Multiple Whistle Blasts - Emergency.
8. No jewelry (e.g., rings, chains, etc.).
9. No diving.

Specify location for muster of students in case of an in-water emergency.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

10. **DO NOT** use ladders to climb out of the pool unless specifically told to do so.
11. Take off fins before standing or walking on the pool deck.
12. Ensure all pool drain covers are installed prior to commencing any disentanglement training.

B. Water Exit

1. For facilities with high pool deck edge:
  - a. Students swim to ladder, remove fins, and exit one at a time.
2. For facilities with low pool deck edge:
  - a. Students will swim to wall and place both hands on edge of pool.
  - b. Holding onto the edge, students will push up resting on both arms extended, roll to the right, and assume a sitting position facing the pool.
  - c. With both legs extended out of the water, remove gear and then turn to their left in order to avoid a collision.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. Emergency Situations

1. Call for help anytime you are in trouble and ONLY when you are in trouble.
2. If a person is in actual danger the instructor only will enter the water to render assistance.
3. If you see anyone in trouble inform an instructor immediately.

D. Shallow Water Blackout

**WARNING**

**Do not hyperventilate prior to underwater swims. Hyperventilation can lead to shallow water blackout.**

1. Hyperventilation (excessively rapid breathing) purges the blood of CO<sub>2</sub>, the body's cue to breathe.
2. Swimmer runs out of oxygen without ever feeling need to breathe, passes out and drowns.

DISCUSSION POINT

SUMMARY:

A. State Lesson Objectives

B. Review Major Teaching Points

APPLICATION: Students shall get a tour of the pool by a qualified instructor. All safety items will be pointed out and explained thoroughly.

EVALUATION: None

ASSIGNMENT: None

RELATED INSTRUCTOR ACTIVITY

Turn to cover page for objectives.

Briefly summarize.

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: UNCLASSIFIED

LESSON PLAN NUMBER: 2.1

LESSON TOPIC: Principles of Physical  
Fitness and Dry Land Conditioning Program

ALLOTTED LESSON TIME: 0.5 Classroom  
31.5 Laboratory  
8.0 Exam

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor Team  
Safety personnel and additional  
instructors as required per annex E,  
Staffing Requirements, of Curriculum  
Outline.

INSTRUCTIONAL REFERENCES:

1. OPNAVINST 3130.6, Naval Search and Rescue (SAR) Standardization Program.
2. Exercise Physiology McArdle, Katch and Katch.

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 2.0 Upon completion of this unit of instruction, the student will achieve and maintain a level of physical conditioning and proficiency that will enable satisfactory performance of Rescue Swimmer duties on land, in a swimming pool, or open ocean, while wearing appropriate Rescue Swimmer equipment, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 2.1 State the fundamentals of physical conditioning.
- 2.2 Perform the proper physical conditioning exercises and Physical Training Level 1, 2, and 3.
- 2.3 Explain the importance of proper technique and form when utilizing weight lifting equipment.

3. Navy Basic Weight Training National Strength and Conditioning Association, 2000.
4. Sports Medicine, Prevention, Evaluation, Management and Rehabilitation, Roy/Irvin.
5. Total Fitness for Life, Cooper.
6. Naval Aerospace Medical Institute Staff Exercise Physiologists
7. Essentials of strength training and Conditioning.

- 2.4 Demonstrate proper techniques for developing and maintaining overall muscular strength utilizing weight lifting equipment without injury to personnel or damage to equipment.

CRITERION TESTS:

Pass Level 1, 2, and 3 Fitness Tests and the Rescue Swimmer Fitness Test.

HOMEWORK: None

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Classroom
3. Overhead projector
4. PT Area (including pull-up bars and exercise mats or grass)
5. Whistle
6. Stop Watch
7. Running Trail/Area

8. Radio
9. Weight Training facility

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. (Lab only) State training time out policy.
5. (Lab only) Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Does anyone have a potentially disqualifying illness/conditions?

Refer questionable cases to a department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson.

DISCUSSION POINT

2. Lesson Overview

- a. Lesson Topic: Principles of Physical Fitness and Rescue Swimmer Dry Land Conditioning Program
- b. Major Teaching Points:
  - (1) Principles of Physical Fitness

RELATED INSTRUCTOR ACTIVITY

Briefly outline material to be covered.

PRESENTATION

A. Principles of Physical Fitness

- 1. Objectives of Rescue Swimmer conditioning program.
  - a. Achieve a level of conditioning which allows the Rescue Swimmer to operate for 30 minutes in a sea state of three (minimum). There is no substitute for practical preparation, but a comprehensive dry land conditioning program will assist toward this goal.
  - b. Pass Level 1, 2, and 3 Fitness Test and the Rescue Swimmer Fitness Test (Per OPNAVINST 3130.6).
  - c. Enhance performance of Rescue Swimmer duties while reducing risk of injury to self or survivor.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Job performance is enhanced for the Rescue Swimmer by maintaining the following:
  - a. Wellness: Is an approach to optimal health and emphasizes the swimmer's deliberate effort to stay healthy and achieve the highest potential for well being. Wellness is an ongoing process which requires daily decisions in areas of proper nutrition, stress management, disease prevention, substance abuse control, and physical fitness.
  - b. Physical Fitness: Is defined as the general capacity to adapt and respond favorably to physical effort. A physically fit rescue swimmer is able to perform normal daily activities effectively and have enough energy remaining to complete the SAR mission.
3. General Principles

**NOTE**

Aviation Rescue Swimmers are not unlike multi-sport athletes in that they must be able to perform a variety of physically demanding tasks on land and in water. The rescue swimmer requires a variety of training workouts, which focus on different goals. Because of the high level of multi-dimensional fitness required by the rescue swimmer, 6-10 training sessions per week may be required.

- a. Overload - System must be stressed to loads

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

greater than it is accustomed to in order to improve.

Increase resistance, repetitions, intensity, or duration during exercise.

- b. Specificity - Effects of exercise limited to system being stressed. To be a good swimmer, you must swim.
- c. Progression - Is continually applying overload to experience gain. (Trng. effect)

4. Aerobic Conditioning

- a. Includes aerobic endurance, cardiorespiratory fitness, cardiopulmonary fitness, and heart rate training. Aerobic exercise requires large amounts of oxygen, large muscle groups, is rhythmical in nature, and should be maintained over time at a moderate intensity.
- b. Examples include swimming, running, bicycling, etc. Weight lifting and most team sports are not aerobic activities.
- c. A good aerobic training program conforms to the F-I-T-T principle:

Ask students for examples of aerobic activities which can be done aboard ship, such as jumping rope, stationary cycles, treadmills, etc.

Write F, I, T, and T on board.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (1) Frequency - Minimum three times a week. If exercising daily, "Cross-Train" (alternate different activities) so skeletal muscles are not over-trained.
- (2) Intensity - Heart and breathing rate must be accelerated, but only to a level which can be maintained for extended periods of time. This is 60% - 75% of an individual's maximum heart rate. As a general guideline, an exerciser should be breathing hard yet still able to talk while performing aerobic activities.
- (3) Type - Must be an aerobic activity.
- (4) Time - Continuous exercise for a minimum of 20 minutes.

Fill in "Frequency".

Fill in "Intensity".

Fill in "Type".

Fill in "Time".

5. Anaerobic Conditioning

- a. Activities which are not long term or rhythmic in nature. They allow the body to recover between efforts. Many team sports and strength/speed training are considered anaerobic.
- b. Two workouts a week can build strength (given sufficient intensity).

Ask for examples.

**WARNING**

DISCUSSION POINT

**Do not exercise the same skeletal muscle group on successive days. Minimum 48 hours rest is required between workouts to avoid over-use injuries and optimize gains.**

RELATED INSTRUCTOR ACTIVITY

- c. A muscle which is too fatigued to contract can still be exercised using a technique called "negatives". For example, an exerciser performing pull-ups will reach a point where he/she can no longer lift themselves. The partner then assists (or "spots") the exerciser by QUICKLY lifting him/her all the way up. The exerciser SLOWLY returns to the starting position. Do not rest at the top or bottom of the cycle. This process can be repeated until the muscle achieves total failure.

6. Ideal Workout

- a. An adequate warm-up period (light jogging, jumping jacks) increases the core temperature 1-2°, warming up the muscles for more effective stretching and exercise.
- b. Slow, steady stretching reduces the risk of strains and improves performance. Avoid ballistic (jerking) stretches - they can cause strains. Avoid unsupported bending at the waist - it can cause back trouble.
- c. Training period - aerobic or anaerobic.
- d. A cool-down period of light exercise helps

DISCUSSION POINT

the body return to its normal state.

7. Preventing Dehydration

- a. Dehydration, a below normal level of water in the body, is a dangerous situation which can lead to heat injuries (heat stress and heat stroke) in the worst case and muscle cramps (including "side stitches") and sub-par performance at a minimum.

**WARNING**

**Exercisers, especially in hot, humid environments, are especially vulnerable to dehydration. Up to two quarts of water per hour may be lost through sweating during exercise and one quart per day is lost through urine.**

- b. Drink large amounts of clear, non-alcoholic, non-caffeinated, non-carbonated beverages before, during and after exercise.
  - (1) Water: The recommended amount for adults is ten 8oz cups during a normal day.
  - (2) Sports drinks with less than 8% dissolved sugar.  
  
Make your own: 1 gallon water, 6 oz sugar, 1 TBSP salt, flavored Kool-Aid sweetened with fructose (not sugar).
  - (3) Six to eight ounces of fluid consumed every 20 minutes of exercise can help

RELATED INSTRUCTOR ACTIVITY

Emphasize danger of heat disorders if environment is likely to be hot and humid, including enclosed pools.

Seek examples from students - many are not aware that caffeine in colas, etc. is a diuretic causing urination.

DISCUSSION POINT

replenish the sweat lost during exercises.

- c. By the time an active individual feels thirsty, he/she is behind the "dehydration power curve."

**NOTE**

The best indication of adequate hydration is clear to light yellow urine.

8. Exercises to avoid.

- a. Knee care. Avoid exercises which require the knee to bear weight while bent beyond 90 degrees.
- b. Back care.
  - (1) Avoid unsupported bending at the waist (i.e., standing toe touch).
  - (2) Avoid doing flutter kicks, leg levers, and horizontal scissor kicks in excessive amounts. These common exercises, mistakenly thought to strengthen the abdominal, predominantly work the Illio Psoas (hip flexor) muscles. These muscles are attached to the top front of the leg, wrap around outside the hip, and attach to the back of the pelvic girdle. Over-developed hip flexors cause a lordotic (sway-

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

backed) spinal curve and result in lower back pain.

9. Rest and Basic Nutrition

- a. The Rescue Swimmer School is a very demanding physical program. Hard workouts without adequate rest or nutrition will result in over-use injuries and illness.
  
- b. Adequate rest is vital if muscles are to recover and gain strength. Seven to nine hours of uninterrupted sleep is adequate for many adults, however, participants in this program need to "listen to their body" and get more sleep as required.
  
- c. Proper nutrition provides the Rescue Swimmer with the energy required to perform duties.

- (1) Carbohydrates: Provide energy and is the main fuel source to the cells in the body. Glucose is the main product of carbohydrate digestion. Carbohydrates are usually referred to as the following:
  - a. Simple: Derive from fruits and sugars. IE. Soda, candy, cake, ECT.
  
  - b. Complex: Derive from vegetables, grains, fruits, and beans. Most of your diet should come from complex carbohydrates.

Ask students for examples of carbohydrates, such as grains (bread and pasta), rice, potatoes, etc.

DISCUSSION POINT

(2) Avoid fatty, fried, and oily foods.

10. Conclusion

- a. The Rescue Swimmer School Dry Land Conditioning program is a comprehensive, total body workout designed by an exercise physiologist from the Naval Aeronautical Medical Institute. Special emphasis is given to muscle groups utilized in Rescue Swimming, specifically the pulling muscles of the upper body and the muscles in front of the thigh (which power the flutter kick).
- b. The principles of this unit apply to the training environment and the fleet.

RELATED INSTRUCTOR ACTIVITY

Unhealthy snack food should be avoided as much as possible.

Refer students to Information Sheet (2.1-1) in Trainee Guide to follow during explanation of Stretch and Calisthenics sets.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

**APPLICATION OF RESCUE SWIMMER DRY LAND CONDITIONING PROGRAM.**

**Basic philosophy**

The calisthenics and strength training program was designed to exercise muscles identified as being utilized while performing Rescue Swimmer duties.

All instructors shall complete the exercises with the students. The Lead Instructor will remain in the front and ensure correct form/pace are utilized, except during strength training exercises.

**STRETCHING AND CALISTHENICS:**

Before beginning dry land conditioning, ensure heat index does not preclude exercise.

Calisthenics shall be performed per the lesson plan and the Master Course Schedule. Conduct a stretch set followed by **only one repetition of the calisthenics routine**, group-paced run, and a cool down stretch set with water breaks between evolutions. (Requiring students to bring a full squeeze bottle to PT will reduce the time between events, increasing the effectiveness of the program. Stretching and the calisthenics routine shall

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

take place in a designated area utilizing exercise mats, non-sloping sandy area or grass.

All stretches and calisthenics are initiated by the lead instructor stating the number of repetitions, the type of exercise, and by giving the commands "ready . . . begin".

Example: "30 four-count jumping jacks-ready-begin".

The exercises shall be performed in a smooth, continuous manner with an emphasis on correct form. The instructor shall state the intermediate counts as indicated in the text by "One", "Two", or "Up", "Down", etc. The students shall call out the completed repetition by stating the number of repetitions completed as indicated in the text by "(Count)".

There will be two different sets of stretching, one will be for calisthenics and running and the other will be for strength training and swimming. One set of stretches will be sufficient for the day depending on which exercise routine that is being performed. The time length for holding a specific stretch shall be no less than 15 seconds.

**STRENGTH TRAINING:**

Strength training workout will be conducted in two alternating day groups Core Exercises and Auxiliary Exercises (i.e. Core-Tuesday, Auxiliary -Thursday). Perform 2-3 sets of 8-12 repetitions for each exercise. All repetitions will be performed in a slow and controlled manner.

Machines and alternate strength training equipment that perform the same exercise may be used in place of free weights. However, to experience the full benefits of the strength training program, free weights should be used to develop the stabilizing muscles as well as the primary muscle. **When performing Dead Lifts, begin with a moderate weight level to prevent over exertion of lower back muscles.**

**RUNNING:**

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

Running sets will be performed for a specific distance with a maximum increase of 15% mileage per week. The first week will have a maximum distance of 6 miles (2 miles per run) and thus increasing 15% distance per week there after (i.e. 2<sup>nd</sup> week 6.9 miles/2.3 miles per run, 3<sup>rd</sup> week 7.9 miles/2.6 miles per run, 4<sup>th</sup> week 9 miles/3 miles per run, 5<sup>th</sup> week 10.5 miles/3.5 miles per run). All runs shall be kept between 8 to 10 minutes per mile pace.

During runs, faster runners may be allowed to circle back to pick up slower runners, or be allowed several short sprints during the course of the continuous run to increase intensity and training effect. Terrain runs can be incorporated to provide variety and increases the difficulty of the running session. Due consideration shall be given to the course to ensure student safety.

Brief stops for calisthenics exercises (i.e. push-ups, crunches, flutter kicks) can be included during the course of the run. **This may include up to three exercises in the calisthenics exercise routine, and not to exceed the PT level the class is currently training under.**

Interval run: Interval training runs are best conducted on a quarter mile track. However, a safe running route with marked distances is sufficient. The interval training session is performed by running quarter mile intervals at a fast pace (near maximum), followed by a 1-4 minute recovery period. Two to four intervals are an adequate training stimulus. Interval running may only be done once a week and not to be combined with endurance running. No calisthenics are to be performed between running intervals.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**STRETCH SET FOR CALISTHENICS AND RUNNING(15 Sec.)**

**POST RUN COOL DOWN STRETCHES (30 SEC.)**

ANKLE ROTATIONS, 10 EACH DIRECTION EACH ANKLE  
JUMPING JACKS, 30 FOUR-COUNT  
ROTATOR CUFF STRETCH  
TRICEPS STRETCH  
QUADRICEPS STRETCH  
INSIDE HURDLER STRETCH  
GROIN STRETCH  
KNEE TO CHEST  
BOTH KNEES TO CHEST  
BACK TWIST  
CALF STRETCH  
ACHILLES STRETCH

QUADRICEPS STRETCH  
INSIDE HURDLER STRETCH  
GROIN STRETCH  
KNEE TO CHEST  
CALF STRETCH  
ACHILLES STRETCH

**CALISTHENICS SET** (REPETITIONS FOR LEVELS I, II AND III FOLLOW)

PULL-UPS (5, 6, 8)  
FOUR-COUNT LUNGES (15, 18, 20)  
PUSH-UPS (25, 30, 35)  
BENT KNEE SIT-UPS (20, 25, 30)  
PULL-UPS (5, 6, 8)  
TWO-COUNT SQUATS (15, 18, 20)  
WIDE ARM PUSH-UPS (25, 30, 35)  
CRUNCHES (25, 30, 35)  
FOUR-COUNT DIRTY DOGS (15, 20, 25)  
FOUR-COUNT OBLIQUE CRUNCHES (15, 18, 20)  
FOUR-COUNT SUPERMANS (15, 18, 20)  
FOUR-COUNT FLUTTER KICKS (25, 30, 35)  
TRICEPS PUSH-UPS (15, 20, 25)  
CALF RAISES (30, 35, 40)

DISCUSSION POINT

CROSS KNEE OBLIQUE CRUNCHES (15, 18, 20)  
EIGHT-COUNT BODY BUILDERS (10, 12, 15)  
HIP FLEXOR STRETCH, 30 SECONDS EACH LEG

RELATED INSTRUCTOR ACTIVITY

**STRETCH SET FOR STRENGTH TRAINING AND SWIMMING**  
**(15 Sec.)**

PUSH-UPS, 10  
ARM CIRCLES, 10 SECONDS EACH DIRECTION  
FLUTTER KICKS, 25  
LUNGES, 10  
CRUNCHES, 15  
ABDOMINAL STRETCH  
ROTATOR CUFF STRETCH  
CHEST STRETCH  
TRICEP STRETCH  
QUADRICEP STRETCH  
INSIDE HURDLER STRETCH  
KNEE TO CHEST  
BOTH KNEES TO CHEST  
BACK TWIST

**STRENGTH TRAINING EXCERSISES**

**CORE EXERCISES**

PULL-UPS (5, 6, 8)  
SQUATS  
DEAD LIFTS  
MILITARY PRESS  
BENT OVER ROW  
BENCH PRESS  
BENT KNEE SIT-UPS (20, 25, 30)  
CRUNCHES (20, 25, 30)

**POST SWIM/STRENGTH TRAINING STRETCHES**  
**(30 Sec.)**

ROTATOR CUFF STRETCH  
CHEST STRETCH  
TRICEP STRETCH  
QUADRICEP STRETCH  
INSIDE HURDLER STRETCH  
KNEE TO CHEST  
BOTH KNEES TO CHEST  
BACK TWIST  
CALF STRETCH

**AUXILIARY EXCERSISES**

SEATED CABLE ROW  
TRICEPS CABLE PRESS DOWNS  
INCLINE BENCH PRESS  
DUMBBELL BICEPS CURL  
LEG PRESS  
LAT PULL DOWNS  
BENT KNEE SIT-UPS (20, 25, 30)  
CRUNCHES (25, 30, 35)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

CROSS KNEE OBLIQUE SIT-UPS (15, 18, 20) CROSS KNEE OBLIQUE SIT-UPS (15, 18, 20)

A. Stretch

1. Ankle Rotations

Announce and lead.

a. Purpose - To stretch ankle tendons prior to jumping jacks.

b. Action:

(1) From a sitting position cross left leg over right knee, place left hand on left ankle, with right hand grasp toes of right foot and rotate each direction 10 times making as large a circle as possible.

(2) Switch and repeat other ankle.

2. 30 Four-count Jumping Jacks

a. Purpose - warm and limber up.

b. Action:

(1) "Ready" Stand with arms at side. Begin.

(2) "One" Raise arms overhead relatively straight, feet slightly wider than

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- shoulder width:
- (3) "Two" Return to ready position.
  - (4) "Three": as "One".
  - (5) "(Count)": as "Two".
3. Rotator Cuff Stretch Announce and lead.
- a. Purpose - stretch back of shoulder.
  - b. Action - from a standing position, reach right arm straight out. With left hand, grasp right arm just above the elbow. Pull right arm across body ensuring thumb pointed up.
  - c. Repeat other arm.
4. Triceps Stretch Announce and lead.
- a. Purpose - stretch back of arm.
  - b. Action - bring arm up and back so that elbow is pointing upward and the hand rest between the shoulder blades. Gently pull arm toward the midline behind the head to stretch the tricep muscle. Do not use back of head for leverage:
  - c. Repeat other side.
5. Quadriceps Stretch Announce and lead.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Purpose - stretches quadriceps muscles (front of thigh).
  - b. Action - Lie on stomach. Bend right leg at knee and grasp right ankle with right hand. Pull foot towards thigh. Do not allow foot to be pulled out to side. Ensure knees stay together.
  - c. Repeat other leg.
6. Inside Hurdler Stretch Announce and lead.
- a. Purpose - stretch hamstrings (back of thigh).
  - b. Action - from seated position, bend left leg such that foot is directly in front and approximately 6" from body. Stretch right leg straight out WITH KNEE AND FOOT POINTING STRAIGHT UP. Reach hand over right foot, slowly bend trunk forward from hips. Keep back and neck in-line; DO NOT BEND HEAD DOWN. Repeat other leg.
7. Groin Stretch Announce and lead.
- a. Purpose - stretch groin muscles.
  - b. Action - seated position with feet pulled in, soles of feet together, heels approximately 6" from body, hands on ankles, elbows on upper leg. Leaning trunk forward

DISCUSSION POINT

slightly, WITH BACK AND NECK STRAIGHT, apply gentle pressure with elbows.

RELATED INSTRUCTOR ACTIVITY

- |     |   |                    |
|-----|---|--------------------|
| 8.  | Knee-to-Chest Stretch   | Announce and lead. |
|     | a. Purpose - stretches gluteal and hamstrings.  |                    |
|     | b. Action - On flattened back with head down, raise right leg. Keeping left foot on deck, grasp the leg with both hands placed behind the knee, pull leg toward chest.                            |                    |
|     | c. Repeat other leg.  |                    |
| 9.  | Both Knees-to-Chest Stretch   | Announce and lead. |
|     | a. Purpose - stretch lower back.  |                    |
|     | b. Action - laying on back, place hands behind knees and pull to chest. Tilt pelvis off deck.   |                    |
| 10. | Back Twist  | Announce and lead. |
|     | a. Purpose - stretch lower back and torso.  |                    |
|     | b. Action - from seated position, stretch left leg straight out. Hook right foot over left leg near knee. Reach left arm across body and use right leg for leverage; gently twist trunk to right. |                    |
|     | c. Repeat other leg.  |                    |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

11. Calf and Achilles stretch.

Announce and lead.

- a. Purpose - stretch calf and Achilles tendon.
- b. Action - With feet approximately 5' from bulkhead, legs straight, lean forward and place both hands on bulkhead. Adjust foot placement as required to provide sufficient stretch.
- c. Repeat with bent legs, shifting stretch to Achilles tendon.

12. Arm Circles

Announce and lead.

- a. Purpose - Warm up and stretch the shoulder muscles.
- b. Action - Extend arms out to the side level with the shoulders and rotate 6-inch circles for 10 seconds forward and backwards. Repeat steps with 24-inch circles.

13. Abdominal Stretch

Announce and lead.

- a. Purpose - stretch abdominal muscles.
- b. Action - While lying in the prone position, raise the upper body, by placing the upper body weight on the elbows. Next, raise the upper body farther by pushing up with the palms of the hands. Lower slowly.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

14. Chest Stretch

Announce and lead.

- a. Purpose - stretch pectoralis and deltoid muscles.
- b. Action - The chest stretch is a partner assisted exercise. Have your partner stand behind you and grasp both of your arms at your wrists. Your arms should be extended at your side and your palms facing forward. Your partner then pulls your arms back slowly and smoothly until you feel the stretch in your pectoralis and deltoid muscles. The stretch is held for the prescribed amount of time and released slowly.

**CALISTHENICS EXERCISES**

1. Pull-Ups

Announce and lead.

- a. Purpose: Strengthen the pulling muscles of the upper body: back, biceps, forearms, back of deltoids (shoulders). These muscles are used in the crawl stroke and when hooking survivor to cable.
- b. Action:
  - (1) "Mount bar": Hang from bar, palms facing away.
  - (2) "Up": Without kicking, pull chin above

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

bar.

- (3) "(Count)". Without dropping, steadily lower body to starting position. Monitor number of unassisted pull-ups students perform; recognize gains.

- c. Variations. Upon reaching partial failure (unable to lift self), the spotter shall quickly lift the exerciser to the "up" position. The exerciser will slowly lower themselves to the count position. **Upon reaching total failure (unable to lift or lower self), the exerciser shall hang on the bar until the group is finished.**

WARNING. DO NOT SPOT EXERCISER BELOW THE WAIST. SHOULD THE EXERCISER'S HANDS SLIP, IT IS IMPERATIVE THE FEET ARE FREE TO BREAK THE FALL.

2. Four Count Lunges.

Announce and lead.

- a. Purpose. Strengthen the quadriceps for effective flutter-kicking.
- b. Action.
  - (1) "Ready". Stand with back and neck straight and feet shoulder width apart.
  - (2) "One" Take a large step forward with right leg so your leg forms an angle greater than 90 degrees. YOUR KNEE SHOULD NOT BE PAST YOUR FOOT. At the same time, bring your left knee down, almost to the floor (DO NOT LET DOWN KNEE HIT THE DECK).

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) "Two" Stand up, returning to starting position.
- (4) "Three" Repeat step one with left foot.
- (5) "(Count)" Stand up, returning to starting position.

3. Pushups

Announce and lead.

b. Action.

- (1) "Ready" The "lean and rest" - body is prone, **supported by straight arms on flat hands** approximately shoulder width apart and feet. THE BACK IS STRAIGHT, NECK IN-LINE, HEAD NEITHER DIPS NOR LOOKS UP. "Begin".
- (2) "Down" Lower body till upper arms are bent at a 90-degree angle.
- (3) "Up" Raise body to starting position.  
"(Count)"

Do not let students allow their backs to sway or raise their posteriors.

4. Bent Knee Sit-ups

Announce and lead.

a. Purpose. Strengthen abdominal muscles.

b. Action

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (1) "Ready" Starting in the up position, with legs bent at a 90° angle, keep feet on deck, cross arms over chest (hands maintain contact with shoulders). "Begin".
  - (2) "Down" Keeping heels on deck, slowly lower torso until shoulder blades touch deck. Maintain muscles in tension; immediately begin recovery.
5. Two Count Squats. Announce and lead.
  - a. Purpose: Strengthen the quadriceps (muscles in front of the thigh), the muscles used in flutter kicking.
  - b. Action.
    - (1) "Ready" Hands on hips, feet shoulder width apart. MAINTAIN STRAIGHT BACK, HEAD LOOKING FORWARD, THROUGHOUT EXERCISE. "Begin".
    - (2) "Down" Bend legs to a 90-degree angle.
    - (3) "Up" Return to ready position. (Count)
6. Wide Arm Push-ups. Announce and lead.
  - a. Purpose. Same as regular push-ups, with greater emphasis on chest muscles.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Action.  
  
All same as push-ups except hands are placed significantly wider than shoulder-width.
  
  - 7. Crunches.  
  
a. Purpose. Strengthen abdominal.  
  
b. Action.
    - (1) "Ready" Lying on back, raise bent legs, knees relaxed. Cross arms over chest, fingers maintaining contact with shoulders. ("Begin").
    - (2) "Up" Raise torso off deck until elbows touch thighs. Pause briefly:
    - (3) "(Count)" Slowly lower torso only until shoulder blades touch deck. Do not relax abdominal.
  
  - 8 Dirty Dogs.  
  
a. Purpose. Strengthen Hip Extensors and Abductors.  
  
b. Action.
    - (1) Start in a kneeling position with hands flat on the ground and legs forming a 90-degree angle.
- Announce and lead.
- Be alert for students relaxing muscles at this point.
- Announce and lead.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (2) Slowly raise left leg to the side, knee bent, (one), slowly lower left leg to starting position without touching the deck (two), slowly straighten left leg back with toe pointed down (three), slowly return left leg to starting position (four); repeat count as required then switch to right leg.

9. Four Count Oblique Crunches.

Announce and lead.

a. Purpose. Strengthen oblique's, the muscles on the sides of the abdominal wall.

b. Action.

- (1) "Ready" Same as regular crunches.
- (2) "One" Raise and twist torso until right elbow touches left thigh.
- (3) "Two" Lower body only until both shoulder blades touch deck. Do not relax abdominal.
- (4) "Three" Raise and twist torso until left elbow touches right thigh, similar to "one".
- (5) "(Count)" As in two.

10. Four Count Supermans.

Announce and lead.

a. Purpose. Strengthen hip extensors and lower

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

back.

b. Action:

- (1) "Ready". Lying on stomach, chin off ground, hands forward with palms on deck, feet about shoulder width apart. "Begin".
- (2) "One". Raise left arm and right leg 6 inches off deck and hold position for 3 to 5 seconds.
- (3) "Two". Return to starting position.
- (4) "Three". Raise right arm and left leg 6 inches off deck and hold position for 3 to 5 seconds.
- (5) "(Count)". As in one.

11. Four Count Flutter Kicks.

Announce and lead.

a. Purpose. Strengthens abdominals and hip flexors.

b. Action:

- (1) "Ready". Lying on back, head up, hands (palms down) under the hips, legs extended, feet together 6 inches above the deck. "Begin"

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (2) "One". Lift left leg 18 inches above deck, keeping the leg straight.
- (3) "Two". Lift right leg to same position while returning left to starting position.
- (4) "Three". Reverse step (2).
- (5) "Count". Shift legs once more.

12. Triceps Push-ups.

Announce and lead.

- a. Purpose. Strengthens arms, shoulders and chests with an emphasis on the triceps muscles in back of the upper arm.
- b. Action:
  - (1) "Ready" Similar to regular push-ups, only hands are much more close together. Thumbs touch, thumbs and index fingers form half-box (not diamond). Feet are approximately shoulder width apart. "Begin"
  - (2) "Down" WITH NECK AND BACK IN LINE, HEAD NEITHER RAISED NOR DIPPED, BUTTOCKS NEITHER SWAYED DOWN OR ELEVATED, lower body until arms are bent at a 90-degree arm.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) "Up" Maintaining form, raise body.  
" (Count) "
- 13. Calf Raises. Announce and lead.
  - a. Purpose. Strengthen calf muscles.
  - b. Action:
    - (1) "Ready" Standing position with feet shoulder width apart and toes pointed forward. "Begin"
    - (2) "Up" Raise heels off deck and pause briefly.
    - (3) "Down" Return to starting position.  
" (Count) "
- 14. Cross Knee Oblique Crunches. Announce and lead.
  - a. Purpose. Strengthen abdominal muscles.
  - b. Action:
    - (1) "Ready" Lay down with legs bent with left ankle positioned on right knee and right hand resting on the temple. Left arm is out to the side. "Begin"
    - (2) "Up" Raise upper torso and touch right elbow to left knee.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) "Down" Return to starting position.  
Repeat IAW calisthenics guide.
- (4) Switch and repeat.
- 15. Eight-count body builders Announce and lead.
  - a. Purpose. Full-body conditioning.
  - b. Action:
    - (1) "Ready". Stand with arms at side and feet shoulder-width apart. "Begin".
    - (2) "One". Squat down to an all fours position. DO NOT LET KNEES BEND PAST 90 DEGREES.
    - (3) "Two". Thrust legs out to "lean and rest" position of push-ups.
    - (4) "Three". As in push-ups, lower body until arms are parallel to deck.
    - (5) "Four". Raise body to "lean and rest".
    - (6) "Five". Straddle legs.
    - (7) "Six". Bring legs together.
    - (8) "Seven". Return to all fours. DO NOT BEND BEYOND 90 DEGREES.
    - (9) "(Count)". Return to ready position. Ensure all students

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

16. Hip Flexor Stretch.

Announce and lead.

a. Purpose. Stretch Illio Psoas muscles.

b. Action:

(1) Put right leg well out in front of you, as if in a lunge. Allow left knee to rest on deck. Lower torso and push hips forward, emphasizing stretch on front of left leg. Body should twist slightly.

(2) Repeat other leg.

B. Instructions for Group Paced Runs

Students shall run continuously, in formation, The pace shall be such that all students can stay with the group, "jodies" can be sung.

According to physiologists, there is "minimal cardio-vascular transfer" between running and swimming. GPRs primarily benefit students by providing esprit de corps and a break from the pool. Accordingly, motivation should be emphasized more than conditioning.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. Instructions For Post Run Cool Down Stretches

For maximum benefit, perform stretch set immediately after completion of run.

1. All stretches will be conducted IAW initial stretch set criteria.

Stretches to complete are listed on page 2.1-15 of this lesson plan.

D. Description of Strength Routine

INSTRUCTOR NOTES. For maximum benefit, perform the set with minimum rest between exercises. Perform the exercises themselves at the steady pace as demonstrated in the Instructor Course.

The program is designed to provide a good workout to as many participants as possible. Students are to perform all exercises with correct form.

E. Training Safely

- a. Start out slowly and build up progressively over a period of time.
- b. Use correct lifting technique at all times when training.
- c. Wear athletic shoes and appropriate clothing for the activity. Use weightlifting gloves, straps, or chalk whenever there is a risk of slippage.

F. Training Correctly

- a. Use a good grip.
- b. Always lift from a stable position.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- c. Keep the weight close to your body.
- d. Use leg muscles, not the lower back, when lifting a weight from the ground.
- e. Lift in a smooth, controlled fashion.
- f. Exercise through a full range of motion.
- g. Exhale as the weight passes through the "sticking point", the most difficult part of the lift, and inhale during the recovery phase. **Do not hold your breath.**
- h. Ensure bars are evenly loaded, outside collars and locks are secure.
- i. When returning a barbell to a rack (squat, bench press), rest the bar on both sides of the rack before releasing.
- j. Use a spotter (assistance) when needed in the execution of an exercise, when a weight is heavy, lifting overhead, lifting over the body, when inexperienced with a weight or exercise, or when loss of balance may occur.
- k. Adjust bench height, lever arm, and weight for body size and ability before lifting.
- l. Maintain regular training days.
- m. Do not train if ill.
- n. Train with a partner.
- o. Stretch between weight training exercises whenever muscles feel overly tight.

## DISCUSSION POINT

## RELATED INSTRUCTOR ACTIVITY

Conversely, the program is designed so that all students can complete every set (if administered correctly). Some will achieve muscular failure before their classmates. These students actually get the most from the workout. **Inability to perform a given number of repetitions during a workout does not constitute failure to meet a training standard. (PT Level 1, 2, and 3 tests and the Rescue Swimmer Fitness Test are the only evaluations).**

## STRENGTH TRAINING EXERCISES

### PRESENTATION

#### 1. Squats

- a. Address the bar while it rests on the rack. Place the bar across the back of the shoulders just below the neck. Place the hands equal distance from the center of the bar and comfortable distance from the shoulders. Hold the chest up and out and pull the shoulder blades together.
- b. Place the hip under the bar, isometrically contract the back and lift the bar upward off the rack.
- c. With the aid of a spotter step back and clear of the rack.
- d. Position feet flat on the floor between hip and shoulder width apart, toes outward 15-30 degrees, eye level and looking straight ahead.

Keep feet flat on the deck throughout the exercise.

DISCUSSION POINT

- e. Downward movement: When stable begin the downward motion by flexing at the knees and hip, lowering the body until the top of the thighs are parallel to the deck. There should be no pause in the down position.
- f. Upward movement: Push into the floor with the feet while extending the knees and hips at the same rate so that the torso to floor angle remains the same.
- g. Stand up to the starting position and repeat the movement for the prescribed number of reps.

**Note**

Keep the back isometrically contracted. The back should never bow forward. There should be no bouncing at the bottom. The lift should be smooth, controlled and calculated.

2. Deadlifts

- a. Address the bar with feet wider than shoulder width apart, sumo style.
- b. Flex at the hip and knees lowering the butt keeping the back isometricly contracted, flat and at approximately 45 degree to the deck. Grasp the bar with hands equal distance for the center of the bar and the hands inside the knees, palms to the back.
- c. Arms should remain extended, elbows rotated

RELATED INSTRUCTOR ACTIVITY

Pronated or Alternated Grip may be used.  
Alternated Grip: One hand is pronated, the other supinated.

(Supinated Grip: Underhand with palms facing up)

DISCUSSION POINT

slightly out with shoulders pulled back and ahead of the bar.

RELATED INSTRUCTOR ACTIVITY

- d. Begin by pressing the feet into the floor extending the knees and hips while maintaining the shoulders and hips a constant relative position to each other and the back in a constant angle with the floor.
- e. Continue to push with the legs extending the knees and hips so the bar will pass the knees. As the bar passes the knees begin to extend the back until standing completely erect, (legs and back extended) pull the shoulders back only slightly. Do not over exaggerate this movement.
- f. Decelerate the bar to the ground by doing the lift in reverse.
- g. Relax and re-address the bar repeat for the prescribed number of reps.

**Note**

Do not allow the back to bow. Control the bar all the way to the floor maintaining the back isometrically contracted, flat and at approximately 45 degree to the deck.

3. Military Press

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Stand or sit with feet hip width apart. Bar should be resting in the rack. Grasp bar with a grip so that the forearms are perpendicular to the deck and equal distance from the center of the bar.
- b. (IF STANDING) Un-rack the bar by allowing it to rest on the anterior shoulder/upper chest then stand up under the bar and step back, clear of the rack.
- c. Press bar straight up to arms extended position, keep the chin tucked in and down to avoid striking the bottom of the chin.
- d. Lower the bar to chest smoothly and controlled repeat for the prescribed number of reps.

**Note**

Avoid bowing the back. The back should remain straight and isometrically contracted for stability.

4. Bent Over Row

- a. Address the bar standing feet hip width apart and grasp the bar equal distance from the center of the bar with a wider than normal grip. Lift the bar from the floor using the dead lift technique to a fully erect posture.
- b. Flex at the knee and forward at the hips,

DISCUSSION POINT

with a slight forward lean, so the torso is at a 45-degree angle with the floor.

- c. With the arms fully extended, the bar should hang so that it will not hit the knees.
- d. Pull the bar to the bottom of the chest with the elbows pointed outward, slight Pause.
- e. Return to start position with arms full extended in a controlled and deliberate way, repeat motion for the prescribed number of reps.

5. Bench Press

- a. Lay on bench with head, shoulder blades and hips touching bench. Feet flat on the floor. There should be minimal or no arch in the low back.
- b. Take bar with a closed/pronated grip at a width so that the forearms are perpendicular to the deck and hands equal distance for the center of the bar.
- c. Raise the bar from the rack to an arm extended position over the face.

RELATED INSTRUCTOR ACTIVITY

Closed Pronated Grip:  
Finger and thumb are wrapped (closed) around the bar. The Pronated, Supinated, and Alternated Grip are examples of a "Closed Grip". **For safety reasons, always use a closed grip.**

DISCUSSION POINT

- d. Lower bar to chest at the nipples, the bar should make contact with your body but allow only a slight pause.
  
- e. Press the bar up and forward (toward the head) in a slight arcing movement ending at the start position, repeat movement for prescribed number of reps.

6. Seated Row

- a. Seated, with knees slightly bent, holding the handle with both hands, arms extended upper body erect.
- b. Pull the shoulder blades together.
- c. Pull cable handle inward toward bottom of rib cage.
- d. After making contact with the lower ribs extend the arms out again smoothly and controlled to the start position. Repeat movement for prescribed number of reps.

**NOTE**

The upper body should remain erect with little or no forward and backward rocking at the hips.

7. Triceps Press Down

- a. While standing with a pronated grip on a

RELATED INSTRUCTOR ACTIVITY

pronated grip: Overhand

DISCUSSION POINT

straight or V shaped bar, press the bar down to the start position. Elbows are at the sides of the torso and flexed at a 90 degree angle.

- b. Begin the exercise by pressing the bar down extending the arms while keeping upper arm stationary and against the sides of the torso.
- c. Return the bar to the start position. Elbows at 90 degrees. Repeat movement for prescribed number of reps.

8. Incline Press

- a. Lay on the bench with the head, shoulder blades and hips touching the bench. Feet flat on the floor. There should be minimal or no arch in the lower back.
- b. Grasp the barbell with a closed/pronated grip. Lower the bar until it touches the upper chest. Pause momentarily and press upwards.

**NOTE**

Can be performed with dumbbells as well.

- c. Lay on bench with head, shoulder blades and hips touching bench. Feet flat on the floor. There should be minimal or no arch in the low back.

RELATED INSTRUCTOR ACTIVITY  
with knuckles facing up.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- d. Grasp the dumbbells with a closed/pronated grip. Lower the dumbbells until they are at chest level. Pause momentarily and press upwards.

9. Dumbbell Curls

- a. Stand holding dumbbells by thigh, palms inward and arms extended.
- b. Flex the elbow, bring the forearm toward the same side shoulder. While progressing through the movement, supinate the forearm so the lift finishes palm facing the shoulder and the arm is fully flexed.
- c. Lower dumbbells to start position by extending, smoothly and controlled, the forearm to the fully extended position with arms at the side and palms inward. Repeat movement for prescribed number of Reps.

If weight or bending at the hips is required to raise the weight, too much weight is being used.

10. Leg Press

- a. Sit in the machine with the head, shoulder, lower back, and hips pressed against the pads.
- b. Place feet on the platform between hip and shoulder width apart with toes outward 15-30 degrees. Grasp the support handles and extend hip and knees to an almost fully

Forcefully extending the knees will cause the knee to lock-out and possible Hyperextension

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

extended position. (knees should be slightly bent) Do not forcefully extend the knee.

- c. Remove the support mechanism and grasp the seat handles again.
- d. Allow the hips and knees to slowly flex and lower the foot platform until the knee angle is less than 90 degrees.
- e. Forcefully extend the legs and hips pushing the platform to the leg extended position, do not forcefully lock out the knee. Repeat movement for prescribed number of reps.
- f. Upon completion of exercise replace the supports and exit the machine.

11. Lat Pulls

- a. While seated at this exercise machine grasp bar with wide grip. Pull the bar down to the top of the sternum, with only a slight backward lean. Maintain correct body position throughout exercise keeping the torso erect.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

EVALUATION

Perform and Pass a level 1, a level 2, and a level 3 PT test.

Recognize the student achieving the highest point total.

Perform and Pass the Rescue Swimmer Fitness Test per reference (1).

Note to instructors the PT level examinations are not to evaluate a students overall fitness level. They are designed to test the student's ability to perform a level 1, 2, or 3 PT. Instructors shall stretch students using the calisthenics stretch set. Once completed Instructors shall have students form up in two lines facing each other. Rank one will perform an exercise then rank two will perform the same exercise before moving on to any other exercises. Instructors are to ensure that correct form is performed.

Exercises will consist of the following;

	<u>Level</u>	<u>1</u>	<u>2</u>	<u>3</u>
Pull-ups		3	4	5
Lunges		15	18	20
Regular width push-ups		25	30	35
Bent knee sit-ups		20	25	30
Wide arm push-ups		25	30	35
Crunches		25	30	35
Flutterkicks		25	30	35

DISCUSSION POINT

Tricep push-ups

15    20    25

RELATED INSTRUCTOR ACTIVITY

Each set of exercises are to be performed with-in two minutes at the students own pace, Instructors are not to dictate the pace of any exercise during a PT level evaluation. Students are to do the exercises in accordance with the procedures outlined in this lesson plan. They are to do only the number of exercises listed above for each level and once a student has reached the correct count on an exercise he/she shall stand up and wait for further instruction. As soon as all students are standing in one rank the next rank should begin the exercise immediately. Extended breaks between one rank and the next performing exercises should be kept to a minimum and breaks between exercises should be short and no more then one minute.

PT examinations shall not be performed on a day immediately following a PT day, but shall be scheduled for a day following a non-PT day.

If a student is unable to reach any count doing an exercise correctly as outlined in this lesson then they shall be marked down as a failure and retest on the next day.

PT level 1, 2, and 3 run times;

Level 1	2.0 miles	18:00 to 20:00 minutes
Level 2	2.5 miles	22:30 to 25:00 minutes

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

Level 3            3.0 miles            27:00 to 30:00 minutes

Runs are to be completed as a group paced run with an Instructor leading and setting a steady pace which will insure completion of the run with-in the above specified time parameters. Runs are to be completed on a prepared and marked path. Any student unable to finish the run in the same position in ranks where they began the run or falls out of a run will be considered a failure and be retested on the next day.

**NOTE**

A student is considered falling out of a group paced run when they slow the group down, that means having to turn the class around to pick someone up or a student has fallen 50 feet behind. When a student has fallen out they are to be put into the duty van and are considered a failure.

ASSIGNMENT

None.

JOB SHEET 2-1  
 PRINCIPLES OF PHYSICAL FITNESS AND DRY LAND CONDITIONING

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
 INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation procedure: Instructors are to ensure that all students are doing all exercises in accordance with lesson topic 2-1. If a student is performing an exercise incorrectly the instructor shall immediately correct their form and instruct the student counting to not add the improperly performed exercise to the overall number for that particular exercise.

Exercises will consist of the following;

	Level	1	2	3	# Of Reps
Pull-ups		3	4	5	_____
Lunges		15	18	20	_____
Regular width push-ups		25	30	35	_____
Bent knee sit-ups		20	25	30	_____
Wide arm push-ups		25	30	35	_____
Crunches		25	30	35	_____
Flutter kicks		25	30	35	_____
Tricep push-ups		15	20	25	_____

Any student who does not achieve the minimum number of repetitions of the exercise for the level of test they are taking, will fail the entire test. Any student who fails will be retested on the next physical training day.

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 2.2

LESSON TOPIC: Swimming Proficiency and  
Conditioning

ALLOTTED LESSON TIME: 12.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Laboratory Instructor  
Safety personnel and additional  
instructors as required per Annex E,  
Staffing Requirements, of Curriculum  
Outline

INSTRUCTIONAL REFERENCES:

1. USN Water Survival Instructor's  
Manual (CNET P1552)

INSTRUCTIONAL AIDS:

1. Swimming pool
2. Rescue Swimmer's Equipment
3. Stopwatches

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 2.0 Upon completion of this unit of instruction, the student will achieve and maintain a level of physical conditioning and proficiency that will enable satisfactory performance of Rescue Swimmer duties on land, in a swimming pool, or open ocean, while wearing appropriate Rescue Swimmer equipment, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 2.5 Perform swimming, proficiency and conditioning drills and timed swim evolutions.

CRITERION TEST: Job Sheet 2.2 Checklist

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self; give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Reiterate the training time out policy.
5. Ask the following questions:

- a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
- b. Has anyone taken over-the-counter medications within 24 hours?
- c. Does anyone have a potentially disqualifying illness/condition?

Refer questionable cases to the department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements:

The purpose of this training is to develop stamina and endurance by gradually building strength and perfecting stroke mechanics.

Establish importance and relevance of lesson material using personal experience or anecdote.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2. Lesson overview
  - a. Lesson Topic: Swimming Proficiency, Conditioning Drills and Timed swims
  - b. Major Teaching Points:
    - (1) Swim conditioning drills in the swimming pool
    - (2) Timed swims

Briefly outline material to be covered.

PRESENTATION

- A. Swimming Proficiency
  - 1. Swim continuously for 10, 15 or 30 minutes alternately using the crawl and the sidestroke while instructors evaluate stroke mechanics.
  - 2. Swim continuously for 5, 10, 15, 20 or 30 minutes by kicking only while instructors evaluate stroke mechanics.

**NOTE**

CONDUCT PRE-SWIM AND POST SWIM STRETCH SET IAW LESSON PLAN 2.1 PRIOR TO ALL MORNING AND AFTERNOON SWIM EVENTS UNLESS DRY LAND CONDITIONING HAS JUST BEEN COMPLETED.

Swim proficiency and conditioning drills may be administered throughout the course. Explain the proper form for the strokes.

DISCUSSION POINT

B. Conditioning Drills

1. Swim 25, 50, 75, and 100 yard sprints on the surface. (1-5 sets)

**WARNING**

**STUDENTS SHALL BE MADE AWARE THAT UNDERWATER SPRINTS WILL ONLY BE CONDUCTED IN A SUPERVISED AND CONTROLLED TRAINING ENVIRONMENT. THE USE OF HEAVY BREATHING /HYPERVENTILATION TECHNIQUES ARE NOT PERMITTED. THIS REDUCES CARBON DIOXIDE LEVELS IN THE BODY, AND INHIBITS THE BODIES NATURAL INDICATORS TO BREATHE.**

2. Swim 25 yards underwater surfacing for only one breath. (No more than two times to avoid shallow water blackout.)
3. Swim 25 yards underwater without surfacing, (No more than two times to avoid shallow water blackout.)
4. perform 25 yard sprints on the surface, having students compete against each other. (1-10 sets)
5. Perform 50 yard sprints on the surface. (1-5 sets)
6. Take turns swimming 50yd buddy tows for 30 minutes.
7. Take turns swimming 50yd buddy tows for 40 minutes.

RELATED INSTRUCTOR ACTIVITY

**Perform not more than six proficiency and conditioning drills during a training day. Drills shall not be repeated during the same day.**

**A 30 sec break will be given to each student prior to that student completing another sprint or event.**

Explain procedures for swimming underwater and surfacing for a breath.

**Underwater swims if chosen, will be the first drills used prior to any other drill during SP&C for the first two weeks of training.**

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

8. Perform 200-meter conditioning buddy tow.

C. Timed swims

During timed swims, one instructor will be designated as timer/lap counter. Additional instructors will be performing as safety observers.

Students with severe muscle cramps, hyperventilation, or any other potential safety problem will be removed immediately, seen by medical authorities if applicable, and scheduled for retest.

1. 800 Meter Swim
  - a. Students may utilize any stroke except a backstroke.
  - b. Shall complete within 20 minutes.
  - c. Perform Job Sheet Checklist 2.2.

To be administered during week two.

2. 400 Meter Buddy Tow
  - a. Shall be completed within 16 minutes.

To be administered during week three of course. **All buddy tows will be conducted in full rescue swimmer's equipment.**

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Perform Job Sheet Checklist 2.2.
  - 3. 500 Meter Swim/400 Meter Buddy Tow
    - a. Students may utilize crawl or side stroke for 500m swim.
    - b. Complete the 500m swim in under 13 minutes.
    - c. Complete the 400m B/T in under 19 minutes.
    - d. Perform Job Sheet Checklist 2.2
  - 4. 500 Meter Swim/400 Meter Buddy Tow
    - a. Students may utilize crawl or side stroke for 500m swim.
    - b. Complete the 500m swim in under 11:30 minutes.
    - c. Complete the 400m B/T in under 17:30 minutes.
    - d. Perform Job Sheet Checklist 2.2
  - 5. 500 Meter Swim/400 Meter Buddy Tow
    - a. Students may utilize crawl or side stroke for 500m swim.
    - b. Complete the 500m swim/400m B/T in under 27
- To be administered during week three of course.
- Students will be given a 5 min break before the 400m B/T.
- To be administered during week Four of course.
- Students will be given a 3 min break before the 400m B/T.
- To be administered during week four of course.
- Students will move into the

DISCUSSION POINT

minutes.

c. Perform Job Sheet Checklist 2.2

6. 2000 Meter Swim/50 Minute Swim

RELATED INSTRUCTOR ACTIVITY

400m B/T without interruption.

**NOTE**

To be administered during week four of course.  
Conducted during the day Open Water Lab (OWL). Will be conducted with the same instructor ratios and safety considerations outlined for OWL's (Annex E). May be completed in the swimming pool if environmental conditions do not permit open water labs.

- a. Students may utilize any stroke except a backstroke.
- b. Shall be completed within 50 minutes.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION:

Perform Swim proficiency, conditioning drills and timed swims.

EVALUATION: Job Sheet 2-2 Checklist.

ASSIGNMENT: None

Job Sheet 2-2 Checklist

Timed Swims

TRAINEE NAME/RATE \_\_\_\_\_

SSN \_\_\_\_\_

CLASS \_\_\_\_\_

DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each event. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by writing in the time and circling either Pass/Fail/Complete/Incomplete.

**SAFETY - Failure to adhere to all safety requirements will result in automatic failure of the performance tests.**

TIMED SWIMS

3.2	Complete 800m swim within 20 minutes.	TIME	PASS/FAIL
3.2	Complete 400m Buddy Tow within 16 minutes.	TIME	PASS/FAIL
3.2	Complete 500m swim (13 min)/400m B/T (19 min) (5min break)	TIMES	PASS/FAIL
3.2	Complete 500m swim (11:30 min)/400m B/T (17:30 min) (3min break)	TIMES	PASS/FAIL
3.2	Complete 500m swim/400m B/T within 27 minutes. (no break)	TIMES	PASS/FAIL
3.2	Complete 2000m/50 minute swim.	COMPLETE	INCOMPLETE

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 2.3

LESSON TOPIC: Open Water Laboratories

ALLOTTED LESSON TIME: 0.5 Classroom  
2.5 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom instructor  
1 Laboratory instructor  
Safety personnel and additional  
instructors as required per Annex E,  
Staffing Requirements, Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. USN Water Survival Instructor's Manual (CNET P1552)

INSTRUCTIONAL AIDS:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 2.0 Upon completion of this unit of instruction, the student will achieve and maintain a level of physical conditioning and proficiency that will enable satisfactory performance of Rescue Swimmer duties on land, in a swimming pool, or open ocean, while wearing appropriate Rescue Swimmer equipment, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 2.6 Explain how the performance of rescue swimmer skills is affected by current, sea state, visibility, sea life, swimmer buoyancy, and other variables encountered in the open water environment.
- 2.7 Perform basic rescue swimmer skills in the open water environment under daytime and nighttime conditions.

2. Protected Bay or River
3. Rescue Swimmer's Equipment
4. Whistle
5. SDU-5E with blue lens cover (night)

CRITERION TESTS: Job Sheet 2-3

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Review training time out policy.
5. Ask for medical concerns:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Does anyone have any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of lesson topic guide and paraphrase objectives.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. Establish Readiness

1. Motivating statements:

Trainees will gain confidence in their ability to complete basic rescue swimmer tasks in the open water environment.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

a. Lesson topic: The Open Water Environment

b. Major Teaching Points:

(1) The Open Water Environment and Open Water Labs

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

- A. The Open Water Environment and Open Water Labs
  - 1. Dramatically different from training tank.
  - 2. Open Water variables which affect the Rescue Swimmers ability to perform his tasks:
    - a. water temperature
    - b. wind
    - c. sea state
    - d. increased buoyancy of salt water and full wet suits
    - e. visibility
    - f. current
  - 3. Open Water hazards to avoid:
    - a. Jelly fish, Man O' Wars
    - b. Debris/contaminates in water
    - c. Kelp/Sargassum weed
  - 4. Purpose of labs:
    - a. In a controlled environment, provide realistic open water environment experience.

Discuss/provide examples and "sea stories" as applicable.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Performance of skills will not be graded, this is for familiarity.

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION:

A. Environmental reasons for cancellation of the OWL, forecast or occurring:

1. Water temperature drops below 50 degrees F.
2. Air temperature (wind chill corrected) drops below 45 degrees F.
3. Water is declared contaminated by County Dept. of Health Services or similar agency.
4. The presence of large numbers of jellyfish, such that a wet suit is not adequate protection.
5. Thunder Storm Condition I (thunder storm

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

activity occurring within a 10 mile radius, or expected to occur within one hour.)

6. Sustained surface winds in the training area exceed **15** knots.
7. Visibility on the water less than 1 mile.

B. General Guidelines:

1. Student trainees will be paired with buddies, buddy pairs will be assigned to a wet instructor. Assign students to a boat if boats will be used for transportation
2. Trainees shall stay in buddy pairs, keeping track of buddy and monitoring his condition at all times. If contact with buddy is lost:
  - a. Trainee momentarily search 360°.
  - b. Call TTO.
  - c. If separated from group, trainee shall:
    - (1) Turn on strobe light (night).
    - (2) Inflate LPU-28/P.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) Give whistle blasts
- d. Whistle blasts:
  - (1) 1 blast - students give attention to PI.
  - (b) Multiple blasts - emergency - students muster with assigned Wet Instructor.
- 3. Review methods of calling a TTO per the Instructor Guide. Additional signals for this evolution include:
  - (a) Vigorous waving of one arm - in trouble, need assistance.
  - (b) Strobe light with blue lens on - in trouble, need assistance.
- 4. Trainees buddy up by size.
- 5. Trainees group with Wet Rescue Swimmers Instructors. Four pairs per Wet Rescue Swimmer - day, two pair per Wet Rescue Swimmer - night.
- 6. Staff and students muster with boat leader (PI or

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

TSM). PI report status to TSM.

7. TSM shall be cognizant of current conditions (limits are listed in para A this application).

- a. Time of next tide.
- b. Time of sunrise/sunset or moonrise/moonset.
- c. Currents.
- d. Air and Water temperature.
- e. Visibility.
- f. Winds.

8. TSM shall decide "go" or "no-go". THE TSM SHALL CANCEL THE EVOLUTION WHENEVER, IN THEIR OPINION, IT CANNOT BE SAFELY CONDUCTED, OR WHEN ENVIRONMENTAL RESTRICTIONS ARE EXCEEDED.

C. Primary Instructor Responsibilities

1. Conduct student presentation as per appropriate lesson plan.
2. Conduct Safety Brief for staff and students:
  - a. Schedule of events
  - b. Mishap plan
  - c. Identify rollbacks.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- d. Communications Relay Ashore reports comm links with SAR, Medical are available.
- e. Three-way communications check between Command and Interceptor/Search boats and Communications Link Ashore checks good.
- f. If students will swim to and from training area:
  - (1). Identify Wet Rescue Swimmer Instructor to lead student group to beach and conduct muster if Lost Student Procedures are in effect.
- 3. Wet instructor equipment checklist (see section II, para F.2.f.).
- 4. PI conduct inspection of all students for proper equipment
  - a. Wetsuit as per NWP 3-50.1.
  - b. LPU-28/P.
  - c. Snorkel.
  - d. Fins - booties.
  - e. Face mask.
  - f. HBU-11/P.
  - g. Whistle.
  - H. (Night) All students shall have two

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

chemlites, all of the same color, which shall be different from the instructors color.  
i. (Night) SDU-5E strobe light without lens.

D. TRAINEES COMPLETE LAB AS PER LP JOB SKILLS CHECKLIST.

1. PI conduct lab utilizing the LP. The PI should reinforce the principles of open water operations as discussed ashore.
2. Wet instructors and trainees muster with PI. PI report muster to TSM.
3. Students swim to training area.

**NOTE**

Trainees may swim to the training area, providing the total swim time (transportation and training) does not exceed 20 minutes.

4. PI start timer.

E. Day Open Water Lab

1. Student must have completed 30 minutes of

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- continuous swimming (ie, Swim Proficiency and Conditioning). Student must have also received Mask, Fin and Snorkel Indoctrination and Lifesaving Carries classes prior to OWL.
2. Boats hoist diver down flags.
  3. Trainee's practice swim strokes for 20 minutes. (If students swim to and from the training area, the transit time shall be included in the 20 minute total.)

Give students courses at various angles to the current, such as a square or triangular pattern.
  4. Trainees practice surface dives (Day only). Trainees note effects of wetsuit and salinity on buoyancy; trainees note reduced visibility.

WARNING: Injury can occur if trainees forcibly impact bottom.

    - a. Perform one pike dive.
    - b. Perform one feet-first dive.

Trainees shall be briefed on water depth. Trainees shall dive on direction of wet instructor. Only one trainee per six-student group shall be submerged at any time.
  5. Trainee's practice tows for approximately 20

Give students courses at

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

minutes.

- a. Equipment tow.
- b. Collar tow.
- c. Tired swimmer carry.
- d. Cross-chest carry.

various angles to the current, such as a square or triangular pattern.

F. Night Open Water Lab

- 1. Class shall complete the day OWL.
- 2. Trainees and instructors activate chemlites and affix them to face masks.
- 3. Trainee's practice swim strokes for 30 minutes. (If students swim to and from the training area, the transit time shall be included in the 30 minute total.)
- 4. Trainee's practice tows for approximately 10 minutes.
  - a. Equipment tow.

Give students courses at various angles to the current, such as a square or triangular pattern.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Collar tow.
- c. Tired swimmer carry.
- d. Cross-chest carry.

G. EVENTS TO OCCUR POST-LAB

- 1. Muster Wet Instructors and trainees.
- 2. TSM report to Comm Link Ashore that evolution is complete and all hands are safely ashore.
- 3. PI supervise post lab clean-up.

EVALUATION: Job Sheet Checklist 2.3

ASSIGNMENT: None

JOB SHEET 2-3 CHECKLIST  
Open Water Environment Labs

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_

DAY INSTRUCTOR \_\_\_\_\_ DATE \_\_\_\_\_

NIGHT INSTRUCTOR \_\_\_\_\_ DATE \_\_\_\_\_

OPEN WATER LAB

**SAFETY - Failure to adhere to all safety requirements will result in automatic failure of this performance test.**

Evaluation Instructions for Non-Critical Steps: Observe overall trainee composure when practicing each basic Rescue Swimmer skill in the open water environment. Skills should be practiced, not **graded:**

	DAY COMP/INC	NIGHT COMP/INC
1. Basic strokes.	---/---	---/---
2. Surface dives.	---/---	NA
3. Tows.	---/---	---/---

Evaluation Instructions for Critical Steps: Lack of adaptability to the open water environment as demonstrated by panic, unmanageable fear which impairs the ability to perform basic tasks, etc., shall be grounds for failure of the lab.

1. Trainee remains in open water for approximately 40 minutes during daylight conditions and practice basic skills.

**COMPLETE            INCOMPLETE**

2. Trainee remains in open water for approximately 40 minutes during nighttime conditions and practice basic skills.

**COMPLETE            INCOMPLETE**

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 3.1

LESSON TOPIC: Approaches and Carries

ALLOTTED LESSON TIME: 1.5 Classroom  
5.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional  
instructors as required per Annex E,  
Staffing Requirements, of Curriculum  
Outline

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

ENABLING OBJECTIVE:

Completely supported by this lesson topic:

- 3.1 List the procedural steps for rescue swimmer approaches to and carries of an active/passive/unconscious survivor.
- 3.2 Demonstrate rescue swimmer approaches to and carries of an active/passive/unconscious survivor in a simulated rescue situation.

2. Twelve Foot Deep Pool
3. Rescue Swimmer's Equipment

CRITERION TEST: Job Sheet 3-1, written test

Homework: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self; give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Review Training Time Out policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to the department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- |  |  |
|--|--|
| 1. Motivating Statements                           | Establish importance and relevance of lesson material using personal experience or anecdote. |
| 2. Lesson Overview                                 | Briefly outline material to be covered.  |
| a. Lesson Topic: Approaches and Carries            |  |
| b. Major Teaching Point(s):                        |  |
| (1) Survivor Characteristics                       |  |
| (2) Cross Chest Carry/Controlled Cross Chest Carry |  |
| (3) Collar Tow and Equipment Tow                   |  |
| (4) Front Surface Approach                         |  |
| (5) Rear Surface Approach                          |  |
| (6) Underwater Approach                            |  |
| (10) Rear Head Hold Escape                         |  |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. Survivor Characteristics

1. Aircrewman

- a. Rescue swimmers were originally tasked to assist downed aircrewman.
- b. Aircrewman are trained in water survival and may be able to assist.  
**(Never assume they can)**
- c. Survivors with water survival training could become too helpful and actually be a hindrance. It might become necessary to instruct him/her to do nothing.

**WARNING**

**An aircrewman who has ejected and/or is unconscious may potentially have a spinal injury, assess the situation and treat accordingly. Loss of ABC's or other life threatening injury will take precedence over a spinal injury.**

2. Panicking Survivors

- a. Some rescues involve panicky survivors (even some aircrewmen).

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Appearance: Wide eyes, frantic activity, grasping for air and other similar behavior.
- c. Will attempt to grab and get on top of rescuer in order to keep his/her own head out of the water. Rescuers could be drowned in this manner.
- d. Best Defense: Do not get too close until you have assessed the situation and decided on the best approach for this survivor.
- e. It may be possible to calm a panicking survivor by talking to them and explaining who you are and what you are doing.

Discuss how this relates to both Approaches and carries and Releases and Escapes.

B. Cross Chest Carry/Controlled Cross Chest Carry

- 1. From a position behind the survivor's shoulder the rescuer reaches across the chest and pulls the survivor from under the armpit with the palm of the rescuer's hand.
- 2. The survivor's shoulder is then tucked securely into the rescuer's armpit and the arm firmly grasped against the survivor's chest.

Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. The rescue swimmer turns to the side with the hip directly against the small of the survivor's back. The swimmer strokes vigorously with his legs, using a flutter kick to provide propulsion.

**NOTE**

This procedure may be difficult to perform on aircrewmembers due to their flotation and survival equipment.

4. Should the survivor be aggressive, the rescuer shall lock his/her hands together under the survivor's armpit to complete a controlled cross-chest carry.

Demonstrate and explain that doing this step is a **Controlled Cross-Chest Carry**.

- C. Collar Tow or Equipment Carry

Demonstrate

**WARNING**

**Do not grasp survivor in a manner, which may result in restricted breathing or circulation.**

1. Grasp the survivor's shirt collar or flight equipment from behind and between the shoulder blades with a straight arm locked at the elbow.
2. The rescue swimmer assumes the sidestroke position and strokes vigorously with the legs, using a flutter kick.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

D. Front Surface Approach

Demonstrate

1. Effective for passive or unconscious survivors. The front surface approach should be the Rescue Swimmer's first choice when approaching an unconscious survivor.
2. Approach the survivor with head out of the water and eyes on the survivor.
3. Upon reaching arms length to survivor, execute a quick reverse.
4. Attempt to establish communication, reassure the survivor. If necessary splash and yell to get the survivors attention.
5. Reach across with your hand grasping the survivor's identical wrist (i.e., right hand grabs right wrist, and left on left wrist).
6. Begin kicking to plane out survivor, lean back and flutter kick.
7. Pull survivor's wrist up and across the front of swimmer's body, turning the survivor onto his back.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

8. When the survivor's back is fully turned, the rescue swimmer places the survivor in a cross-chest carry.

**Note**

If the survivor is conscious, every attempt shall be made to approach the survivor from the rear. This can be accomplished by either asking the survivor to turn around, or by swimming to the rear of the survivor and executing a rear surface approach.

E. Rear Surface Approach

Demonstrate

1. Most common approach used by rescue swimmers. The rear surface approach should be used for all conscious survivors.
2. Approach the survivor with head out of the water and eyes on the survivor.
3. Upon reaching 6 to 8 feet of distance from the survivor, execute a quick reverse.
4. Attempt to establish communications, reassuring the survivor. If survivor appears unresponsive, splash or yell to get his/her

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

attention.

5. Secure survivor in a cross-chest or equipment carry.

F. Underwater Approach

Demonstrate

**WARNING**

**Underwater approach shall not be used if survivor is wearing a parachute.**

1. Appropriate for active drowning survivor.
2. Approach from the front, keeping head out of the water and eyes on the survivor.
3. Upon reaching a distance of 6 to 8 feet from the survivor, appraise the situation. When comfortable, execute a surface dive and swim under the survivor.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE**

When wearing a wetsuit the swimmer must be aware of the added buoyancy of the wetsuit and avoid premature surfacing.

4. Swimming underneath or to the side and below the survivor and maintaining eye contact execute a half turn. When clear, (the survivor's back should be towards the rescue swimmer), ascend towards the surface as close to the survivor as possible without touching him/her.
5. Upon breaking the surface of the water, immediately place the survivor in a controlled cross-chest carry. Roll with the momentum and swim to plane out the survivor.

SUMMARY:

- A. State Lesson Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.

Briefly summarize.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION:

**NOTE**

It is unrealistic for a survivor to act aggressively and chase the rescue swimmer. This is an impractical simulation of an active drowning victim as defined by the American Red Cross (Lifeguarding manual, pg. 56); GAO report (pg. 17) calls "belligerent and aggressive victims a poor teaching method and an ineffective way to mentally condition students to perform under stress." Survivors **SHALL** be briefed to exhibit the following characteristics as detailed by the ARC:

1. Struggle to keep the face above water in an effort to breathe.
2. Have arms extended to the side, pressing down for support. There is no supporting kick.
3. Have a vertical body position in the water.
4. Struggles at the surface, unable to move forward, for approximately 20 to 60 seconds before submerging.

**IN NO CASE WILL THE SURVIVOR CHASE THE RESCUE SWIMMER.**

**THE STUDENT'S EYES SHALL REMAIN OPEN DURING ALL PHASES OF LIFESAVING TRAINING.**

- A. Have students form two rows on pool deck and conduct dry land drills on approaches and carries.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- B. Two instructors will conduct in water demonstration of approaches and carries.
- C. Students form lines within their groups in the deep end. Instructor will designate skill to be practiced.
- D. On the instructors command, the first student will swim out 5-10 yards act as the swimmer. On the instructors command, the second student in line drops the mask and snorkel, and acting as the "survivor/panicky survivor", will act as instructed or approach the "swimmer" and place him in the appropriate carry.

As required, review characteristics of panicking survivor. Survivor should be as realistic as possible.

- E. Students will practice approaches and carries in the deep end under instruction.
- F. Students will then be divided, lined up and demonstrate each approach and carry.

Students will be staged in the pool to provide an unobstructed view of the demonstration.

One in water instructor per group will evaluate each student for proficiency of skill demonstrated.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE**

Instructors may demonstrate skills as a rescuer while using a student as a survivor. Because of their superior aquatic skills, instructors shall not NORMALLY assume the role of survivor. However, instructors may act as survivors for extra instruction only after all other means of instructions have failed and only with the permission of the pool deck safety monitor.

In-water instructors will carry a rescue tube or torpedo buoy during practice and testing of approaches and carries, releases, holds, and escapes.

Activate Mishap Plan when an accident or injury is observed.

EVALUATION: Written Test/Job Sheet 3-1.

ASSIGNMENT: None.

JOB SHEET 3-1  
APPROACHES AND CARRIES

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either Q, CQ, UQ. "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure. A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0 Minimum average score for passing is 3.6 If an item is not applicable line out that item and do not add it to the overall average

FRONT SURFACE APPROACH	ACTION	SCORE	POINTS
Approach survivor Utilizing modified crawl or breast stroke Head out of the water eyes on the survivor	Q	CQ	UQ _____
Execute quick reverse Arms length away from survivor	Q	CQ	UQ _____
Attempt to establish communication	Q	CQ	UQ _____
*Hand placement Right hand grasping right wrist or left hand on left wrist Begin flutter kicking and plane survivor out Pull and twist survivor's wrist and successfully turn survivor	Q	CQ	UQ _____
*Attain and maintain a cross-chest carry	Q	CQ	UQ _____
<b>REAR SURFACE APPROACH</b>			
Approach survivor Utilizing modified crawl or breast stroke Head out of the water eyes on the survivor	Q	CQ	UQ _____
Execute quick reverse 6 to 8 feet distance separating	Q	CQ	UQ _____

survivor and swimmer

Attempt to establish communication Instruct survivor to turn around with back facing swimmer	Q	CQ	UQ _____
*Grasp center of survivors back Begin flutter kicking and plane survivor out Place and maintain cross-chest carry with free arm	Q	CQ	UQ _____

UNDERWATER APPROACH

Approach survivor Utilizing modified crawl or breast stroke Head out of the water eyes on the survivor Attempt communication Try and calm survivor	Q	CQ	UQ _____
Surface dive Keep eyes on survivor No premature contact with survivor	Q	CQ	UQ _____
*Surface behind survivor Close enough to immediately achieve a cross-chest carry	Q	CQ	UQ _____
*Place survivor in a controlled cross-chest carry Plane survivor out Maintain control of survivor	Q	CQ	UQ _____

4.0 X number of **Q** = \_\_\_\_\_

2.0 X number of **CQ** = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 3.2

LESSON TOPIC: Releases and Escapes

ALLOTTED LESSON TIME: 1.5 Classroom  
5.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional  
instructors as required per Annex E,  
Staffing Requirements, of Curriculum  
Outline

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objective:

Completely supported by this lesson topic:

- 3.3 List procedural steps for rescue swimmer head hold releases and escapes.
- 3.4 Demonstrate rescue swimmer head hold releases and escapes in a simulated rescue situation.

2. Twelve Foot Deep Pool

CRITERION TEST: Written test/Job Sheet  
3-2

3. Rescue Swimmer's Equipment

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self; give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Review Training Time Out policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to the department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Rescue Swimmer Head Hold Releases and Escapes.

b. Major Teaching Point(s):

(1) Front Head Hold Release

(2) Front Head Hold Escape

(3) Rear Head Hold Release

(4) Rear Head Hold Escape

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

**NOTE**

If caution is used and approaches are done correctly, these procedures should not have to be used. Releases and escapes are taught as a precaution.

A. Releases and Escapes

1. To allow rescuer to escape grasp of panicking survivor.
2. Remember that a panicking survivor will do anything to ensure he keeps his head above water. The key to these techniques is that the rescuer submerges deeply enough that survivor goes underwater.
3. A properly performed escape will simply free the rescuer from the grasp of the survivor and require a re-approach; a properly executed release will result in the release of the survivor's grasp while the rescuer remains in control.

B. Front Head Hold Release

Demonstrate

1. Suck - take a quick breath.
2. Tuck - tuck chin down and to the side.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. Duck - Rescue swimmer extends arms outward, palms up, moving them upward rapidly several times which produces downward movement and submerges survivor and swimmer.
4. If the survivor's head is on the right of rescue swimmer's head, rescue swimmer brings right arm up and over encircling arm and places hand securely against survivor's right cheek, the little finger against the side of survivor's nose and thumb hooked under the jaw.

**NOTE**

If survivor's head is at the rescuer's left side, the method is reversed.

5. The remaining hand is brought up beneath the survivor's other arm seizing it in a grip with the thumb just above the elbow on the pressure point.
6. In one continuous motion, the survivor's head is pressed out and around with the right hand while the left hand is lifting the survivor's arm over the rescue swimmer's head and sweeping it across the far side. This is a pressing movement and it is continued until the survivor's back is to the rescuer.
7. The left hand continues to hold the arm until the right hand can be shifted from the survivor's

DISCUSSION POINT

face to the chest, the left hand releases the elbow and the survivor is brought into a controlled cross-chest carry.

**NOTE**

If survivor's head is at the rescuer's left side, the method is reversed.

8. If survivor places a scissors lock on the rescue swimmer with the legs, the scissors rarely is held after the head hold is released. However, if it is not released the rescue swimmer uses one hand between the ankles to unlock the crossed feet.

C. Front Head Hold Escape

1. Suck
2. Tuck
3. Duck

4. Without pause, the rescue swimmer places both hands on the front of survivor's hips with the heels of the hands against the body, fingers extended and thumbs grasping the survivor's sides. By forcefully pressing and extending the arms, the rescue swimmer pushes the survivor's body back and up towards the horizontal position. This leverage will loosen the survivor's grasp.

RELATED INSTRUCTOR ACTIVITY

Demonstrate

Review

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. By tucking the chin inward and hunching the shoulders, the rescue swimmer's head is freed. Survivor is then pushed away.
  6. Rescue swimmer surfaces to reassess the situation.
- D. Rear Head Hold Release
1. Suck
  2. Tuck
  3. Duck
  4. Rescue swimmer places both hands on survivor's wrist, either top or bottom, and pulls toward rescue swimmer's hips, rotating the hand and sliding the other hand up to the survivor's elbow.
  5. By twisting inward and down on the survivor's wrist and pushing the survivor's elbow upward, the grip is released. Rescuer slides survivor over his/her head until the survivor is in front of the rescuer with the survivor's fore arm straight across survivor's back and survivor is in front of rescue swimmer.

Explain this is perhaps the worst situation a swimmer can encounter.  
Review

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

6. From this position behind survivor, rescue swimmer shall release the grip on the elbow while maintaining control of the wrist, reaching over the survivor with the free hand and then place survivor in controlled cross-chest carry.

E. Rear Head Hold Escape

Demonstrate

1. Suck
2. Tuck
3. Duck
4. Rescue swimmer brings the hands up to underside of each of the survivor's elbows. While keeping chin tucked in and hunching the shoulders, rescue swimmer pushes forcefully upward freeing the head.
5. Survivor is then pushed back away. Swimmer turns to face survivor, prepared to prevent subsequent grasps.
6. Rescue swimmer swims well out of reach of survivor, surfaces, and decides which rescue procedures to use.

Review

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION:

**NOTE**

It is unrealistic for a survivor to act aggressively and chase the rescue swimmer. This is an impractical simulation of an active drowning victim as defined by the American Red Cross (Lifeguarding manual, pg. 56); GAO report (pg. 17) calls "belligerent and aggressive victims a poor teaching method and an ineffective way to mentally condition students to perform under stress." Survivors **SHALL** be briefed to exhibit the following characteristics as detailed by the ARC:

1. Struggle to keep the face above water in an effort to breathe.
2. Have arms extended to the side, pressing down for support. There is no supporting kick.
3. Have a vertical body position in the water.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Struggles at the surface, unable to move forward, for approximately 20 to 60 seconds before submerging.

**IN NO CASE WILL THE SURVIVOR CHASE THE RESCUE SWIMMER.**

**THE STUDENT'S EYES SHALL REMAIN OPEN DURING ALL PHASES OF LIFESAVING TRAINING.**

- A. Have students form two rows on pool deck and conduct dry land drills on releases and escapes.
- B. Two instructors will conduct in water demonstration of releases and escapes.
- C. Students form lines within their groups in the deep end. Instructor will designate skill to be practiced.
- D. On the instructors command, the first student will swim out 5-10 yards act as the swimmer. On the instructors command, the second student in line drops the mask and snorkel, and acting as the "survivor/panicky survivor", will act as instructed or approach the "swimmer" and place him in the designated head hold.

Students will be staged in the pool to provide an unobstructed view of the demonstration.

As required, review characteristics of panicking survivor. Survivor should be as realistic as possible.

- E. Students will practice releases and escapes in

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

the deep end under instruction.

F. Students will then be divided, lined up and demonstrate each approach and carry, release and escape.

One in water instructor per group will evaluate each student for proficiency of skill demonstrated.

**NOTE**

The possibility of a panicky survivor grasping the rescue swimmer in a front or rear head hold exists. The rescue swimmer must be prepared to act quickly to effect a release/escape and continue rescue efforts. A person drowning will commonly attempt to grasp and climb up on top of anything close enough for them to reach. This action results in the rescuer being forced underwater. The natural impulse for the rescuer is to attempt to keep their head above water in order to breathe. A rescuer without personal flotation would quickly become exhausted and possibly aspirate water in an attempt to support the survivor.

Instructors may demonstrate skills as a rescuer while using a student as a survivor. Because of their superior aquatic skills, instructors shall not NORMALLY assume the role of survivor. However, instructors may act as survivors for extra instruction only after all other means of instructions have failed and only with the permission of the pool deck safety monitor.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

In-water instructors will carry a rescue tube or torpedo buoy during practice and testing of approaches and carries, releases, holds, and escapes.

Activate Mishap Plan when an accident or injury is observed.

EVALUATION: Written Test/Job Sheet 3-2.

ASSIGNMENT: None.

JOB SHEET 3-2  
RELEASES AND ESCAPES

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_

INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either Q, CQ, UQ. "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure. A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0 Minimum average score for passing is 3.6 If an item is not applicable line out that item and do not add it to the overall average

FRONT HEAD HOLD ESCAPE	SCORE	POINTS
Suck, tuck and duck Inhaled a breath of air Turned chin down to shoulder Go far enough underwater that survivor is submerged	Q      CQ	UQ _____
Hand placement Hands on survivors hips Thumbs grasping survivor's hips	Q      CQ	UQ _____
*Perform escape Thrust forcefully away with arms Hunch shoulders and drop head	Q      CQ	UQ _____
*Surface far enough away that survivor can't grab hold of swimmer	Q      CQ	UQ _____
 FRONT HEAD HOLD RELEASE		
Suck, tuck and duck Inhaled a breath of air Turned chin down to shoulder Go far enough underwater that survivor is submerged	Q      CQ	UQ _____
Hand placement	Q      CQ	UQ _____

Correct hands on survivors face  
and elbow Utilizing proper pressure  
points

\*Perform release Q CQ UQ \_\_\_\_\_  
Free head from grasp  
Turn survivor around

\*Place and maintain survivor in a Q CQ UQ \_\_\_\_\_  
controlled cross-carry

#### REAR HEAD HOLD ESCAPE

\*Suck, tuck and duck Q CQ UQ \_\_\_\_\_  
Inhaled a breath of air  
Turned chin down to shoulder  
Go far enough underwater that  
survivor is submerged

Hand placement Q CQ UQ \_\_\_\_\_  
Hands on survivors elbows  
Thumbs grasping survivors pressure  
points

\*Perform escape Q CQ UQ \_\_\_\_\_  
Thrust away with arms in the  
direction swimmer is looking  
Free head from grasp

\*Surface far enough away that survivor Q CQ UQ \_\_\_\_\_  
cannot grab hold of swimmer

#### REAR HEAD HOLD RELEASE

\*Suck, tuck and duck Q CQ UQ \_\_\_\_\_  
Inhaled a breath of air  
Turned chin down to shoulder  
Go far enough underwater that  
survivor is submerged

Hand placement Q CQ UQ \_\_\_\_\_  
Both swimmer's hands on one of  
survivor's wrists thumbs grasping  
survivors pressure point

\*Perform release Q CQ UQ \_\_\_\_\_  
Break survivors grip  
Swimmer spins hand on survivor's

wrist  
Swimmer slides hand up to elbow  
pressure point  
Swimmer gains position behind survivors  
Release elbow vice wrist

\*Place and maintain survivor in a controlled cross-chest carry                    Q            CQ            UQ \_\_\_\_\_

4.0 X number of **Q** = \_\_\_\_\_

2.0 X number of **CQ** = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 3.3

LESSON TOPIC: Water Entry

ALLOTTED LESSON TIME: 1.0 Classroom  
2.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory instructor  
Safety personnel and additional instructors  
as required per Annex E, Staffing  
Requirements, of Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Twelve foot deep Pool
3. Ten foot Tower
4. Rescue Swimmer's Equipment
5. Two Crewman's Safety Belts

INTRODUCTION:

TERMINAL OBJECTIVES:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.5 List the procedures for day or night water entry and day or night direct deployment.
- 3.6 Perform day or night water entry procedures and day or night direct deployment from search and rescue helicopters.

CRITERIA TEST:

Performance tests: Job sheet checklist 3.3  
Written test

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc..
3. State question and answer policy.
4. Reiterate training time out policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Water Entry Indoctrination

b. Major Teaching Points:

(1) Day Water Entry

(2) Night Water Entry

PRESENTATION:

A. Day Water Entry

Observe from poolside.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Don crewman's safety belt.
2. Quickly give gear a final check.
3. Crewman maintains positive control of swimmer, while swimmer scoots up to doorway.
4. Tap on chest to release gunner's belt.

**WARNING**

**The crewman shall maintain a hold of the swimmer's harness with one hand as the other hand is used to tap the swimmer's chest. This is to avoid an inadvertent rescue swimmer deployment.**

5. Remove crewman's safety belt with right hand.
6. Assume ready position.
  - a. Hands on door edge.
  - b. Fingers straight.
  - c. Legs out straight, knees slightly bent.
  - d. Toes pointed upward, eyes on horizon.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- |   |   |
|---|---|
| 7. Receive Jump command (three taps on shoulder).                     |   |
| 8. Visually ensure landing area is clear look left, right and center. |   |
| 9. Keep eyes on horizon.  |   |
| 10. Push out of doorway with hands.                                   |   |
| 11. Hands assume proper position.                                     | Demonstrate; right hand on left shoulder, left hand on face mask or vice versa. |
| 12. Clear mask prior to surfacing.                                    |   |
| 13. Surface and give helo hand signal for "I'm all right"             | Demonstrate hand signal   |
| B. Night Water Entry  | Explain procedures and hazards of night water entry.                            |
| 1. Prior to leaving platform, quickly give gear a final check.        |   |
| 2. Illuminate lighting device.  |   |
| 3. Don rescue strop.  |   |
| 4. Tap on chest to remove crewman's safety belt.                      | Explain that crewman will then take out slack in cable.                         |
| 5. Swimmer is lowered in from 40-60 foot hover.                       | Explain platform dependent.   |
| 6. Swimmer disconnects from hoist.                                    |   |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

7. Give night signal for "I'm all right."
8. Proceed with rescue.

SUMMARY:

- A. State Lesson Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.

Briefly summarize.

Check for understanding.

APPLICATION:

- A. Practical Application (Day)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Instructor demonstrates a day water entry while another instructor talks through the procedure.
2. Students perform dry land procedures on pool deck.
3. Water entries shall be conducted from the platform prior to jumping from the helo. Students must demonstrate proper form/technique.
4. One instructor in tower as crewman.
5. One instructor in water to critique jumps.
6. Only two students in tower at a time with fins, mask, harness and SAR-1 Vest.
7. Students practice jumps under instructor supervision.

B. Practical Application (Night)

1. Instructor demonstrates a night water entry while another instructor talks through the procedure.
2. Device 9H1A Operator shall:
  - a. Assist the students in donning the appropriate equipment.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Shall ensure that the students are properly attached and clear of the cable prior to hoisting.
- 3. Students shall first complete day entry practice then begin night entry procedures.
- 4. Students shall complete as many water entries as time permits.

EVALUATION: Job sheet checklist 3-3.  
Written test

ASSIGNMENT: None

JOB SHEET 3-3 CHECKLIST

Water Entry Indoctrination

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_

INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either SAT or UNSAT.

**"\*" denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test.**

PERFORM DAY AND NIGHT WATER ENTRY PROCEDURES:

A. Day Entry

- |   |   |     |       |
|---|---|-----|-------|
| * | (1) Don crewman's gunner's belt.                | SAT | UNSAT |
|   | (2) Give gear a final check.                    | SAT | UNSAT |
|   | (3) Release gunner's belt when tapped on chest. | SAT | UNSAT |
| * | (4) Assume ready position.                      | SAT | UNSAT |
| * | (5) Check for area clear of debris.             | SAT | UNSAT |
| * | (5) Jump on command.                            | SAT | UNSAT |
| * | (6) Signal I'm alright.                         | SAT | UNSAT |

B. Night Entry

- |   |  |     |       |
|---|--|-----|-------|
| * | (1) Don crewman's gunner's belt.                                 | SAT | UNSAT |
|   | (2) Don rescue strop.  | SAT | UNSAT |
|   | (3) Give gear a final check.                                     | SAT | UNSAT |
|   | (4) Release gunner's belt when tapped on chest.                  | SAT | UNSAT |
| * | (5) Avoided touching rescue hook until makes contact with water. | SAT | UNSAT |
| * | (6) Separates from rescue strop.                                 | SAT | UNSAT |
| * | (7) With lighting device on signals I'm alright.                 | SAT | UNSAT |



LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 3.4

LESSON TOPIC: Parachute Canopy Escape

ALLOTTED LESSON TIME: 1.0 Classroom  
2.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory instructor  
Safety personnel and additional instructors  
as required per Annex E, Staffing  
Requirements, of Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NWP-3-50.1, Navy Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. 12 foot deep pool.
3. One 28-foot parachutes with shroud lines removed, one safety line attached to the skirt hem of the parachute.

TERMINAL OBJECTIVE:  
Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.7 List procedural steps for parachute canopy escape.
- 3.8 Perform a hand-over-hand escape from underneath a collapsed parachute.

CRITERIA TEST: Performance test

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self; give rank, current job.
1. State background, schools, duty stations, etc.
1. State question and answer policy.
4. Reiterate the training time out policy.
1. Ask the following questions:
  1. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  1. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Lesson Overview

Briefly outline material to be covered.

- a. Lesson Topic: Parachute Canopy Escape
- b. Major Teaching Points:
  - (1) Dangers of Collapsed Parachute.
  - (2) Entanglement in a Collapsed Parachute.
  - (3) Trapped Under Collapsed Parachute.

PRESENTATION:

- A. Dangers of Collapsed Parachute.
  - 1. Inability to breathe through a wet parachute.
  - 2. Possibility of the parachute sinking and taking survivor with it.
  - 3. Rescue swimmer becoming entangled.
  - 4. Rescue swimmer or survivor panicking and becoming more entangled.
- B. Entanglement In a Collapsed Parachute.
  - 1. Should a rescue swimmer inadvertently jump or swim onto a parachute canopy
    - a. Do not Panic

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Turn onto your back
- c. Arch your back to help float your body
- d. Scull with the hands while repeatedly opening the legs slowly, no more than shoulder width, and closing until clear of the parachute.
- e. Once clear of parachute, swim clear of area.

Explain to students that flutter kick shall not be used. Flutter kick will further entangle the swimmer.

C. Trapped Under Collapsed parachute.

- 1. Grasp shroud line in parachute seam.
- 2. Lift high above head.
- 3. Swim backwards; utilizing a punching hand over hand movement, keeping them high enough to create an air pocket.
- 4. Once at the apex, reach high to create another air pocket.
- 5. Continue along one given shroud line until clear of parachute.

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION:

- A. Instructor performs demonstration of procedures for Entanglement in a Collapsed Parachute.
- B. Instructor performs demonstration of procedures for Trapped under Collapsed Parachute.
- C. Practice "Trapped under a Collapsed Parachute" until all students can successfully demonstrate the skill.
  - 1. Parachute spread out on water surface in deep end of pool. (Min. water depth of eight feet)  
Student's circle parachute and hold it on the surface by the skirt hem.
  - 2. One student, with an instructor, at a time under the parachute, and another instructor will be at the apex for safety.
  - 3. Students practice procedures.

Check for understanding.

Ensure each evolution is manned as per Annex E.

One instructor demonstrates the skill while the other instructor or staff member is poolside tending the parachute safety line.  
Explain the procedures and safety hazards.

EVALUATION: Performance Test

ASSIGNMENT: None

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Course, Q-050-600  
Q-050-602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 3.5

LESSON TOPIC: Direct Deployment

ALLOTTED LESSON TIME: 1.0 Classroom  
2.5 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional instructors  
as required per Annex E, Staffing  
Requirements, Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1 Naval Search and Rescue Manual
2. NTTP 1-01 Series

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series without injury to personnel or damage to equipment.

Enabling Objective:

Completely supported by this lesson topic

3.9 List maritime direct deployment procedural steps for survivor recovery, to include maritime direct deployment hand signals.

3.10 Demonstrate maritime direct deployment procedural steps for survivor recovery, to include maritime direct deployment hand signals.

CRITERION TEST: Job Sheet 3-5, written test

HOMEWORK: None

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Rescue Swimmer's Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic

1. Introduce self, give rank, current job
2. State background, schools, duty stations, etc
3. State question and answer policy
4. Review Training Time Out policy
5. Ask the following questions:

- a. Has anyone gone to the hospital or branch clinic for treatment within 24 hours, and are you taking any medications?
- b. Has anyone taken over-the-counter medications within 24 hours?
- c. Are there any potentially disqualifying illnesses or conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objective

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Motivating Statements

U.S. Naval helicopter crews are routinely faced with situations where traditional rescue swimmer deployment procedures are inadequate. Direct deployment can be used effectively in surf, heavy seas, high winds, moving water, ice, off cliffs and structures. It should only be used when the crew has determined that it will be the best method for recovery of a survivor. The primary difference between direct deployment and traditional rescue crewman deployment procedures is the rescue crewman remains attached to the hoist throughout the evolution and survivor recovery is made using the quick stop. Direct deployment procedures are expedient and the rescue swimmer is typically ready for hoisting with the survivor about one to two minutes after initial contact.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Direct Deployment

b. Major Teaching Points:

(1) General maritime direct deployment information.

(2) Maritime direct deployment hand signals.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) Maritime direct deployment rescue swimmer procedures.
- (4) Maritime double lift in water procedures.
- (5) Maritime direct deployment survivor recovery procedures.

PRESENTATION:

A. General Maritime Direct Deployment

1. TRI-SAR Harness

- a. The first harness designed to combine the security of a full body harness, comfort of a seat harness and safety of integrated flotation.
- b. Constructed of MIL-SPEC types 8 and 13 nylon webbing and features low profile flotation and quick adjusting stainless steel hardware.
- c. Harness enables the swimmer to be hoisted in the upright, slightly reclined seated position to allow total use of the hands.
- d. Integrated flotation vest features a low profile, easy to swim in design with user variable buoyancy up to 35 lbs. Flotation cell is encased entirely in a heavy weight,

puncture/abrasion resistant nylon cover.

2. Quick Strop Harness

- a. The quick strop provides a quick safe means of hoisting uninjured personnel.
- b. Constructed of MIL-SPEC webbing and stainless steel hardware.
- c. The strop is placed under the survivors arms, around the survivors back or over the survivors head in one quick motion.
- d. To prevent the survivor from slipping out, a slide buckle is slid down the strop and attached to an adjustable crotch safety strap, which is stored in a zipper pocket on the rear of the strop.
- e. Instructions and pictorials are printed on the strop.

B. General Maritime Direct Deployment Acronyms used:

1. DD - Direct Deployment
2. RS - Rescue Swimmer
3. QS - Quick Strop

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. CC - Crew Chief

5. TSH - TRI-SAR Harness

C. General Maritime Direct Deployment

1. The QS shall only be used in conjunction with the TSH for DD and recovery of survivors.

2. The decision to use DD procedures on a survivor with a known or suspected head, neck, spinal or other severe injury should only be exercised when the use of traditional survivor recovery procedures would place the lives of the RS and/or survivor at greater risk.

3. Direct deployment procedures should not be used on aviators who have ejected from aircraft or if the survivor is entangled in a parachute.

4. The QS shall not be deployed to survivors without the RS. The survivors may not know how to properly use it.

D. Maritime Direct Deployment hand signals.

**Note**

All hand signals should be given in a large and exaggerated manner to prevent misinterpretation by the flight crew.

1. Down: Either RS arm held straight out from the

3.5-7

Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

side of the body, bent at the elbow 90 degrees so hand is pointing down, index finger extended, swiveling from the elbow down, in a circular motion.

- |  |             |
|--|-------------|
| 2. Up: Either RS arm held straight out from the side of the body, palm facing up, sweeping the arm in an up and down motion touching the top of the head and then back to the perpendicular position. The arm should not go below 90 degrees from the body on the down portion of the sweep. | Demonstrate |
| 3. Level off: Either RS arm held straight out from the side of the body, 90 degrees, hand flat palm facing down waving in a rhythmic motion from left to right.  | Demonstrate |
| 4. Left: Left arm held straight out to the side of the body, index finger pointed out ward.  | Demonstrate |
| 5. Right: Right arm held straight out to the side of the body, index finger pointed outward.   | Demonstrate |
| 6. Deploy LPP1/A or LPU-33 (Personal Flotation Device): Palm of either hand placed on top of head. (only one hand will be placed on top or head for this signal).  | Demonstrate |

**Note**

The RS cannot remove the flotation device on the TRI-SAR harness during a rescue. Therefore, when utilizing the TRI-SAR harness during a traditional rescue and the need arises to provide flotation to a survivor the hand signal for Deploy LPP1/A or LPU-33 shall be utilized.

E. Maritime Direct Deployment Procedures

1. The CC opens the cabin door and brings the rescue hook into the helicopter for RS hook-up.

**Note**

Being hooked into more than one safety device (gunner belt, crew seat restraint belt, Double rescue hook) at one time may be hazardous to the RS should the helicopter encounter and emergency and have to ditch. The CC shall ensure that the RS is immediately released from the gunner's belt once the RS is properly hooked into the large rescue hook and the CC has positive physical control of the RS.

**Note**

The SAR helicopter breathing device holster (SHBD holster) shall be removed from the TSH assembly of the RS prior to deployment (Day or Night) from the helicopter.

2. The RS sits on the cabin deck, with gunners belt on and hooks up to the large end of the double rescue hook in the following order:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- |    |   |             |
|----|---|-------------|
| a. | TSH lifting V-ring (always first)   | Demonstrate |
| b. | Rescue strop (for double lift recovery only)  | Demonstrate |
| c. | Quick strop (always last)   | Demonstrate |
| 3. | The detachable lifting strap of the QS can be identified by the red band of webbing located next to the detachable lifting straps V-ring assembly.  | Demonstrate |
| a. | Ensure the detachable lifting strap is routed through the friction lock prior to hook-up.   | Demonstrate |
| b. | Ensure the detachable lifting strap V-ring is always the last object hooked up to the large rescue hook.  | Emphasize   |
| c. | The RS should slide the QS friction keeper as far out as possible, ensuring as large an opening as possible is maintained in the QS assembly. This will make employment of the QS over the survivor's head and shoulder easier. | Demonstrate |
| 4. | RS routes the QS over the preferred shoulder and maintains control of it until employed on the survivor. When RS is satisfied, gives the CC a thumbs up signal.   |             |
| 5. | CC grabs the back of the RS's TSH and taps the RS once on the Chest.  |             |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Upon receiving the signal (one tap on the chest) the RS releases the gunner's belt.
6. CC maintains positive control of RS and directs the RS to the cabin door.
7. After the helicopter has established a steady hover and permission is granted to lower the RS. CC gives RS three taps on the shoulder. The RS then gives the CC thumbs up signal.
8. The CC hoists the RS off of the deck. RS then adjusts straps for fit and comfort, when satisfied, RS gives the CC a thumbs up signal meaning ready to be hoisted.

**Note**

As the RS is entering the water the RS shall maintain visual contact with the survivor.

9. The RS should be placed in the water no more than 2 to 3 feet away from survivor. This is accomplished by the RS directing CC with hand signals.
10. The "I am all right" hand signal is not used for DD procedures by the RS.

**Note**

The rescue strop shall not be used for DD, unless it is in conjunction with the QS for DD double lift procedures.

**WARNING**

The QS shall only be used with the TRI-SAR harness for DD and recovery of survivors.

**WARNING**

If the survivor is placed in the QS device facing away from the swimmer there is a possibility of the survivor being injured and/or rendered unconscious due to the extreme pressure placed on the chest area. Placing the survivor in this manner shall only be performed as a last resort in an extreme situation (i.e. swift water rescue, heavy surf, etc.) in which the RS may get only one chance to put the survivor in the QS or the required to place the survivor in the QS correctly would threaten the life of the RS or the survivor.

- |   |             |
|---|-------------|
| 11. The RS shall attempt to face the survivor and grab the survivor's arm that coincides with the arm that the RS has the QS positioned on (i.e. the RS's right hand grabs the survivors left if they are facing each other). | Demonstrate |
|---|-------------|

**Note**

The detachable lifting strap of the QS can be identified by the red band of the webbing located next to the detachable lifting strap's V-ring assembly.

- |  |             |
|--|-------------|
| 12. The RS slides the QS off his/her arm and along the survivor's arm, placing the QS over the survivor's head and shoulders. The QS may also be applied by: | Demonstrate |
|--|-------------|

- a. Moving the QS over the survivor's feet up the legs and torso.
- b. Disconnecting the QS's detachable lifting V strap from the large end of the double rescue hook and pulling it through the friction keeper.

13. The RS then places the QS up into the armpits and high on the survivor's back. Then slides the friction keeper as close as possible to the survivor keeping constant pressure on the friction keeper and both straps of the QS with one hand.

Demonstrate

**WARNING**

**The safety strap shall be properly secured when placing an unconscious survivor in the QS.**

**WARNING**

**During and actual rescue, the safety strap should be properly used unless it will cause the rescuer and survivor greater risk.**

14. Securing the safety strap is accomplished by routing the hook located at the end of the strap between the survivors legs, then connect the hook to the large side of the friction keeper.

Demonstrate

15. The RS then signals "Ready for pick-up".

Show training video of Direct Deployment.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

F. Double lift Procedures

**Note**

When dealing with severe hypothermia, the double lift method may be utilized. The standard rescue strop is utilized in conjunction with the quick strop, lifting the survivor semi-supine position.

- |  |                                     |
|--|-------------------------------------|
| 1. The rescue strop is attached between the TRS and the QS on the double rescue hook.                      | Demonstrate                         |
| 2. Once in the water place the rescue strop around the survivor according to the NWP 3-50.1 series manual. | Demonstrate                         |
| 3. Then slide down the legs and slide the QS up the legs and under the knees.                              | Demonstrate                         |
| 4. Secure the friction keeper.   | Demonstrate                         |
| 5. Signal "Ready for pick-up".   |                                     |
| 6. RS maintains positive control of the survivor while being hoisted.                                      | Show training video of double lift. |

SUMMARY

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| A. State Lesson Objective       | Turn to cover page for objectives |
| B. Review Major Teaching Points | Briefly summarize                 |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION:

Students shall perform one single quick strop retrieval,  
and one duel quick strop retrieval.

EVALUATION: None

ASSIGNMENT: None

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 3.6

LESSON TOPIC: Disentanglement Procedures (Free  
Floater/Helicopter Aircrew)

ALLOTTED LESSON TIME: 1.5 Classroom  
6.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional instructors as  
required per Annex E, Staffing Requirements, of  
Curriculum Outline.

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. NAVAIR 13-1-6 Series Manuals

INSTRUCTIONAL AIDS:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.11 List the disentanglement procedures for day and night conditions for survivors both with and without aircrew survival equipment.
- 3.12 Demonstrate disentanglement procedures for day conditions for survivors both with and without aircrew survival equipment.

CRITERION TEST: Written Test, Job Sheet 3-6.

HOMEWORK: None

2. LRU-1 Life Rafts
3. LPP-1 Life Vest
4. Pool
5. Chemlights
7. Flashlights
8. Whistle
9. Rescue Swimmer's Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

1. Introduce self; give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Review Training Time Out policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch medical clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Aviation personnel who have bailed out or ejected from their aircraft and are entangled in the parachute

Establish importance and relevance of lesson material using personal experience or anecdote.

present the rescue swimmer with both the greatest challenge and the greatest danger. The swimmer must act swiftly and efficiently in disentangling the survivor before the parachute sinks and the survivor is pulled down with the parachute.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Disentanglement Procedures (Free floater/Helicopter Aircrew)

b. Major Teaching Points:

- (1) Disentanglement procedures for a free floater.
- (2) Disentanglement procedures for helicopter aircrew personnel.
- (3) Emergency floatation procedures.
- (4) Raft extraction procedures.

**WARNING**

**Inhalation of composite fibers resulting from aircraft fires and/or aircraft material damage may be harmful to rescue personnel. If smoke is present, the rescue swimmer shall be deployed up-wind and will approach the aircraft in a manner as to avoid any smoke. Discard wet suit if it becomes impregnated with composite fibers.**

PRESENTATION:

**NOTE**

Equipment worn by the survivor determines the procedures to be used in parachute disentanglement.

A. DISENTANGLEMENT PROCEDURES FOR FREE FLOATER

1. **ASSESS** the situation to determine if survivor(s) are conscious, unconscious, passive, or active. Assessing the situation begins before water entry. The situation may change at any moment.
2. **ESTABLISH** communication to determine the condition of the survivor and make approach. Ask, "are you OK"? The rescue swimmer shall continually evaluate the medical condition of a survivor during the entire course of a rescue.
3. Grasp survivor between the shoulder blades and pull survivor into wind. Obtain control of survivor **"ICIC"**.

State that the rear surface approach is preferred.

Stress "in close in control".

**NOTE**

Check for breathing. Give two breaths if required. Continue giving rescue breaths during disentanglement not to exceed 60 seconds between breaths until survivor is hoisted free of water.

4. **CLEAR** head, neck, and chest area. If survivor is conscious ask about any known injuries or conditions.
5. **CHECK FLOATATION,** evaluate the condition of survivor's floatation.

**NOTE**

When the survivor has damaged or no floatation, the rescue swimmer may give up his/her SAR 1 vest. If the rescue swimmer chooses to give up floatation, he/she shall use the appropriate conscious or unconscious survivor procedures as outlined in Lesson Topic 3.7, Combative Survivor Procedures.

6. **DISENTANGLEMENT** from head to toe.
7. **SWEEP ARMS**, ensure that the survivor's arms are completely clear of any debris. Once it has been verified that the survivor's arms are clear, cross the arms across the survivor's chest.
8. **SPINAL HIGHWAY**, using the spine as a reference, submerge and proceed hand-over-hand, keeping one hand on the survivor at all times, down the back and remove any debris off of the survivor's legs. Submerge as many times as necessary to remove all possible entanglements.

**WARNING**

**If survivor has a suspected back injury, use the side of the survivor as a reference, proceed hand-over-hand along the side, keeping one hand on the survivor at all times, and remove all possible entanglements.**

9. **DISCARD RAFT**, (if applicable).

**NOTE**

At the discretion of the rescue swimmer the raft may be punctured with a knife and sunk before, during, or after the survivor has been removed.

**WARNING**

**Loss of ABC's is a serious life threatening condition requiring immediate medical treatment. This condition takes precedence and the survivor should be recovered by the fastest means possible.**

10. Perform **FINAL CHECK**, head to toe to ensure that all shroud lines and parachute suspension lines are clear.
  11. **SIGNAL** rescue platform.
    - a. Day-arm raised, thumb up.
    - b. Night-arm raised, waving high intensity chemlight.
  12. As helicopter is approaching:
    - a. Ensure **AREA CLEAR**.
    - b. Establish a left hand cross-chest carry.
  13. Allow **RESCUE HOOK TO TOUCH WATER** to discharge static electricity.
  14. **USE APPROPRIATE PROCEDURES** for rescue device selected.
  15. Perform **SAFETY CHECK** on rescue device, signal up hoist.
- B. DISENTANGLEMENT PROCEDURES FOR CMU-33/P22P-18 AIRSAVE VEST WITH PRU-60/P22P-15 INTEGRATED BODY ARMOR, AND CMU-30/P22P-15 ASAIP VEST WITH PRU-61/P22P-15 INTEGRATED BODY ARMOR.

Emphasize importance of final check especially if swimmer inadvertently swims into any debris.

When the survivor is wearing the AIRSAVE/ASAIP vest with body armor, the rescue swimmer shall:

1. **ASSESS** the situation to determine if survivor(s) are conscious, unconscious, passive, or active. Assessing the situation begins before water entry. The situation may change at any moment.
2. **ESTABLISH** communication to determine the condition of the survivor and make approach. Ask, "are you OK"? The rescue swimmer shall continually evaluate the medical condition of a survivor during the entire course of a rescue.
3. Grasp survivor between the shoulder blades and pull survivor into wind. Obtain control of survivor **"ICIC"**.

**NOTE**

Check for breathing. Give two breaths if required. Continue giving rescue breaths during disentanglement not to exceed 60 seconds between breaths until survivor is hoisted free of water.

4. **CLEAR** head, neck, and chest area. If survivor is conscious ask about any known injuries or conditions.

**NOTE**

If the survivor is wearing an HGU series helmet, the chin strap must be loosened prior to inflating survivor's floatation.

5. **CHECK FLOATATION,** evaluate the condition of survivor's floatation.

**NOTE**

When the survivor has damaged or no floatation, the rescue swimmer may give up his/her SAR 1 vest. If the rescue swimmer chooses to give up floatation, he/she shall use the appropriate conscious or unconscious survivor procedures as outlined in Lesson Topic 3.9, Combative Survivor Procedures.

**NOTE**

The following floatation assemblies can be utilized with the ASAIP Vest; LPU-21/P, LPU-27/P, and LPU-35/P.

**WARNING**

**Depending on floatation assembly installed, the rescue swimmer must use the appropriate inflation procedures.**

6. **DISENTANGLEMENT** from head to toe.
7. **SWEEP ARMS**, ensure that the survivor's arms are completely clear of any debris. Once it has been verified that the survivor's arms are clear, cross the arms across the survivor's chest.
8. **SPINAL HIGHWAY**, using the spine as a reference, submerge and proceed hand-over-hand, keeping one hand on the survivor at all times, down the back and remove any debris off of the survivor's legs. Submerge as many times as necessary to remove all possible entanglements.

**WARNING**

**If survivor has a suspected back injury, use the side of the survivor as a reference, proceed hand-over-hand along the side, keeping one hand on the survivor at all times, and remove all possible entanglements.**

9. **DISCARD RAFT**, (if applicable).

**NOTE**

At the discretion of the rescue swimmer the raft may be punctured with a knife and sunk before, during, or after the survivor has been removed.

10. Perform **FINAL CHECK**, head to toe to ensure that all shroud lines and parachute suspension lines are clear.
11. **SIGNAL** rescue platform.
- a. Day-arm raised, thumb up.
- b. Night-arm raised, waving high intensity chemlight.
12. As helicopter is approaching:
- a. Ensure **AREA CLEAR**.

Emphasize importance of final check especially if swimmer inadvertently swims into any debris.

**NOTE**

Survivor's lifting device is located on right side of vest. Lifting device could be covered by a nylon restraining flap.

**WARNING**

**The survivor will ride lower than normal on PNJ-205 and TRI-SAR rescue harnesses. This will prevent dual man hoist into UH-1 and H-60 aircraft.**

**NOTE**

UH-1 and H-60 aircraft recoveries shall use the rescue strop as the primary means of rescue.

- b. With your right hand, connect rescue swimmer's snap hook to survivor's "D" ring.
  - c. Maintain left hand cross-chest carry while grasping rescue swimmer's lifting "V" ring in your left hand.
13. Allow **RESCUE HOOK TO TOUCH WATER** to discharge static electricity.
  14. **USE APPROPRIATE PROCEDURES** for rescue device selected.
  15. Perform **SAFETY CHECK** on rescue device, signal up hoist.

C. ARMOR PLATE REMOVAL PROCEDURES

**NOTE**

The following procedures for armor plate removal will happen during step 6 (disentanglement head to toe), immediately following the check inflation step.

**WARNING**

**The rescue swimmer must decide if performing armor plate removal procedures could cause further injury to survivor.**

**NOTE**

If vest is zippered fully, armor release beaded pull handle will not detach normally. Armor release beaded pull handle will have to be detached at snaps to remove back plate.

**WARNING**

**Failure of armor release beaded pull handle to completely come away from survivor could cause a choking hazard to survivor. If this occurs, the rescue swimmer must detach snaps to allow back plate to fall away.**

1. Grasp armor release beaded pull handle, located on front chest of vest, and pull out and away (approximately 18 inches) to release back plate. If back plate does not fall away, pull free from hook/pile tape located on rear of vest, and discard.

**NOTE**

Vest could be fully zippered which would cover access to chest plate. Unzip vest to expose chest plate.

2. Grasp nylon web handle on front plate, located on center of chest inside vest. Pull free from hook/pile tape and discard.
3. Continue disentanglement using appropriate procedures.

D. RAFT EXTRACTION PROCEDURES

**WARNING**

**Liferaft must be discarded prior to final check.**

**NOTE**

The point at which disentanglement in the liferaft becomes unfeasible is the point at which the rescue swimmer should extract the survivor from the raft. Once the survivor is in the water, the rescue swimmer resumes disentanglement procedures from where he/she left off.

1. The three effective methods of removing a survivor from a raft are as follows:

**WARNING**

**Do not use this method if the survivor has a possible back injury.**

- 1.a. The rescue swimmer gets behind the survivor, places his/her knees against the edge of the liferaft, and grasp the survivor's harness/flight suit between the shoulder blades.
- 1.b. Simultaneously, the rescue swimmer pulls the survivor up and over the raft lobe, and pushes down and away with knees against the raft.
- 1.c. Once the survivor is in the water, continue disentanglement procedures.

**WARNING**

**Do not use this method if the survivor has a possible back injury.**

- 2.a. The rescue swimmer gets behind the survivor and grasps the harness/flight suit between the shoulder blades.
- 2.b. The rescue swimmer will roll the survivor and raft either to the right or left. Inform survivor if practical. Normally, in order to gain momentum the rescue swimmer will rock the survivor/raft twice to the side and prepare to roll the survivor out of the raft. On the third time, roll the survivor into the water and immediately right him/her by rolling him/her onto their back.

- 2.c. Once the survivor is in the water, continue disentanglement procedures.

**WARNING**

**Use the following method if survivor has a possible back injury.**

- 3.a. The rescue swimmer gets behind the survivor and grasps the harness/flight suit between the shoulder blades.
- 3.b. With one hand, the rescue swimmer remove his/her scabbard knife while maintaining control of the survivor with the other hand. The rescue swimmer then uses the knife to puncture/cut the raft and deflate it.

**WARNING**

**This is done well clear of the survivor ensuring not to injure the survivor or swimmer.**

- 3.c. While the raft is deflating, the rescue swimmer may stow the knife if practical.
- 3.d. Once the survivor is in the water, continue disentanglement procedures.

Summary:

- A. State the Lesson Objectives.
- B. Review major teaching points.

Turn to cover page for objectives.

Briefly summarize.

APPLICATION:

**NOTE**

It is unrealistic for a survivor to act aggressively and chase the rescue swimmer. This is an impractical simulation of an active drowning victim as defined by the American Red Cross (Lifeguarding Manual, pg. 56); GAO Report (pg. 17) calls "belligerent and aggressive victims is a poor teaching method and an ineffective way to mentally condition students to perform under stress". Survivors SHALL be briefed to exhibit the following characteristics as detailed by the American Red Cross:

1. Struggle to keep the face above the water in an effort to breathe.
2. Have arms extended to the side, pressing down for support. There is no supporting kick.
3. Have a vertical body position in the water.
4. Struggle at the surface, unable to move forward, for approximately 20 to 60 seconds before submerging.

**IN NO CASE WILL THE SURVIVOR CHASE THE RESCUE SWIMMER.**

A. Instructor performs a day water entry and proceeds to slowly disentangle a survivor wearing the applicable parachute harness while another instructor talks the students through the procedures. Set up rescue scenarios in the deep end of the pool.

Ensure students receive the classroom instruction and observe an in-water demonstration of each disentanglement scenario prior to any practical experience.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE**

Instructors shall observe and critique the performance of each student for all rescue scenarios, under both day and night situations.

Students outfitted in complete Rescue Swimmer equipment will line up on the side of the pool and, upon direction of the Primary Instructor, enter the water using standard water entry procedures and perform disentanglement procedures.

**SCENARIOS**

1. Simulated conscious aircraft passenger wearing a partially inflated LPU-28/LPP-1 and cranial helmet.
2. Simulated conscious helicopter crewman wearing a CMU-33 or CMU-30 vest with appropriate floatation and an HGU series helmet.
3. Simulated unconscious helicopter crewman wearing a CMU-30 or CMU-33 vest with appropriate floatation and an HGU series helmet.

The student simulating the man-overboard shall wear a shorty wetsuit and an un-inflated LPU-28/LPP-1/LPU-30/MK-1 vest for minimum floatation.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

EVALUATION: Job Sheet 3.6, written test.

ASSIGNMENT: None

JOB SHEET 3-6  
 DISENTANGLEMENT FREE-FLOATER, HELICOPTER CREWMEMBER

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
 INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either **Q, CQ, UQ**.  
 "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure.  
 A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0  
 Minimum average score for passing is **3.6**  
 If an item is not applicable line out that item and do not add it to the overall average

ACTION	SCORE	POINTS
Assess the situation	Q	CQ UQ _____
Deployment Look left, right and center Signal, "I'm all right"	Q	CQ UQ _____
Approach survivor (using correct approach) Establish communication In close in control *Check breathing Give two rescue breaths if necessary	Q	CQ UQ _____
*Clear head, neck and chest Remove any debris Remove raft lanyard Ensure that it is safe to inflate flotation	Q	CQ UQ _____
Inflate and/or check flotation	Q	CQ UQ _____
*Disentanglement head to toe Sweep arms/cross arms across chest Spinal highway/side control (insure survivor has no back injuries) Sweep legs using appropriate method	Q	CQ UQ _____
Raft (if applicable) Proper raft procedure Discarded raft completely	Q	CQ UQ _____

Final check (if applicable)	Q	CQ	UQ _____
Sweep head to toe for any debris			
Signal helicopter for the appropriate	Q	CQ	UQ _____
lifting device			
Properly use lifting devices			
*Perform safety check for lifting device			
Signal up hoist			

4.0 X number of **Q** = \_\_\_\_\_

2.0 X number of **CQ** = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

LESSON PLAN

JANUARY 2004

COURSE TITLE: AVIATION RESCUE SWIMMER  
COURSES, Q-050-0600  
Q-050-0602

TERMINAL OBJECTIVE:  
Partially supported by this lesson topic:

CLASSIFICATION: Unclassified

3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescue as outlined in NWP3-50.1 and OPNAVINST 3130.6 series without injury to personnel or damage to equipment.

LESSON TOPIC NUMBER: 3.7

LESSON TOPIC: Disentanglement procedures  
(Back Pack)

ALLOTTED LESSON TIME: 1.5 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional instructors as required per Annex E, Staffing Requirements, of Curriculum Outline.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

3.13 List parachute disentanglement procedures for personnel wearing U. S. Navy Back Pack parachute assembly.

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. NAVAIR 13-1-6 Series Manual

CRITERION TEST: Written test.

HOMEWORK: None

INSTRUCTIONAL AIDS:

1. Trainee Guide

2. 2 LRU-1 Life Raft
3. 4 Back Pack Harness with Parachute
4. 4 Helmets
5. Pool
6. Whistle
7. Rescue Swimmer's Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

A. Establish Contact

Display name and lesson topic

1. Introduce self; give rank, current job
2. State background, schools, duty stations etc.
3. State question and answer policy
4. Review Training Time Out policy
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to the department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

Establish importance and relevance of lesson material using personal experience or anecdote.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Motivating Statements

Aviation personnel who have bailed out of or ejected from their aircraft and are entangled in the parachute present the rescue swimmer with both the greatest challenge and the greatest danger. The swimmer must act swiftly and efficiently in disentangling the survivor before the parachute sinks and the survivor is pulled down with the parachute.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Disentanglement Procedures

b. Major Teaching Points:

- (1) Disentanglement Procedures for the Navy Standard Back Pack harness and parachute.
- (2) Ballooned Canopy Procedures

PRESENTATION:

**WARNING**

**Inhalation of composite fibers resulting from aircraft fires and/or aircraft material damage may be harmful to Rescue Personnel. If smoke is present, the Rescue Swimmer shall be deployed up-wind and will approach the aircraft in a manner as to avoid any smoke. Discard wets suit if it becomes impregnated with composite fibers.**

**NOTE**

Equipment worn by the survivor determines the procedures to be used in parachute.

**WARNING**

**The parachute should never be allowed to come between the rescue swimmer and the survivor, as the rescue swimmer could lose sight of the survivor or could become entangled in the parachute or suspension lines.**

A. Disentanglement procedures for Back Pack Harness

1. **ASSESS** situation to determine if survivor(s) are conscious, unconscious, passive or active. Assessing the situation begins before water entry. The situation may change at any moment.
2. **ESTABLISH** communication to determine the condition of the survivor and make approach. Ask, "Are you OK"? The rescue swimmer shall continually evaluate the medical condition of a survivor during the entire course of a rescue.
3. Grasp survivor's harness between the shoulder blades and pull survivor into the wind and away from parachute. Obtain control of survivor **"ICIC"**.
4. Remove oxygen mask, if applicable. **CLEAR** head, neck, and chest area. If survivor is conscious ask about any known injuries or conditions.

State that the rear surface approach is preferred.

Stress "In close in Control"  
**ICIC.**

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE**

CHECK FOR BREATHING Give two breaths if required. Continue giving rescue breaths during disentanglement not to exceed 60 seconds between breaths until survivor hoisted free of water.

**WARNING**

**When the HGU series helmet is worn with the LPP-1 life preserver, do not inflate vest until chinstrap is loosened or helmet is removed.**

5. Disconnect survivor's quick ejector snap located on the chest and CHECK FLOATATION (inflate manually or orally, if necessary).

Display and demonstrate operation of quick ejector snap.

**WARNING**

**If releasing the quick ejector snap is not done prior to inflation and the survivor's is wearing an LPP-1, there is a possibility of the LPP-1 crushing survivor's chest. At a minimum, it will be hard for the survivor to breathe. This warning applies to the U.S. Chest Pack, Back Pack, and Seat Pack Harness also.**

**NOTE**

If the survivor is wearing a chest pack, one of the butterfly spring snaps, that connect the pack to the harness, must be released to gain access to the chest quickly.

6. DISENTANGLEMENT from head to toe, checking for injuries during disentanglement procedures.
7. Remove shoulder straps and SWEEP ARMS, ensuring that survivor's arms are completely clear of any debris.

Stress there is no fitting attaching the parachute to

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

Once it has been verified that the survivor's arms are clear, cross the arms across the survivor's chest.

the harness. It must be removed as one unit.

8. **SPINAL HIGHWAY**, using the spine as a reference, submerge and proceed hand-over-hand, keeping one hand on the survivor at all times, and release quick ejector fittings on survivor's legs. After fittings are released, submerge as before and remove all parachute suspension lines from survivor's legs. Submerge as many times as necessary to remove all debris.

**WARNING**

**If survivor has a suspected back injury, use the side of the survivor as a reference, proceed hand-over-hand along the side, keeping one hand on the survivor at all times, and remove all possible entanglements.**

Tow the survivor clear of the parachute. If the survivor is still not free of the parachute or harness, use the washboard method.

**WARNING**

**If the survivor has a suspected back injury do not use the washboard method.**

- a. Grasp survivor with both hands on the back of the floatation device.
- b. In quick succession, push and pull survivor fore and aft. Make sure that the survivor's head is kept above water.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

9. **DISCARD RAFT** (If applicable)

**NOTE**

At the discretion of the rescue swimmer the raft may be punctured with a knife and sunk before, during or after the survivor has been removed.

**WARNING**

**Loss of ABC's is a serious life threatening condition requiring immediate medical treatment. This condition takes precedence and survivor should be recovered by fastest means possible.**

10. Perform **FINAL CHECK**, head to toe to ensure that all shroud lines and parachute suspension lines are clear.
11. **SIGNAL** rescue platform.
- a. Day - Arm raised, thumb up.
  - b. Night - Arm raised, waving high intensity chemlight.
12. As the helicopter is approaching
- a. Ensure the **AREA CLEAR**.
  - b. Establish a left-hand cross-chest carry, grasping survivor's lifting "V" ring in your left hand.

Emphasize importance of final check especially if swimmer inadvertently swims into parachute.

**WARNING**

**When connecting to a survivor who has an SV-2 vest, ensure that the chest strap on the survivor is loosened slightly to avoid injury to the survivor.**

- c. With your right hand connect rescue swimmer's snap hook to survivor's "V" ring.
  - d. Maintain left-hand cross-chest carry while grasping rescue swimmer's lifting "V" ring in your left hand.
- 
- 13. Allow **RESCUE HOOK TO TOUCH WATER**, discharging static electricity.
  - 14. **USE APPROPRIATE PROCEDURES** for rescue device selected.
  - 15. Perform **SAFETY CHECK** on rescue device, signal up hoist.

C. Ballooned Canopy Procedures

Explain ballooned canopy

- 1. Establish communications during approach to survivor

**WARNING**

**Do not go under canopy; it may collapse and trap survivor and swimmer.**

- 2. Swim to chute edge closest to survivor and opposite the apex.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. Lift edge of parachute; pull one shroud line until survivor is within reach.
4. With free arm, turn survivor around and grasp back of harness pull to edge of canopy.
5. In one motion; Lift skirt over survivor head and pull survivor clear.
6. With survivor out from under the parachute continue pulling survivor into the wind and away from parachute canopy.
7. When well clear of parachute canopy, use disentanglement procedures applicable to type of harness the survivor is wearing.

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives

B. Review Major Teaching Points

Briefly summarize

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

APPLICATION:

A. Instructor performs a day water entry and proceeds to slowly disentangle survivor wearing a standard parachute harness, while another ARSS instructor narrates procedures. Set up rescue scenarios in the deep end of pool.

Ensure students receive the classroom instruction and observe an in-water demonstration prior to any practical experience.

EVALUATION: Written test.

ASSIGNMENT: None

LESSON PLAN

JANUARY 2004

COURSE TITLE: AVIATION RESCUE SWIMMER  
COURSES, Q-050-0600  
Q-050-0602

TERMINAL OBJECTIVE:  
Partially supported by this lesson topic:

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 3.8

LESSON TOPIC: Disentanglement procedures  
(Jet aircraft)

ALLOTTED LESSON TIME: 1.5 Classroom  
6.0 Laboratory

3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescue as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series without injury to personnel or damage to equipment.

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional instructors as required per Annex E, Staffing Requirements, of Curriculum Outline.

ENABLING OBJECTIVES:

Completely supported by this lesson topic:

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. NAVAIR 13-1-6 Series Manual

- 3.14 List disentanglement procedures for personnel wearing Jet aircraft survival equipment.
- 3.15 Demonstrate disentanglement procedures for personnel wearing Jet aircraft survival equipment in day/night conditions.

CRITERION TEST: Job Sheet 3.6, written test.

HOMEWORK: None

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. 2 Parachute Restraint Harness, PCU-33
3. 2 LRU-1 Life Raft
4. 2 Parachute Assemblies
5. 2 Helmets
6. 2 RSSK/SKUs
7. Chem.-lights (Yellow & Blue)
8. Flashlights
9. Whistle
10. Pool
11. Rescue Swimmer's Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

1. Introduce self; give rank, current job
2. State background, schools, duty stations etc.
3. State question and answer policy
4. Review Training Time Out policy
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Display name and lesson topic

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

Aviation personnel who have bailed out of or ejected from their aircraft and are entangled in the parachute present the rescue swimmer with both the greatest challenge and the greatest danger. The swimmer must act swiftly and efficiently in disentangling the survivor before the parachute sinks and the survivor is pulled down with the parachute.

2. Lesson Overview

a. Lesson Topic: Disentanglement Procedures

b. Major Teaching Points:

Briefly outline material to be covered.

Disentanglement procedures for the parachute restraint harness, PCU-33.

PRESENTATION:

**NOTE**

Equipment worn by the survivor determines the procedures to be used in parachute.

**WARNING**

Inhalation of composite fibers resulting from aircraft fires and/or aircraft material damage may be harmful to rescue personnel. If smoke is present, the rescue swimmer shall be deployed up-wind and will approach the aircraft in a manner as to avoid any smoke. Discard wets suit if it becomes impregnated with composite fibers.

**WARNING**

The parachute should never be allowed to come between the rescue swimmer and the survivor, as the rescue swimmer could lose sight of the survivor or could become entangled in the parachute or suspension lines.

A. Disentanglement procedures for PCU/33, Integrated Torso Harness

1. **ASSESS** situation to determine if survivor(s) are conscious, unconscious, passive or active. Assessing the situation begins before water entry. The situation may change at any moment.
2. **ESTABLISH** communication to determine the condition of the survivor and make approach. Ask, "Are you OK"? The rescue swimmer shall continually evaluate the medical condition of a survivor during the entire course of a rescue.

Write key words on board

Day entry - Enter from platform

Night entry - Lowered from platform

State the rear surface approach is preferred.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. Grasp survivor's harness between the shoulder bladders and pull survivor into the wind and away from parachute. Obtain control of survivor "ICIC".
4. Remove oxygen mask. CLEAR head, neck, and chest area. If survivor is conscious ask about any known injuries or conditions.
  - a. If survivor is still wearing oxygen mask completely remove it from both bayonet fittings and push mask through chest strap, away from survivor.

Stress "In Close In Control", **ICIC**.

**NOTE**

CHECK FOR BREATHING. Give two breaths if required. Continue giving rescue breaths during disentanglement not to exceed 60 seconds between breaths until survivor is hoisted free of water.

5. CHECK FLOATATION (inflate manually or orally if necessary).
6. DISENTANGLEMENT from head to toe, checking for injuries during disentanglement process.
  - a. Disconnect parachute risers by releasing shoulder Kock fittings.
  - b. Remove parachute risers and throw them to the side, ensuring they do not fall back onto survivor.
7. SWEEP ARMS, ensuring that survivor's arms are

Demonstrate operation of Kock fittings.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

completely clear of debris. Once it has been verified that the survivor's arms are clear, cross the arms across the survivor's chest.

8. **SIDE CONTROL**, using the side of the survivor as a reference, proceed hand-over-hand along the:
  - a. Left side. Move down towards the legs removing any shroud lines along the way. Release the Oxygen hose (if applicable) from RSSK, and then disconnect mini-Koch fitting on lap.
  - b. Move back up the left side and go down the right side toward the legs, removing any shroud lines along the way. Disconnect the mini-Koch fitting on lap. This releases the RSSK.
  - c. Move back down the left side and ensure there are no entanglements around the survivor's left leg. Repeat for right leg.
9. Tow survivor clear of parachute and **DISCARD RAFT** (if applicable).

Emphasize that this process should be repeated as many times as necessary to completely disentangle survivor.

**NOTE**

At the discretion of the rescue swimmer the raft may be punctured with a knife and sunk before, during, or after the survivor has been removed.

**WARNING**

**Loss of ABC's is a serious life threatening condition requiring immediate medical treatment. This condition takes precedence and survivor should be recovered by fastest means possible.**

**NOTE**

The litter should be the primary recovery device if survivor is an ejected aviator or other survivor suspected of having a spinal injury based on swimmer's evaluation.

10. Perform **FINAL CHECK**, head to toe to ensure that all shroud lines and parachute suspension lines are clear.
  
11. **SIGNAL** rescue platform.
  - a. Day - Arm raised, thumb up
  - b. Night - Arm raised, waving high intensity chemlight.
  
12. As the helicopter is approaching
  - a. Ensure the **AREA CLEAR**.

Emphasize importance of the final check especially if swimmer inadvertently swims into parachute. If any material is removed during the final check, another final check will be accomplished until no entanglements are found.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Establish a left-hand cross-chest carry, grasping survivor's gated "D" ring in your left hand.
  - c. With your right hand connect rescue swimmer's snap hook to survivor's "D" ring.
  - d. Maintain left-hand cross-chest carry while grasping rescue swimmer's lifting "V" ring in your left hand.
13. Allow **RESCUE HOOK TO TOUCH WATER**, discharging static electricity.
14. **USE APPROPRIATE PROCEDURES** for rescue device selected.
15. Perform **SAFETY CHECK** on rescue device, signal up hoist.

**NOTE**

If rescue scenario involves E-2C Hawkeye aircrew, all of the procedural steps are identical with those of ejection seat aircraft. The difference in gear is purely mechanical and will require deviations in technique only.

APPLICATION:

**NOTE**

It is unrealistic for a survivor to act aggressively and chase the rescue swimmer. This is an impractical simulation of an active drowning victim as defined by the American Red Cross (Lifeguarding Manual, pg. 56). GAO Report (pg. 17) calls "belligerent and aggressive victims is a poor method and an ineffective way to mentally condition students to perform under stress". Survivors SHALL be briefed to exhibit the following characteristics as detailed by the American Red Cross:

1. Struggle to keep the face above the water in an effort to breathe.
2. Have arms extended to the side, pressing down for support. There is no supporting kick.
3. Have a vertical body position in the water.
4. Struggle at the surface, unable to move forward, for approx. 20 to 60 seconds before submerging.

**IN NO CASE WILL THE SURVIVOR CHASE THE RESCUE SWIMMER.**

- A. Instructor performs a day water entry and proceeds to slowly disentangle a survivor wearing an integrated torso harness, while another instructor talks the students through the procedures. Set up rescue scenarios in the deep end of the pool.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- B. Instructors shall observe and critique the performances of each student for successful disentanglement and rescue of survivor.
1. Simulated conscious pilot wearing a torso harness, under a ballooned canopy.
  2. Simulated unconscious pilot wearing a torso harness, with a deflated canopy in water/raft.
  3. Test out student, using either one of the two preceding evolutions.

Ensure students receive the classroom instruction and observe an in-water demonstration of the integrated torso harness prior to any practical experience.

NIGHT SCENARIO SAFETY NOTES: In the event of an emergency, any instructor will sound multiple whistle blasts. The student guarding the emergency lights will turn them on.

Brief to students prior to night disentanglement scenarios.

The tower or pool deck safety observers/instructors will point out the student/instructor in distress.

The instructor/safety swimmer nearest the scene shall immediately proceed to the student/instructor in distress and render assistance.

In the event that safety swimmer requires assistance, only a qualified instructor will enter the water to assist.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

ALL STUDENTS ON THE POOL DECK SHALL FREEZE AND HOLD THEIR POSITION. THOSE STUDENTS IN THE WATER SHALL SWIM TO THE SIDE OF THE POOL AND FREEZE.

Prior to securing from the emergency, the primary instructor shall muster and account for all students and ensure pool is clear of all students.

During the night evolution: the student will complete a hook up of a free floater to a rescue strop, complete a Torso Harness Disentanglement, and properly secure survivor in a litter.

EVALUATION: Job sheet checklist 3.8, final multi practical and a written test.

ASSIGNMENT: None

JOB SHEET 3-8  
 DISENTANGLEMENT INTEGRATED TORSO HARNESS

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
 INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either Q, CQ, UQ.  
 "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure.  
 A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0  
 Minimum average score for passing is 3.6  
 If an item is not applicable line out that item and do not add it to the overall average

ACTION	SCORE	POINTS
Assess the situation	Q CQ	UQ _____
Deployment Look left, right and center Signal, "I'm all right"	Q CQ	UQ _____
Approach survivor (using correct approach) Establish communication In close in control *Remove O2 mask *Check breathing Give two rescue breaths if necessary	Q CQ	UQ _____
*Clear head, neck and chest * Remove any debris Remove raft lanyard Ensure that it is safe to inflate flotation	Q CQ	UQ _____
Inflate and/or check flotation	Q CQ	UQ _____
Disentanglement head to toe *Remove KOCH fittings Sweep arms/cross arms across chest *Side control Release oxygen hose on SKU * Release SKU Sweep legs	Q CQ	UQ _____
Raft (if applicable) *Proper raft procedure	Q CQ	UQ _____

Discarded raft completely

Final check Q CQ UQ \_\_\_\_\_

Signal helicopter for the appropriate lifting device Q CQ UQ \_\_\_\_\_

Properly use lifting devices

\*Perform safety check for lifting device

Signal up hoist

4.0 X number of **Q** = \_\_\_\_\_

2.0 X number of **CQ** = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Course, Q-050-600  
Q-050-602

TERMINAL OBJECTIVE:  
Partially supported by this lesson topic:

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 3.9

LESSON TOPIC: Combative Survivor

ALLOTTED LESSON TIME: 1.0 Classroom  
2.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional instructors  
as required per Annex E, Staffing  
Requirements, of Curriculum Outline.

INSTRUCTIONAL REFERENCES:

NWP3-50.1 Naval Search and Rescue Manual

3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objective:  
Completely supported by this lesson topic

- 3.16 Describe characteristics of a panicking survivor.
- 3.17 State the procedures for survivor emergency floatation for both conscious and unconscious victims.
- 3.18 Demonstrate emergency floatation procedures for conscious and unconscious victims in a simulated rescue situation.

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Rescue Swimmer's Equipment
3. Pool

- 3.19 List procedural steps for a combative survivor.
- 3.20 Demonstrate combative survivor procedures in a simulated rescue situation.
- 3.21 State modified recovery procedures for a combative survivor.
- 3.22 Demonstrate modified recovery procedures for a combative survivor in a simulated rescue situation.
- 3.23 State procedures for providing care for combative survivor while aboard the aircraft.
- 3.24 Describe appropriate combative survivor hand signals.
- 3.25 Demonstrate appropriate combative survivor hand signals.

CRITERION TEST: Written test, Practical

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic

1. Introduce self, give rank, current job
2. State background, schools, duty stations, etc
3. State question and answer policy
4. Review Training Time Out policy
5. Ask the following questions:

- a. Has anyone gone to the hospital or branch clinic for treatment within 24 hours, and are you taking any medications?
- b. Has anyone taken over-the-counter medications within 24 hours?
- c. Are there any potentially disqualifying illnesses or conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objective

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Lesson Overview

a. Lesson Topic: Combative Survivor

b. Major Teaching Points:

(1) Survivor Characteristics

(2) Emergency flotation for survivors

(3) Combative survivor

(4) Modified recovery procedures

(5) Caring for combative survivor while on board  
rescue platform

(6) Combative survivors hand signals

anecdote.

Briefly outline material to  
be covered.

PRESENTATION:

A. Survivor Characteristics

1. Naval Rescue Swimmers are sometimes faced with situation where the survivor can be categorized as uncooperative. Uncooperative survivors can be categorized into two distinct types; panicked and combative.

2. Panicking Survivors:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Some rescues involve panicky survivors (even some aviators).
- b. Appearance: Wide eyes, frantic activity, grasping for air and other similar behavior.
- c. Will attempt to grab and get on top of rescuer in order to keep his/her own head out of the water. Rescuers could be drowned in this manner.
- d. Best Defense: Do not get too close until you have assessed the situation and decided on the best approach for this survivor.
- e. It may be possible to calm a panicking survivor by talking to them and explaining who you are and what you are doing.
- f. Another means of calming a panicked survivor down is to provide floatation.

B. Procedures for giving up floatation to a conscious/unconscious survivor.

**Note**

When the survivor has damaged floatation or no floatation, the swimmer may give up his/her SAR-1 vest. If the swimmer chooses to give up floatation, the rescue swimmer shall use the following conscious or unconscious survivor procedures:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Conscious survivor;

- a. Approach the survivor and establish communication, using the front surface approach.
- b. Upon reaching a distance of 6 to 8 feet from the survivor, execute a quick reverse.
- c. Remove rescue swimmer's mask, unclip and remove SAR-1 and replace mask.
- d. Inflate SAR-1, hold onto end of SAR-1 strap and pass to survivor. Instruct survivor to place SAR-1 over his head with pocket facing out.
- e. While survivor is donning SAR-1. The swimmer shall swim around to the right and behind survivor with strap in right hand.
- f. Place left hand cross-chest under SAR-1 and grasp buckle. Bring strap under both arms and clip into buckle. Tighten strap.

During the pool evolution, the in water instructor will have a fully inflated SAR-1 at the ready, used in the event that a student becomes in distress and will need the flotation. This will ensure more realistic training of a swimmer taking off his mask/SAR-1, replacing the mask, then giving flotation to the simulated survivor as per the procedures for a conscious/unconscious survivor in need of flotation.

2. Unconscious survivor;

- a. Approach the survivor using the front surface approach and establish communications or determine unresponsiveness.
- b. Upon reaching a distance of an arm's length from the survivor, execute a quick reverse.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- c. Remove rescue swimmer's mask, unclip and remove SAR-1 and replace mask.
- d. Inflate SAR-1 and place right arm through neck hole with pocket facing in.
- e. Use front surface approach procedures.

**Note**

Remove survivor's oxygen mask/helmet/cranial if applicable

- f. Place SAR-1 over survivor's head with pocket facing out. This is done with rescue swimmer's right arm while keeping survivor in a left-hand cross-chest carry.
- g. Place left hand cross-chest under SAR-1 and grasp buckle. Bring strap under both arms and clip into buckle. Tighten strap.
- h. Check for breathing. Give two breaths if required.
- i. Perform disentanglement procedures.
- j. Complete the rescue using normal procedures.

C. Combative Survivor

**WARNING**

**Combative survivors may not initially desire to be rescued and may actively resist assistance from the rescue swimmer. The combative survivor may intentionally try to harm the rescue swimmer or themselves when approach. This type of**

**behavior can continue indefinitely, even after repeated attempts by the rescue swimmer to provide assurance and recovery.**

1. Indications that a survivor might be combative are:
  - a. Prior mentally unstable behavior, suicide attempt, voluntarily jumping into the water.
  - b. Suspected or known enemy, foreign personnel demonstrating hostility towards Americans or suspicious personnel aboard vessels being detained.
2. Combative Survivor Procedures

**WARNING**

**The rescue swimmer shall not be deployed into the water to recover enemy or hostile survivors armed with weapons.**

**WARNING**

**Recovery of enemy or hostile survivors should only be attempted using a rescue boat or ship's J-bar davit with armed security personnel on station in the rescue boat or ships forecastle. Helicopter recovery of an enemy or hostile survivor should only be used under operational necessity.**

**WARNING**

**Direct deployment procedures should not be used on a combative survivor. If direct deployment procedures are utilized, the rescue swimmer shall be deployed to a safe distance from the survivor (6-8 feet). If from this "safe distance" the rescue swimmer determines that the survivor is going to remain combative, the rescue swimmer should**

**disconnect from the double rescue hook, reattach the quick strop to the double rescue hook and signal the crew chief "up hoist". Combative survivor procedures should then be utilized.**

**WARNING**

**A single rescue swimmer should not attempt the recovery of a combative survivor without assistance from a rescue boat and/or a second rescue swimmer.**

- a. Approach survivor and establish verbal communication. Attempt to calm the survivor with verbal reassurance and commands.
- b. If survivor is actively combative, do not attempt to immediately gain physical control of the survivor. The rescue swimmer should remain a safe distance (6-8 feet) from the survivor and assess the situation.
- c. If survivor does not have operable floatation, the rescue swimmer should attempt to provide a flotation device to the survivor while still maintaining a safe distance.
- d. Communicate with the rescue platform and brief the situation.
- e. Request assistance utilizing radio or hand signals:
  1. Request rescue boat assistance.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Request the assistance of a second Rescue swimmer. The second rescue swimmer is backup to the primary rescue swimmer and has the following responsibilities:
  - (a) Ensure the safety of the primary rescue swimmer.
  - (b) Assist the primary rescue swimmer as needed.
  - (c) Deploy with rescue equipment requested by primary rescue swimmer.
  - (d) Once on scene, the back-up rescue swimmer may assume/help with communication duties to the rescue platform.
  - (e) Assist the primary rescue swimmer as required.

**Note**

There are no dual rescue swimmer procedures. The back-up rescue swimmer should act as a safety observer and assist the primary rescue swimmer as required.

D. Use the following modified recovery procedures:

1. Maintain 6-8 feet distance from survivor, remain vigilant and ready to render immediate assistance, and wait for the survivor to tire, calm down, and/or ask for assistance.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Be patient. Attempt to calm the survivor and provide flotation to the survivor if needed and/or practical.
3. Assume physical control of the survivor only when deemed safe. Do not attempt to rescue an actively combative survivor unless the following conditions occur:
  - a. The survivor requests assistance.
  - b. The survivor become unconscious/incapacitated.
4. Ensure the survivor has no weapons.
  - a. If conscious, direct the survivor to maintain hands in view at all times.
  - b. Once physical control is established, the rescue swimmer shall remain vigilant for survivor to become actively combative or the presence of any weapons.
5. Recover survivor using appropriate device.

**Note**

The rescue boat or ship's J-Bar davit is the preferred recovery vehicle. If a rescue boat or ship is unavailable, recovery may be made to a helicopter.

**WARNING**

**In all cases (whether the survivor is determined to be combative, panicked, or cooperative) the rescuer shall not hoist the survivor from an overland or maritime environment**

**without the proper application of the selected rescue device to include any and all safety straps or safety devices per all applicable publications and instructions.**

a. Rescue strop:

1. The rescue swimmer shall, in all cases, correctly employ the arm retaining straps prior to signaling "up hoist".

b. Direct deployment:

1. Shall only be used by a rescue swimmer qualified in direct deployment procedures. The quick strop shall only be used in conjunction with the TRI-SAR harness.
2. The rescue swimmer shall, in all cases, correctly employ the quick strop crotch strap prior to signaling "up hoist".

E. Care and control of a combative survivor on board the rescue platform:

1. The rescue platform shall notify the on-scene commander of the situation, survivor's condition, and request medical and security personnel assistance at the rescue platforms location.
2. The rescue platform crew shall remain vigilant during transit. A member of the crew or security personnel shall be stationed next to the survivor at all times during transit to provide immediate physical control if required.

**WARNING**

Restraints will preclude the survivor from being able to egress/swim in the event of an aircraft mishap or rescue boat capsizing during transit. Rescue personnel may need to provide assistance to the survivor to egress the rescue platform in the event of a mishap.

3. Once aboard the rescue platform, the survivor should be secured into a rescue or medevac litter at the earliest opportunity. If aboard a helicopter, cabin doors and windows should be secured.

**Note**

The rescue personnel shall assess condition of survivor and provide medical treatment during transit.

**Note**

Once rescue platform is safely aboard ship or ashore, transfer survivor to awaiting medical and/or security personnel.

F. Hand Signals:

1. Request rescue boat assistance:
  - a. The rescue swimmer extends both arms directly overhead, palms placed together
2. Request the assistance of a second rescue swimmer:
  - a. Rescue swimmer faces the rescue platform, raises one arm from side of body, diagonally

DISCUSSION POINT

(45 degrees) palms down, fingers extended straight out and rotate arm in a circular motion.

RELATED INSTRUCTOR ACTIVITY

EVALUATION: Written test and practical.

ASSIGNMENT: None

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 4.1

LESSON TOPIC: Rescue Swimmer's Equipment

ALLOTTED LESSON TIME: 1.5 Classroom

INSTRUCTIONAL SUPPORT:

- 1 Classroom Instructor
- 1 Laboratory Instructor

INSTRUCTIONAL REFERENCE:

1. NAVAIR 13-1-6 Series Manuals
2. NWP 3-50.1, Naval Search and Rescue Manual
3. OPNAVINST 3710.7, NATOPS General Flight and Operating Instruction
4. NAVAIR 16-30PRC-149-1

INSTRUCTIONAL AID:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.26 State requirements for the maintenance of rescue swimmers equipment per current NAVAIR 13-1-6 series manuals/Maintenance Requirement Cards (MRC's).
- 3.27 Explain the functional operation of rescue swimmer's equipment.
  - a. Wet Suit
  - b. Mask, Fins and Snorkel
  - c. Rescue swimmer's harness
  - d. LPU-28 (SAR-1)
  - e. HBU 23

2. Wet Suit Ensemble
  3. Mask, Fins and Snorkel
  4. HBU-23 (Harness)
  5. LPU-28 (SAR-1)
  6. Navy TRI-SAR Harness
  7. AN/PRC-149
  8. Parachute bag
- f. Navy TRI-SAR Harness  
g. AN/PRC-149
- CRITERION TEST: Written test.
- HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc..
3. State question and answer policy.
4. Reiterate the training time out policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Rescue Swimmer's Equipment

b. Major Teaching Points:

(1) Rescue Swimmer's Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(2) Rescue Swimmer's Equipment Maintenance

PRESENTATION:

A. Rescue Swimmer's Equipment

1. Wetsuit Ensemble

- a. Preferred commercial grade.
- b. Neoprene rubber sandwiched by non-chaffing nylon.
- c. Consists of:
  - (1) Jacket with long sleeves.
  - (2) Trousers, Farmer John type.
  - (3) "Shorty" assembly.
  - (4) Booties
    - a. Worn with fins to protect the feet.
    - b. Worn at the discretion of the rescue swimmer, unless atmospheric conditions dictate otherwise.

Show students each item of the wetsuit ensemble.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(5) Gloves

- a. Worn at the swimmer's discretion.
- b. Shall be the five finger type.

(6) Hood

- a. Worn at the swimmer's discretion.
- b. Reduces chill factor generated by rotor wash.
- c. Reduces heat loss through the head. Sixty percent of all body heat is lost through the head.
- d. Minimum of a wetsuit top shall be worn during all rescues.
- e. Entire wetsuit shall be worn as per OPNAVINST 3710.7, specifically:
  - (1) When water temperature is above 50° F and air temperature is above 32° F (wind chill corrected), full wetsuits shall be worn at the commanding officer's discretion.
  - (2) Whenever the water temperature is below 50° F or air temperature is 32° F (wind chill corrected) or below, full

Emphasize that cold water in the ears can cause dizziness, fainting, or disorientation.

DISCUSSION POINT

anti-exposure protection is mandatory.

2. U.S. Divers Wrap Around Mask

- a. Allows rescue swimmers to see clearly underwater by providing an air space in front of the eyes.
- b. Double skirted for comfort and optimum seal.
- c. Wrap around offers a wide field of view and greater peripheral vision.
- d. Plastic adel clamp on top of mask provides means to attach the four inch General Purpose Chemical Light to the swimmer.
- e. Mask fogging is prevented by coating the interior of all three lenses with commercial mask lens defogger, toothpaste, or saliva.
- f. Mask shall be tied off on either the left or right shoulder strap of the rescue swimmers harness and not passed through the neck of the SAR-1 Vest. The mask shall not be tied off to the LPU-28.

RELATED INSTRUCTOR ACTIVITY

Display

Emphasize use of four inch General Purpose Chemical Light. Using the six inch High Intensity Chemlight will reflect off mask glass and cause vision problems.

Demonstrate.

Display

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. U.S. Divers Rocket Fins

a. Fins provide greater propulsion, speed, power and mobility. U.S. Divers Rocket Fins are the only authorized fins.

1. Slots or vents:

a. Redirect the flow of water through the fin and toward the tip.

b. Most efficient when used with the flutter kick.

c. Fins have a stiff blade which may cause calf cramps.

Explain to students how to stretch out calf cramps in pool with fins on.

4. U.S. Divers Snorkel

a. Permits the rescue swimmer to breathe easily while working in the rotor wash from the aircraft.

b. Barrel can be straight or gently curved.

c. Flexible hose connects barrel to mouthpiece.

d. Snorkel attaches to mask strap with a snorkel keeper.

Display

Demonstrate positioning snorkel and mask on head

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. Aviation Rescue Swimmer's Harness HBU-23

- a. Provides a means to hoist the rescue swimmer and aviator simultaneously from the water.
- b. Incorporates two lifting devices attached to the harness:
- c. Two-inch snap hook
  - (1) Located on extension of chest strap.
  - (2) Aviator's V-ring or D-ring is attached to swimmer's snap hook if swimmer and survivor are to be hoisted simultaneously.
- d. Lifting V-ring.
  - (1) Located between snap hook and chest strap.
  - (2) Attaches to rescue hook.
- e. Has left and right riser pockets which contain the following equipment:
  - (1) Two MK-124 Marine Smoke and Illumination Signal.

Display HBU-23 and show location of equipment.

Demonstrate.

Demonstrate.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. One in each riser pocket.
- b. Used to signal for emergency pick up.
- (2) Two six-inch General Purpose Chemical Lights for signaling or illumination of rescue devices.
  - a. Carried in the left riser pocket
- (3) Two four-inch High Intensity Chemical Lights for use with the swimmers mask.
  - a. Carried in the right riser pocket.
- (4) J-hook Knife Demonstrate
  - (a) Used only as a last resort to cut shroud lines.
  - (b) Carried in the right riser pocket.
  - (c) Has curved end for safety.
- (5) One Strobe Light Demonstrate
  - (a) Located on right shoulder strap.
  - (b) Used for emergency signaling by the swimmer.
  - (c) Covered with a blue lens for

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

swimmer identification.

(6) Scabbard Knife, attached to chest strap.

6. LPU-28 (SAR-1)

- a. Provides emergency flotation for the rescue swimmer. SAR One may also be used to provide flotation for survivor.
- b. Provides a minimum of 30 pounds of buoyancy.
- c. Single cell construction.
- d. Velcro on right shoulder is for attaching strobe light or the AN/PRC-149 to the LPU-28.
- e. Storage pouch is in front.
- f. Normal inflation is through the oral inflation tube, emergency inflation is accomplished with a CO2 cartridge.
- g. Relief valve under storage pouch alleviates over inflation.

Display example point out components

Demonstrate

7. Navy TRI-SAR Harness

- a. The TRI-SAR harness assembly may be worn in place of the HBU-23 swimmers harness.

Demonstrate donning TRI-SAR Harness

DISCUSSION POINT

- b. The TRI-SAR Harness is designed to combine the security of a full body harness with the comfort of a seat harness.
- c. When hoisted, the harness provides a slightly reclined seated position allowing total use of the rescuer's hands.
- d. The integrated flotation vest features a low profile, easy to swim in design with a minimum buoyancy of 35 pounds.

RELATED INSTRUCTOR ACTIVITY

Show students seat of TRI-SAR harness

Show floatation

**NOTE**

The floatation vest is an integrated part of the TRI-SAR Harness and cannot be removed by the swimmer while in the water.

- e. The flotation bladder is encased entirely in a heavy weight, puncture/abrasion-resistant nylon cover.
- f. The floatation can be removed easily when floatation is not required.
- g. TRI-SAR harness incorporates two lifting devices that are attached to the harness.

Explain that floatation must be removed by paraloft

(1) Lifting V-ring.

Show V-ring

- a. Located on waist strap.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Attaches to the large end of the double rescue hook.
- (2) Snap hook
  - a. Located on the extension of the waist strap.
  - b. Allows for the connection of the Aviators lifting V-ring or gated D-ring if swimmer and survivor are riding up simultaneously.
- h. The vest includes three pockets for stowage of survival items.
  - (1) Two MK-124 Marine smoke and illumination signal.
    - a. Located in the bottom left pocket.
  - (2) Two, four inch high intensity chemical lights for use by the rescue swimmer that are located in bottom left pocket next to the MK-124's.
  - (3) Two, six inch general purpose chemical lights used for signaling or illumination , and is located in the lower right pocket, next to the PRC-149.

Show Snap hook

Show students the three pockets of the TRI-SAR harness

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (4) J-hook knife
  - a. Located in the lower left pocket.
- (5) One strobe light.
  - a. Located in the top left pocket next to oral inflation tube.
- (6) Scabbard knife is located on the right side between the floatation folds.

8. AN/PRC-149 Rescue Swimmer's Radio

Show students AN/PRC-149 components.

- a. The AN/PRC-149 is battery-powered and contains a flexible VHF/UHF antenna, GPS antenna, LED display, ON/OFF switch, volume control switch, Press To Talk (PTT) switch, electronic microphone, speaker and earphones.
- b. The radio is a personal non-combat emergency communication radio and location beacon transmitter. It is intended to provide a means of signal and voice communication between a downed aircrew member and the rescue party. The radio is also used as the primary means of communication between the swimmer and the helicopter.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- c. Operates in voice transmitter mode on three manually selectable emergency frequencies. A triple frequency beacon-operating mode provides transmission on all three internationally recognized Search and Rescue frequencies.
- d. Consist of the following major components:
  - (1) Swimmer's Radio Control Unit(SRCU, voice box w/ cable) connects to PRC-149 to make a SAR swimmer's radio. When attached, the control unit assumes control of the PUSH-TO-TALK (PTT) and volume control functions. Connecting the SRCU disables the corresponding functions in the PRC-149.
  - (2) Main Electronics Housing, provides controls, LED displays, speaker, and a microphone.
  - (3) Blade Antenna Assembly, a stowable blade type VHF/UHF antenna. This assembly is removable for replacement purposes, or attaching the SRCU.
- e. Main Electronics Housing stows in LPU-28/Tri-Sar harness storage pouch, cable exits top right corner of storage pouch. Swimmer's Radio Control Unit attaches to enlarged Velcro patch on right shoulder of

Explain to students the Receiver/Transmitter is stowed in the storage pouch on the LPU when not wearing a TRI-SAR Harness.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

LPU-28/Tri-Sar.

- f. Function switch has the following positions:
  - (1) Off
  - (2) GPS (Global Positioning System)
  - (3) 243.0,121.5,282.8 Voice
  - (4) 243.0,121.5,406.025 Beacon
- g. SRCU designed for hands free operation. Press to Talk (PTT) button can be operated with either hand or the chin.
- h. VHF/UHF Radio transmission performance is optimized when the radio is in a direct line of sight to the SAR aircraft receiver. Speech should be directly into speaker with the antenna length pointed generally vertical and perpendicular to the line of sight to the SAR aircraft.
- i. Has optional waterproof earphone for use in high ambient noise areas.
- j. Radio is completely waterproof, but does not float.
  - a. Receiver will function completely

Explain line of sight theory.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

submerged as long as approximately one inch of the antenna is above the surface.

- b. Do not disassemble any part of the AN/PRC-149 Radio, especially the rear cover of the receiver/ transmitter. This will break the watertight integrity of the radio and render it inoperative.

Show training video.

B. Rescue Swimmer's Equipment Maintenance

1. Care and Preventative Maintenance

- a. Fresh water rinse all equipment.
- b. Hang in a cool, dry, windless place.
- c. After drying hand fold wet suit loosely.
- d. Lubrication:
  - (1) Coat zippers, mechanical parts, and fins with silicone spray lubricant.
  - (2) Do not expose mask, fins, and snorkel to direct sunlight unnecessarily as this will accelerate the deterioration of the silicone rubber.

Refer to MSDS on all hazardous materials.

2. Inspection Intervals for Rescue Swimmers Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. By the swimmer prior to flight or deployment.
  - 1. Look for signs of deterioration
    - a. Dry rot, Corrosion
    - b. Tears, Worn or Broken components
- c. Quarterly by the paraloft.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives.

Turn to cover page for objectives.

B. Review Major Teaching Points.

Briefly summarize.

EVALUATION: None

Issue Gear Prior To Lesson  
Plan 4.2

ASSIGNMENT: None

1. Mask
2. Fins
3. Snorkel

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 4.2

LESSON TOPIC: Mask, Fins, and Snorkel

ALLOTTED LESSON TIME: 1.0 Classroom  
2.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional  
instructors as required per Annex E,  
Staffing Requirements, of Curriculum  
Outline

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1 Navy Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Rescue Swimmer's Equipment

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.28 Explain procedures for donning mask, fins, and snorkel and procedures for clearing the mask and snorkel.
- 3.29 Perform side/crawl strokes while wearing mask, fins, and snorkel.

CRITERION TEST:

Job Sheet 4-2

HOMEWORK:

None.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. State training time out policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Topic Guide and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

Relate importance of lesson material using personal experiences or relevant story/anecdote.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2. Lesson overview
  - a. Lesson Topic: Mask, Fins, Snorkel
  - b. Major Teaching Points:
    - (1) Masks
    - (2) Snorkel
    - (3) Fins
    - (4) Surface Diving

Briefly outline material to be covered.

PRESENTATION

A. Masks

- 1. Check for proper fit and seal.
  - a. Hold lightly in place without using strap.
  - b. Seal edge should touch everywhere with no air leaks, gaps, or pressure points.
  - c. Inhale gently
  - d. Good fit - mask will stay in place with light pressure alone. You should feel comfortable and secure.
- 2. Donning procedures
  - a. Put mask on face
  - b. Pull strap over back of head
- 3. Mask clearing methods-replacing water with air

Demonstrate

Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

a. Method A

- (1) Press the top of the mask against forehead with palm of hand and slowly exhale through your nose.
- (2) Air displaces the water and is forced out the bottom of the mask.

Demonstrate.

b. Method B

- (1) Place hands on sides of mask, then lift bottom of mask slightly away from face, and slowly exhale through your nose.
- (2) Air displaces the water and is forced out the bottom of the mask.

Demonstrate.

B. Snorkel

- 1. Attaches to left side of mask by snorkel keeper strap.
- 2. Snorkel clearing methods

Demonstrate

- a. Exhalation method - As swimmer returns to surface, keep face submerged so that tip of snorkel is above water and forcefully exhale through the mouth into the snorkel. Take a slow deep breath and exhale forcefully again to clear any residual water and then breath normally.
- b. Gravity method - As swimmer returns to surface, look upward toward the surface

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

keeping snorkel pointed downward, just prior to reaching the surface exhale into snorkel, as your face clears the surface continue exhaling and flip snorkel tip up by looking down. Take a slow deep breath and forcefully exhale into snorkel, then breath normally.

C. Fins

1. Fit - Fins come in small, medium, and large sizes, with adjustable heel strap to accommodate different foot sizes. Work fins over foot as far as possible then pull strap up over heel. Straps should be adjusted so fins fit snugly. Straps that are too tight can cause painful foot cramps and loose straps will cause the fin to fall off.
2. Kick - Modified flutter is kick used when swimming with rocket fins.
  - a. Legs are kept straight knees slightly bent, toes pointed.
  - b. Alternately flutter the legs up and down, moving them at the hip.
  - c. Fins are kept underwater when swimming on the surface.

Demonstrate

D. Surface Diving

1. Feet-first surface dive
  - a. Begin the dive while treading water, push arms down towards side while executing a flutter kick

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Push up and out of the water
  - c. Allow body to sink until head is submerged, keep hands by your side
  - d. Rotate palms outward and push arms upward towards the surface
  - e. Level out and swim forward underwater
2. Pike Surface Dive
- a. Bend at the waist, and look at the bottom of the pool
  - b. Lift your legs completely out of the water
  - c. Let the weight of your legs force you down, pull with your arms
3. Diving precautions
- a. When diving beneath surface, pain and discomfort may arise from:
    - (1) Mask squeeze
    - (2) Sinus squeeze
    - (3) Ear squeeze
  - b. To alleviate pain and discomfort you can either

DISCUSSION POINT

- (1) Exhale slightly into mask.
- (2) Valsalva to equalize sinus and ears.
- (3) Ascend slightly if equalization will not occur.

**Warning**

**If unable to equalize pressure using these methods, surface immediately. Continued descent could rupture eardrums and damage sinus membranes.**

RELATED INSTRUCTOR ACTIVITY

Demonstrate valsalva maneuver.

Emphasize that if they cannot equalize the pressure using these methods they should surface immediately. Continuing their descent could cause ruptured ear drums and damage to the sinus membranes.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

NOTE TO INSTRUCTORS: Some students will initially be apprehensive about breathing with a snorkel. For an inexperienced snorkeler, nerves on the face and body sensing water signal the lungs to (involuntarily) gasp and hold breath. In most cases, this impulse can be overcome by becoming more comfortable in the water. Always allow students to gain confidence in one stage before moving on. Always be alert for signs of panic.

Explain the Shallow Water Blackout phenomenon and that hyperventilating is prohibited.

1. While students are in the shallow end of the pool have them take a normal breath and sit on the bottom of the pool and exhale through their nose. Students will be gently held down while they exhale steadily through their noses. Repeat until students are able to demonstrate skill comfortably. Have students change places and repeat skill. Practice until all students can demonstrate this skill proficiently. Students experiencing difficulty with this skill must be completely remediated before they are allowed to attempt this skill in deeper water.

Instructor Demonstrate

2. With students still in shallow end of pool, have students take a breath and submerge with their

Instructor Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

masks in hand. Have students put their masks on underwater and stand with their masks full of water and clear it using method A. Repeat until students demonstrate ability to perform comfortably and clear their mask with one steady breath. Next have students clear it underwater using method A. Repeat until students can demonstrate skill comfortably.

3. Repeat item #2 above using mask clearing method B.
4. In shallow end, have students take a breath, submerge until snorkel fills with water then surface and clear snorkel using exhalation method.
5. Repeat item #4 using gravity method.
6. Have one student per instructor swim out to six foot water and drop mask and snorkel to bottom. Submerge and retrieve mask, don it underwater and clear it using their preferred method prior to surfacing. Repeat until students are able to demonstrate skill comfortably.
7. Have one student per instructor swim out to the deep end and have them perform a pike dive and place their mask on the bottom of the pool. After they surface have them use the feet first surface dive and swim down to their mask, don it, and clear it using the method they prefer prior to surfacing. Remediate until students perform mask clearing correctly and comfortably or until the in water instructor observes negative progress.
8. Have students perform a perimeter swim while

Instructor Demonstrate

Instructor Demonstrate

Instructor Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

instructors check for proper flutter kick and swim techniques.

EVALUATION

Job Sheet 4-2  
Written test

ASSIGNMENT

None.

JOB SHEET 4-2  
RESCUE SWIMMERS EQUIPMENT

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either Q, CQ, UQ. "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure. A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0 Minimum average score for passing is 3.6 If an item is not applicable line out that item and do not add it to the overall average

	SCORE	POINTS
Demonstrate procedures for donning mask fins and snorkel	Q      CQ	UQ _____
*Demonstrate one of the following procedures for clearing the mask	Q      CQ	UQ _____
Method A Press the top of the mask against the forehead with and exhale slowly through nose.		
Method B Place hands on side of mask, lift bottom of masks lightly away from face and exhale slowly through nose.		
*Demonstrate one of the following procedures for clearing snorkel	Q      CQ	UQ _____
Exhalation method		
Expansion method		
*Perform crawl stroke while wearing mask, fins, and snorkel	Q      CQ	UQ _____
*Perform sidestroke while wearing mask, fins, and snorkel	Q      CQ	UQ _____

4.0 X number of **Q** = \_\_\_\_\_

2.0 X number of **CQ** = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.3

LESSON TOPIC: Primary Rescue Devices and  
Procedures

ALLOTTED LESSON TIME: 2.5 Classroom  
6.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional instructors  
as required per Annex E, Staffing  
Requirements, of Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. NAVAIR-13-1-6.5, Rescue and Survival Equipment

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Double Rescue Hook

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.30 Explain the functional operation of the following Rescue Devices per NWP 3-50.1:
  - a. Double Rescue Hook
  - b. Modified Rescue Strop
  - c. Quick strop
  - d. Rescue Net
  - e. Rescue Litter/SAR MEDEVAC Litter, Trail Line and Gloves
  - f. Rescue Seat

3. Quick Strop
4. Modified Rescue Strop
5. Rescue Net
6. Rescue Litter/SAR MEDEVAC Litter,  
Trail Line and Gloves
7. Rescue Seat

- 3.31 Demonstrate procedures for placing a survivor into the following rescue devices in a water environment:
- a. Double Rescue Hook
  - b. Modified Rescue Strop
  - c. Rescue Litter/SAR MEDEVAC Litter

CRITERION TEST: Job Sheet 4.3/Written Test

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc..
3. State question and answer policy.
4. Review Training Time Out policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer student to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Rescue Devices and Procedures

b. Major Teaching Points:

(1) Communication Procedures

(2) Double Rescue Hook

(3) Modified Rescue Strop

(4) Rescue Net

(5) Rescue Litter/SAR MEDEVAC Litter

(6) Rescue Seat

(7) Inspection and Care of Rescue Devices

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

Instructor note: This presentation may be given in the classroom or on the pool deck.

A. Communication Procedures

1. Efficient communications keeps pilot, hoist operator, deck crew and swimmer aware of a developing rescue situation and allows rescue platform to provide needed support to swimmer (i.e., deployment of rescue devices).
2. The radio offers an optimal secondary means of communications.
3. Hand signals are the primary means of communication between Rescue Swimmer and the rescue platform in a maritime environment.
  - a. All crewmembers must be familiar with the meaning of standard hand signals.

Demonstrate all signals.

1. I am all right

Raised arm, open hand, fingers extended.

2. Move in for pickup

Raised arm, thumb up.

3. In trouble, need assistance

Vigorous waving of one arm.

4. Deploy raft

Clenched fists, arms crossed overhead.

5. Deploy radio

Hand held to ear

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- |     |  |  |
|-----|--|--|
| 6.  | Deploy Pneumatic Webbing Cutter            | Clenched fist, arm pumping motion  |
| 7.  | Deploy Rescue Litter                       | One arm raised with open palm, fingers extended, other arm raised over the swimmer`s head and touching the first arm at the elbow. |
| 8.  | Deploy Rescue Net                          | Both arms raised, palms open, fingers extended, at a 45° angle to the swimmer`s head.  |
| 9.  | Deploy Rescue Seat (Aviation only)         | Both arms outstretched, palms up.  |
| 10. | Deploy Oxygen/Suction Unit (Aviation only) | One palm cupped over mouth and nose, clenched fist in front.   |
| 11. | Deploy Medical Kit                         | Both arms raised, palms overlapping and touching top of head.  |
| 12. | Ready to be hoisted                        | Raised arm, thumb up.  |
| 13. | Stop hoisting                              | Raised arm, clenched fist.   |
| 14. | Lower cable                                | Raised arm, thumb down.  |
| 15. | Failed hoist                               | Clenched fist over clenched fist followed by   |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

16. I am all right (night)

a thumbs down by hoist operator.

Swimmer's lighting device (chemlight) on, raised arm, palm open, fingers extended.

17. Move in for pickup (night)

Wave chemlight.

18. In trouble need assistance

Wave signal device (smoke flare).

19. In trouble need assistance

Blue strobe on.

B. Double Rescue Hook

Display device, indicating hooks and equipment ring.

1. The Double Rescue Hook is the primary rescue device.

a. All other rescue devices can only be used with the Double Rescue Hook.

b. Load ratings of the Double Rescue Hook (per the NAVAIR 13-1-6.5):

(1) Large hook, rated at 3,000 lbs., shall be the only hook used to hoist personnel.

(2) Small hook, rated at 1,000 lbs., is to be used only for lightweight items such as mail.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) The equipment ring, rated at 1500 lbs., is used to hoist light equipment and mail.

c. Night-time Illumination

- (1) Attach chemlight strap to equipment ring and attach two chemlights to strap.

2. Procedures for Helo-Deployed Rescue Hook.

Walk-through procedures with equipment and "survivor".

**WARNING**

**Never touch any rescue device before it is grounded on deck or by water entry, as doing so may cause electrical shock. Helicopter rotors can build up a significant static electrical charge.**

a. Procedures for hoisting swimmer alone:

Demonstrate.

- (1) Signal for pickup.
- (2) Allow hook to ground.
- (3) Connect "V"-ring to large hook.
- (4) Perform safety check:
  - (a) Double check connections.
  - (b) Ensure cable clear and taut.

Explain danger of cable wrapped around body.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (5) Signal for "up-hoist".
- b. Procedures for hoisting survivor alone: Demonstrate.
  - (1) Signal for pickup.
  - (2) Allow hook to ground.
  - (3) Connect survivor's "V"-ring (center of chest) or "D"-ring (right shoulder) to large hook.
  - (4) Perform safety check to ensure survivor is not entangled in the hoist cable .
  - (5) Signal for "up-hoist".
- c. Procedure's for hoisting survivor and swimmer simultaneously: Demonstrate.
  - (1) Connect the Rescue Swimmer's harness snap hook to the survivor's lifting device.
  - (2) Signal ready for pickup.
  - (3) Allow hook to ground.
  - (4) Connect lifting "V"-ring of Rescue Swimmer's harness to large rescue hook.
  - (5) Perform safety check.
  - (6) Signal for up-hoist".

DISCUSSION POINT

**WARNING**

**Do not to place fingers in or around the bumper compression spring due to the possibility of a crushing injury during hoisting operations when the hoist reaches the upper limit switch.**

C. Modified Rescue Strop

1. Rescue device used with Double Rescue Hook. The Modified Rescue Strop is a buoyant device with a red waterproof cover designed to accommodate one survivor. A webbing strap runs through the cover and has a "V"-ring at both ends for attaching the Double Rescue Hook. Two arm retainer straps are attached on the outside to hold survivor in the strop.
2. Night-time Illumination  
  
Two chemlights are attached to the chemlight strap. The strap is attached to the Rescue Strop lower "V"-ring by the crewman.
3. Procedures for use:

**NOTE**

Arm retainer straps shall be in the stowed position when lowering the Rescue Strop.

- a. Signal for pick-up.
- b. Allow rescue device to touch water.
- c. Approach hoist with survivor in an

RELATED INSTRUCTOR ACTIVITY

Point out the bumper compressing spring.

Display Strop.

Walk-through procedures with equipment and "survivor".

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

appropriate carry.

- d. Working behind the survivor with the arm retainer straps outboard, the Rescue Swimmer shall pass the free end of the strop under one arm, around the back, and under the other arm.
- e. Connect the Rescue Strop free end lifting "V"-ring to the large hook.
- f. Position the Rescue Strop tightly under the survivor's armpits and on the upper half of the survivor's back.

**WARNING**

**Arm retainer straps shall always be used when hoisting survivor with the Rescue Strop. This prevents the survivor's arms from rising and the survivor from slipping out of the Rescue Strop.**

- g. Pass the arm retainer straps over the survivor's arms, route under the Rescue Strop and across the survivor's chest.
- h. Connect the snap-hook arm retainer strap to the "V"-ring arm retainer strap.
- i. Pull webbing on the "V"-ring arm retainer strap until the arm retainer straps are secured tightly around the survivor's arms.
- j. If swimmer is to be hoisted, connect swimmer's lifting "V"-ring to large hook.
- k. Perform Safety Check.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- l. Signal Ready to be hoisted.
- m. Rescue Swimmer and survivor are hoisted up to the aircraft. After reaching the aircraft the Rescue Swimmer and crewman shall assist the survivor inside the aircraft.
- n. Once the survivor is inside and on the deck of the aircraft, the Rescue Swimmer shall maintain positive control of the survivor until the crewman gives a thumbs up. A thumbs up indicates to the Rescue Swimmer that the crewman has the survivor in positive control within the aircraft.

D. Rescue Net

- 1. Conically-Shaped Bird Cage

**WARNING**

**In order to utilize the net, the front support rods must be locked in place to prevent the net from collapsing on the survivors. Collapsing of net could result in the survivor(s) drowning.**

- 2. Primarily used for multiple rescue.
- 3. Never send unconscious victim up alone in rescue net.
- 4. Flotation for two persons.
- 5. A "V"-strap is provided for securing the net in the rescue vehicle door.

Display Device

Demonstrate locking support rods into place.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

6. Night-time illumination.  
  
Two chemlights are attached to the strap. Chemlight straps are attached to nylon rope just above the middle frame flotation on both sides of the net opening.
7. Procedures:
  - a. Signal for net.
  - b. Allow device to ground.
  - c. Place Rescue Net opening directly in front of the Rescue Swimmer without disconnecting it from the rescue hook.
  - d. Place survivor in a collar/equipment tow and swim into rescue net backwards while positioning the survivor on either side of the net facing out.
  - e. Ensure that survivor's body is entirely in the net.

Demonstrate procedures.

**WARNING**

**Survivor shall not attempt to get out of the rescue net until directed by the crewman.**

- f. Place one arm across the net.
- g. Signal for up-hoist.
- h. When net reaches the helicopter, the crewman shall hook up the safety strap from the Rescue Net to the decking of the helicopter.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

The crewman shall assist the survivor inside the helicopter.

E. Rescue Litter/SAR MEDEVAC Litter

1. Litter Characteristics:

- a. Both are for use with suspected back injury victims and unconscious survivors.
- b. Both are designed to be used over land or in water with flotation assemblies.
- c. Rescue Litter requires a flotation kit for over water use. When flotation is installed litter floats with patients head slightly reclined from the vertical.

Display Litter, indicating features.

**WARNING**

**If survivor is wearing the bright orange Quick Donning Anti-Exposure Suit it may counteract the self-righting feature of the Rescue Litter and the SAR MEDEVAC Litter.**

- d. Both have a two piece rescue litter hoisting sling which are attached to the Double Rescue Hook. Sling is color coded short red to head and long white to feet.
- e. The SAR MEDEVAC Litter folds in half and can be stored in a backpack and weighs approx. 40 lbs. It can be hoisted vertically or horizontally with its own sling, making it especially useful in restricted access situations. Overland, two rescuers can carry the litter between them using the two adjustable carrying harnesses.

Display SAR MEDEVAC Litter, indicating features.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

f. Night-time illumination.

Two chemlights are attached to each strap. One strap is attached to the head of the litter; one to the foot.

g. Both litters utilize a "trail line" controlled by the swimmer in the water to control litter deployment and stabilize the litter during hoisting.

(1) One hundred and twenty feet in length.

(2) Three eights inch thick polyethylene, diamond-braided rope.

(3) A weak link is incorporated, designed to break if the trail line becomes entangled.

(4) Gloves and line are deployed together via a 5 pound shot bag.

Display trail line assembly and gloves.

2. Securing Survivor to the Rescue Litter:

Display Rescue Litter securing features. Demonstrate each procedure as it is presented.

a. Rescue Litter has five restraint straps. They are stowed with four retaining straps.

b. Procedure for securing survivor:

(1) The rescue swimmer shall guide the

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

survivor into the positioned litter by using the collar tow or equipment carry.

- (2) Once positioned, the swimmer shall take the top restraint strap from the front of the litter and secure it around the survivor's chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.
- (3) Next, working from the chest strap down, secure the rest of the restraint straps.
- (4) Once the restraint straps are secured, attach the chest pad over the survivor's arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however, flotation shall not be removed. Instead, remove chest pad from litter and continue with rescue. If practical swimmer will return chest pad back to helicopter when hoisted.

3. Securing survivor to the SAR MEDEVAC Litter:

Display SAR MEDEVAC Litter securing features.

- a. Litter will need to be assembled by hoist operator prior to lowering to swimmer.
- b. Litter has integral cervical collar and head restraint, four patient restraint straps, one chest flotation pad assembly strap, and one foot restraint assembly.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

c. Procedure for securing survivor:

Demonstrate each procedure as it is presented.

- (1) The rescue swimmer shall guide the survivor into the positioned litter by using the collar tow or equipment carry.
- (2) Once positioned, the swimmer shall take the top restraint strap from the front of the litter and secure it around the survivor's chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.
- (3) Next, working from the chest strap down, secure the rest of the restraint straps.
- (4) Properly adjust foot restraint assembly.
- (5) Once the restraint straps are secured, attach the chest pad over the survivor's arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however, flotation shall not be removed. Instead, remove chest pad from litter and continue with rescue. If practical swimmer will return chest pad back to helicopter when hoisted.
- (6) Secure head restraint assembly if possible. Don't remove survivor's helmet if neck/back injury is suspected.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. General Litter Procedures:

Demonstrate procedures.

- a. Signal for litter. (Trail line will come out first.)

**WARNING**

**The weight bag shall be deployed so as not to strike rescue swimmer or survivor.**

- b. The hoist operator shall deploy the trail line ensuring that it is attached to the litter. The gloves shall be tied on by a slip knot located just above the weight bag.

**WARNING**

**The rescue swimmer shall wear trail line or authorized rescue swimmer gloves with leather palms in order to prevent rope burns to the hands.**

- c. Put on gloves.
- d. The Rescue Swimmer shall pull on the trail line gently until the entire line is deployed.
- e. Signal "thumbs-up" indicating ready for litter.
- f. Use the trail line to control the litter and pull it into position as it is lowered.
- g. Allow rescue device to touch water.
- h. Disconnect hoisting slings from rescue hook, placing hoisting slings outside litter. Do not allow hoisting slings to foul restraining

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

straps.

- i. Position survivor on litter, adhering to warning regarding survivor's buoyancy and the self righting feature of the litter.
- j. Secure survivor using procedures appropriate to the litter.
- k. Ready the Rescue Litter hoisting sling and signal the aircraft to move in for pick-up.
- l. Hook the Rescue Litter hoisting sling (both sides) to the large hook.
- m. Conduct pre-hoisting safety check, ensuring survivor is securely within litter, litter is attached to large hook, tending line is attached to the proper side of the litter (aircraft dependent), sling cables are in correct positioning, swimmer is wearing gloves, and cable is clear and not wrapped around the litter or swimmer.
- n. Signal for up-hoist.

**NOTE**

Extreme care shall be utilized during train line evolutions in shallow waters. Cease hoisting immediately if the weighted bag becomes snagged on the bottom. Hoisting when this occurs may cause possible harm to personnel and/or equipment.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- o. Swimmer remains in water, taking a slight strain on trail line, stabilizing the hoist, and keeping the litter oriented parallel to the longitudinal axis of the rescue platform. Upon reaching the rescue platform, maneuver survivor aboard per platform specific procedures.
- p. When the litter is at the aircraft entrance, the swimmer shall use the trail line to maneuver the litter such that the survivor enters headfirst.

**NOTE**

The confined space in the H-60 cabin requires the litter to enter feet first in order for the crewman to properly attend to the survivor.

- q. With the litter and trail line on board, the crewman shall lower the hoist cable and recover Rescue Swimmer.

F. Rescue Seat

Display device.

- 1. Two folding flukes for sitting.
- 2. Bright orange flotation collar for high visibility.
- 3. Swimmer or survivor must lower the flukes.
- 4. Two adjustable yellow safety straps with friction adjusters.
- 5. Used for both land and sea rescue.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

6. Night-time illumination.
  - a. Chemlights are attached to the rescue hook equipment ring.
7. Procedures for use:
  - a. Signal for device.
  - b. Allow device to ground.
  - c. Pull down fluke and have survivor sit on it, facing the rescue seat.

Demonstrate hand signal for device.

**Note**

If survivor is wearing an inflated LPU life preserver, the waist lobes may need to be disconnected prior to attaching the adjustable safety trap.

- d. Pass adjustable safety straps under rider's arms and around their back and secure strap to the v-ring tighten until survivor is secured against flotation collar.
- e. Have the survivor wrap arms and legs around the flotation collar.
- f. Perform final safety check.
- g. Signal for "up-hoist".

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**Note**

If the rescue swimmer elects to be hoisted with the survivor, the rescue swimmer shall wear the adjustable safety strap in the same manner as the survivor.

G. Night utilization of Rescue Devices.

Normal hook up procedures are used at night.  
Chemlights are attached as appropriate.

**WARNING**

**Due to low visibility at night, the Rescue Swimmer must pay particular attention to ensure all safety straps, harnesses, etc., are properly installed. Failure to do so could result in injury or death to the survivor/Rescue Swimmer.**

H. Rescue Equipment Inspection

1. Visual Inspection Prior to Use

- a. Inspect fabric for cuts, deterioration, and abrasion.
- b. Inspect seams for proper adhesion and stitching.
- c. Inspect all hardware for security of attachment, corrosion, damage, wear, and if applicable, ease of operation.
- d. Check for sharp edges and projections.
- e. Ninety day inspection cycle for equipment conducted by maintenance personnel.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**WARNING**

Unauthorized modification to, and deviation from, prescribed life support and survival equipment by individual crewmembers could create unknown safety hazards.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION:

Initial students practice procedures dry-land until comfortable.

Instructor demonstrate proper procedures in placing a survivor into the rescue net

Students place "survivor" into the following rescue devices in a day and night pool environment.

Instructor demonstrate proper procedures in placing a survivor into the rescue seat

- a. Double Rescue Hook
- b. Modified Rescue Strop
- c. Rescue Litter/SAR MEDEVAC Litter

Break initial students into small groups for dry land practice.

Students practice skills in water under observation and instruction of an in-water instructor. Instructor demonstrates skills as required.

EVALUATION: Job sheet checklist 4-3.

ASSIGNMENT: None

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 4.4

LESSON TOPIC: Alternate Rescue Devices

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCE:

1. NWP 3-50.1, Navy Search and Rescue Manual
2. NAVAIR 13-1-6.5, Rescue Equipment

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Helicopter Rescue Equipment Case (BGU-8/N)
3. Hoisting Gloves
4. Crewman Safety Belt
5. Cable Grip (Chicago Grip)

TERMINAL OBJECTIVE:  
Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:  
Completely supported by this lesson topic:

- 3.32 State the requirements for maintenance of emergency rescue equipment per NAVAIR 13-1-6 series and current maintenance requirement cards (MRC's).
- 3.33 Describe the functional operation of the following Emergency Rescue Equipment per NWP 3-50.1:
  - a. Helicopter Rescue Equipment Case (BGU-8/N)
  - b. Hoisting Gloves
  - c. Crewman Safety Belt
  - d. Cable Grip (Chicago Grip)
  - e. Chemical Lights
  - f. Chemical Light Strap
  - g. Rescue Litter Sling Assembly

6. Chemical Lights
7. Chemical Light Strap
8. Rescue Litter Sling Assembly
9. Hoist Quick Splice
10. Pneumatic Rescue Hand Tool/Handheld  
Cable Cutter
11. Blanket
12. Cranial Assembly
13. Level A Medical Kit

- h. Hoist Quick Splice
- i. Pneumatic Rescue Hand Tool/Handheld  
Cable Cutter
- j. Blanket
- k. Cranial Assembly
- l. Level "A" Medical Kit

CRITERION TEST: Written test

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

- a. Alternate Rescue Equipment is used by the crew in conjunction with the rescue devices during rescue operations.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

- a. Lesson Topic: Alternate Rescue Equipment

b. Major Teaching Points:

1. Helicopter Rescue Equipment Case (BGU-8/N)
2. Hoisting Gloves
3. Crewman Safety Belt
4. Cable Grip (Chicago Grip)
5. Chemical Lights
6. Chemical Light Strap
7. Rescue Litter Sling Assembly

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 8. Hoist Quick Splice
- 9. Pneumatic Rescue Hand Tool/Handheld Cable Cutter
- 10. Blanket
- 11. Cranial Assembly
- 12 Level A Medical Kit

PRESENTATION:

- |  |  |  |
|--|--|--|
| A. Helicopter Rescue Equipment Case (BGU-8/N)  |  | Show students Helicopter Equipment Case slide on screen. |
| 1. Has 10 labeled pockets for storage of helicopter rescue equipment.                                |  |  |
| 2. Can be secured from support rails, tie down rings, etc., inside the cabin of the helicopter..     |  |  |
| 3. Items found in this case will be discussed in order from top to bottom throughout in the lecture. |  | Explain that items are found in the NWP 3-50-1           |
| B. Chemical Lights   |  |  |
| 1. Two types currently in use:<br>a. 30 minute high-intensity<br>b. 12 hour general purpose          |  | Show students both chemical lights.                      |
| 2. Self contained, compact, easily stored.   |  |  |
| 3. Emit Omni-directional light.  |  |  |
| 4. Windproof, waterproof, nonflammable and require no batteries.                                     |  |  |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. Crewman Safety Belt

**WARNING**

**Crewman safety belts shall not be worn when strapped into a seat.**

1. Primarily used as a safety device by the crew while performing hoisting operations in the aircraft doorway
2. Provided with pull tabs and adapters for size adjustment.
3. Latch-link assembly for easy donning.
4. Meshed to the back of the belt is a length adjustable nylon strap with a snap hook for attachment to a tie down fitting.

Show students safety belt.

Demonstrate.

D. Cable Grip (Chicago Grip)

1. Used in the event of a hoist drum malfunction or a bird's nest to hoist cable.
2. Capable of supporting 1000 lbs.
3. Attaches to crewman safety belt to take weight off hoist assembly during a hoist failure.
4. Procedures for use can be found in chapter 1 of NWP 3-50.1 series.

Show students cable grip.

E. Chemical Light Strap

1. Nylon strap with three snap hooks.

Show Chemical light strap to students.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. One snap hook on each end and one in the middle.

F. Hoisting Gloves.

Show Hoisting Gloves to students.

1. Made of heavy-duty leather.

2. Used to prevent injuries to crew chief's hands while guiding hoisting cable.

G. Rescue Litter Sling.

Show Rescue Litter Slings to students.

1. Consists of two sets of two 5/32-inch cables.

2. One set for each side of litter.

3. Each set consists of a lifting ring and two locking carabiners.

**CAUTION**

**Attach short legs (red colored carabiners) to the head end of litter and attach long legs (white colored carabiners) to the foot end of litter when attaching sling assembly to the rescue litter.**

H. Hoist Quick Splice.

Show Hoist Quick Splice to students.

1. Flat rectangular aluminum plate with rounded corners and attached double rescue hook.

2. Used when hoist cable breaks or has been cut.

3. Bitter end of the severed cable is threaded through five numbered holes and secured with a stainless steel clip.

Demonstrate.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Procedures for use can be found in chapter 1 of the NWP 3-50.1 series.

I. Pneumatic Hand Tool.

Show Pneumatic Hand Tool to students.

1. Designed for cutting heavy webbing.
2. Can be used by rescue swimmer for cutting parachute risers.
3. Has jaw for prying open or breaking canopies.
4. Contains a 3000 psi nitrogen cartridge in the handle chamber.
5. Procedures for use can be found in chapter 1 of NWP 3-50.1 series.

6. Hand-held Cable Cutter can be used as a replacement.

Show Hand Held Cable Cutter to students.

J. Blanket and Cranial Assembly.

Show Blanket and Cranial Assembly to students.

1. Blanket
  - a. Standard wool blanket 6x8 ft.
  - b. Used for treatment of hypothermia.
2. Cranial Assembly.
  - a. Cloth helmet with chin strap designed to incorporate protective devices.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Rigid plastic with cushion liners that snap on for head protection.
- c. Sound attenuators for hearing protection.
- d. Goggles for eye protection.

K. Life Rafts.

- 1. Used when numerous survivors are at the rescue scene.
- 2. Can support four times the rated capacity if survivors are placed around outside of raft.
- 3. Can also be used for staging survivors during disentanglement.
- 4. Discard life raft if it becomes a hindrance to the rescue.
- 5. Discard rafts by puncturing prior to leaving scene.

**NOTE**

An empty floating raft could start an unnecessary rescue effort.

**WARNING**

**Rotor wash could blow an empty floating raft into the helicopter rotor system.**

L. Level A Medical Kit.

Show Level A Medical Kit to students.

- 1. Designed for use by the rescue swimmer and the crew chief.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2 Carried on all SAR capable helicopters.
3. Rescue Swimmer shall have a working knowledge of all contents.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

EVALUATION: Written test.

ASSIGNMENT: None

LESSON PLAN

January 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.5

LESSON TOPIC: Aviation Life Support  
Systems

ALLOTTED LESSON TIME: 1.5 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCES:

1. NAVAIR 13-1-6.2
2. NAVAIR 13-1-6.7
3. NWP 3-50.1 Navy Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. HGU Series Helmet Fixed Wing
3. HGU Series Helmet Rotor Wing
4. MBU-12 Oxygen Mask Assembly
5. RSSK/SKU

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.34 Explain the functional operation and hardware associated with various parachute harnesses.
- 3.35 List the types of harnesses as outlined in NWP 3-50.1.
- 3.36 Describe the procedures for donning/doffing the following assemblies:
  - a. Helmet assemblies
  - b. RSSK assemblies
  - c. Oxygen mask assemblies
  - d. Survival vest/flotation assemblies

CRITERION TEST: Written test

HOMEWORK: None

6. SV-2 Series Vest with lifting "V" ring
7. LPU-21
8. LPU-30/MK-1
9. PCU-Series Parachute Restraint Harness
10. NB-Series Back Pack type Parachute  
Harness

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish contact

Display name and lesson topic.

1. Introduce self, give rank, current job.

2. State background, schools, duty stations, etc.

3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

a. Lesson Topic: Aviation Life Support Systems

Briefly outline material to be covered.

b. Major Teaching Points:

- (1) General Equipment
- (2) Flotation Devices
- (3) Backpack Parachute Removal
- (4) Torso Harness-style Parachute and Rigid Seat Survival Kit Release
- (5) Hoisting Attachment Points

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. General Equipment

1. Anti-Exposure Suits

a. Imperial Drysuit (quick-donning)

Show example

(1) Bright orange in color.

(2) Worn over the flight suit/clothing.

(3) Positive buoyancy may negate self righting features of MEDEVAC litter.

(4) Some have lifting "V"-ring in the center of the chest.

2. Flight Helmets

Show examples of fixed wing and helicopter helmets.

a. Covered with high visibility reflective tape.

b. Provide limited flotation.

c. May hinder communications between survivor and rescuer.

d. Helmets are not removed until survivor is aboard rescue platform.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. Oxygen Masks

- a. Form fit to face.
- b. Attach to helmet with bayonet fitting.
- c. Oxygen supply hose connects to Rigid Seat Survival Kit (RSSK) or Aircraft console.
- d. Always disconnect mask from helmet to eliminate the possibility of suffocation.

B. Flotation Devices

1. Aircrew Flotation Devices

- a. Naval aircrew flotation is provided by an LPU series life preserver assembly attached to either an SV-2 survival vest or a PCU parachute harness.
- b. Providing flotation to the survivor is very important. There are three methods of inflating an LPU:
  - (1) Some jet aircrew may have an automatic inflation device, such as the FLU-8. This device is activated by immersion in the water, and will require no action on the part of the rescue swimmer.
  - (2) Manual inflation is accomplished by pulling the beaded handles located near the aviator's hips.

Display an SV-2 and PCU with LPUs incorporated.

Display FLU-8.

Demonstrate.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (3) Oral inflation is accomplished by loosening the knurled knob on the inflation tube, holding it down with your teeth, and blowing into the tube. This method will require the most effort on the part of the rescue swimmer.
- 2. Other flotation assemblies.
  - a. Worn by flight deck personnel and aircraft passengers.
  - b. Inflated by CO<sub>2</sub> or orally.
    - (1) Pull cord for CO<sub>2</sub> inflation. Demonstrate.
    - (2) Oral inflation. Demonstrate.
- C. Backpack Parachute
  - 1. Large fixed wing aircraft crew (P-3, C-130) wear an NB-Series Back Pack Type Parachute with quick donning harness. Show example of Back Pack type harness.
    - a. Harness is worn over the SV-2 survival vest and flotation.
    - b. Harness must be removed to separate the survivor from the parachute.
    - c. Removed by releasing three quick ejector snaps, one at the chest, and one for each leg. Demonstrate.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

D. Torso Harness-style Parachute and Rigid Seat Survival Kit Release

1. Jet and E-2 aircrew wear a PCU-Series Torso Harness.
  - a. The torso harness is not removed during the rescue. The parachute must be separated from the torso harness.
  - b. For Navy gear, the parachute is separated by releasing the Koch fittings which attach the parachute risers to the harness.
    - (1) Most jet gear incorporates Sea Water Activated Release System (SEAWARS) which automatically release the Koch fittings upon immersion in salt water. This system poses no danger to the rescue swimmer and requires no action of the rescue swimmer.
    - (2) Manual release is accomplished by separating the male portion of the Koch fitting assembly (located on the right and left upper chest area) from the female ends (on the parachute risers).

Show example of torso harness.

Emphasize difference: Backpack - entire harness removed; PCU - parachute separates from harness.

Display Koch fittings.

Display SEAWARS.

Demonstrate manual release of the Koch fittings.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

c. A Rigid Seat Survival Kit/Seat Kit Unit containing a raft, oxygen, and survival gear is attached to the lap belt of the torso harness.

Show students mini-Koch fitting and operation.

(1) Disconnect oxygen hose from RSSK by lifting the knurled locking ring and pulling firmly on the supply hose.

Demonstrate.

(2) After ensuring the oxygen hose disconnected, remove the RSSK by releasing the mini-Koch fittings located near the aviator's hips.

Demonstrate.

3. USAF/Other Parachute Harnesses

Display

a. USAF harnesses closely resemble Navy Backpack Type.

b. Risers may be attached with Frost, Koch or J1 Capewell Fittings.

c. Seat kits may use mini-Koch fittings or a fitting closely resembling automotive lap belts.

E. Hoisting Attachment Points

1. For hoisting, the rescue hook or rescue swimmer's snap hook may be attached directly to the aviator in one of two ways.

a. Hoist via the lifting "V" ring of an SV-2 vest (if so equipped).

Demonstrate.

DISCUSSION POINT

- b. Hoist via the gated "D" ring of a PCU torso harness.

RELATED INSTRUCTOR ACTIVITY

Demonstrate.

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**APPLICATION:**

Objective: To give students total familiarity with aviator's equipment by allowing hand's on experience.

Set Up: Station one - Jet gear. At least one manikin (or stuffed flight suit) in PCU, parachute risers attached, RSSK attached, and helmet with oxygen mask.

Station two - Prop gear. At least one manikin (or stuffed flight suit) in SV-2 (with V-ring) in parachute back-pack.

Station three - other attachment devices. Labeled strips of webbing connected by (at a minimum) Frost fittings, J1 Capewell fittings, and the USAF fitting closely resembling automotive lap belts. (The objective is to demonstrate the wide variety of equipment used by other services and nations.)

Assign an equal number of students to each station. Students remove O<sub>2</sub> mask (as applicable), simulate inflating gear, release and connect appropriate attachment several times, simulate attaching rescue hook to harness. Students repeat until comfortable - ideally they should be able to do all steps with eyes closed. Instructor help student visualize rescue scenario - where parachute would be, why oxygen mask is removed first, etc. Students rotate through stations.

Announce when manikins will be available for students to practice individually.

EVALUATION: Written Test

ASSIGNMENT: None

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.6

LESSON TOPIC: Survivor Marker/Locator  
Devices

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. NAVAIR 00-80T-101, NATOPS Survival Manual
3. NAVAIR 11-15-7, Pyrotechnic, Screening, Marking, and Countermeasure Devices

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. MK-25 Marine Location Marker
3. MK-58 Marine Location Marker

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment, for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objective:

Completely supported by this lesson topic:

- 3.37 Explain the purpose and hazards of the following Survivor Marker/Locator Devices.
  - a. MK-25 Marine Location Marker
  - b. MK-58 Marine Location Marker
  - c. Electric Marine Marker Light
  - d. MK-13/MK-124 MOD 0 Day/Night Distress Flare
  - e. MK-79 Pencil Flare
  - f. Signal Mirror
  - g. Sea Dye Marker

CRITERION TEST: Written test

HOMEWORK: None

4. Electric Marine Marker Light
5. MK-13/MK-124 MOD 0 Day/Night Distress Flare
6. MK-79 Pencil Flare
7. Signal Mirror
8. Sea Dye Marker

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.

2. State background, schools, duty stations, etc.

3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Survivor Marker/Locator Devices

b. Major Teaching Point(s):

(1) Survivor Markers

(2) Survivor Signaling Devices

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. Survivor Markers

1. Survivor markers are devices launched by aircraft/ships to provide day or night reference points to the position of survivors.
2. Procedures for deploying pyrotechnic devices are contained in the NAVAIR 11-15-07.

**WARNING**

**Should fuel be observed or suspected to be present in the water, pyrotechnic devices SHALL NOT BE USED due to ignition hazards.**

**WARNING**

**All flares burn "white hot" and can cause serious burns if allowed to come into contact with skin.**

**WARNING**

**Avoid breathing potentially hazardous pyrotechnic fumes.**

- |    |  |                 |
|----|--|-----------------|
| 3. | MK-25 Marine Location Marker                                   | Display Marker. |
| a. | Produces smoke and light; burn time 10-20 minutes.             |                 |
| 4. | MK-58 Marine Location Marker                                   | Display Marker. |
| a. | Produces a yellow flame and white smoke; burn time 45 minutes. |                 |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. Electric Marine Marking Lights

Battery powered, an alternative to pyrotechnic devices when flammables are present or suspected.

B. Survivor Signaling Devices

1. MK-13/MK-124 MOD 0 Flares

Display Flare

- a. This signal is used for day or night distress signaling as appropriate by personnel on land or at sea.
- b. Emits orange smoke for day use and red flames for night use.
- c. Burn time for each is approximately 20 seconds.
- d. MK-124 is the replacement for the MK-13 and is intended use is the same as MK-13, but is designed for single hand operation.

2. MK-79 Signal Kit Personal Distress (Pencil Flare)

Display Flare

- a. Intended to be used by downed air crewmembers or personnel in life rafts as a distress signaling device.
- b. Produces a single red star display at a minimum altitude of 250 feet.
- c. Burns for a minimum of 4.5 seconds.

3. Non-pyrotechnic Visual Signaling Devices

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Includes lights, strobes, mirrors.
- b. Pose no hazard to swimmers.

4. Sea Dye Markers

- a. A dye packet which dissolves in sea water, creating a large, highly visible fluorescent signal. Standard Navy issue is a bright green color; other colors may be used.
- b. The dissolved dye poses no hazard to swimmers.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION: None

EVALUATION: Written test

ASSIGNMENT: None

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.7

LESSON TOPIC: SAR Publications and Reports

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom instructor

INSTRUCTIONAL REFERENCES:

NWP 3-50.1 Naval Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. NWP 3-50.1 Navy Search and Rescue Manual
2. NAVAIR 13-1-6.5/13-1-6.1.2
3. ATP 10
4. NWP 3-04.1
5. NWP 3-22.5 SAR TACAID
6. Job Sheet 4.7-1 in Trainee Guide (SAR

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment, for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

3.38 Identify the title and content of publications applicable to a rescue swimmer.

3.39 Identify the steps to complete a rescue report SAR FORM 3-50-1/1, when given a rescue scenario.

CRITERION TEST: Written test

HOMEWORK: Complete Job Sheet 4.7-1 in Trainee Guide.

form 3-50.1/1, of NWP 3-50.1)

7. OPNAVINST 3130.6, Naval Search and Rescue (SAR) Standardization Program
8. JCS 3-50/3-50.1.3-50.2, National Search and Rescue Manuals
9. OPNAVINST 3710.7 NATOPS General Flight and Operating Instructions

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

There are several publications which will aid you in doing your job. These pubs provide needed information about all phases of search and rescue. By becoming familiar with the manuals you will become a well-rounded rescue swimmer.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Lesson Topic: SAR Publications and Reports

Briefly outline material to be covered.

D. Major Teaching Points:

- (1) NWP 3-50.1 Naval Search and Rescue (SAR) Manual
- (2) NAVAIR 13-1-6 Aviation Crew Systems Manual on Rescue and Survival Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

a. 13-1.6.1.2 Inflatable Survival  
Equipment

b. 13-1-6.5 Rescue and Survival  
Equipment

- (3) ATP 10 NATO SAR Manual
- (4) NWP 3-04.1 Helicopter Operating  
Procedures For Air-Capable Ships
- (5) NWP 3-22.5 SAR TACAID
- (6) OPNAVINST 3130.6 Naval (SAR)  
Standardization Program
- (7) JOINT PUB 3-50/3-50.1/3-50.2 National  
SAR Manuals
- (8) OPNAVINST 3710.7 NATOPS General Flight  
and Operation Instructions
- (9) Locating SAR Reference Publications

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. NWP 3-50.1 Navy Search and Rescue (SAR) Manual

Show manual.

1. The most frequently used SAR publication.
2. This manual is intended to promote and maintain standardization of SAR procedures and techniques within the U.S. Navy.
3. These procedures shall serve as a basis for SAR evaluation programs. Therefore, it is essential that this manual be maintained and readily available to unit personnel.
4. Items covered in this manual are:
  - a. Search and rescue equipment.
  - b. Aviation maritime SAR procedures.
  - c. Rescue swimmer procedures.
  - d. Surface vessel SAR procedures.
  - e. SAR medical procedures.
  - f. Rescue report form (SAR form 3-50.1/1)

Refer to Job Sheet (4.8-1) in Trainee Guide Emphasize that it must be correctly completed ASAP following a rescue.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- B. NAVAIR 13-1-6.5 Aviation Crew Systems Manual on Rescue and Survival Equipment Show manual.
1. Purpose of each volume is to provide technical information related to configuration, application, function, inspection, and maintenance of a particular category of aircrew safety and survival equipment.
  2. Two volumes that are of particular interest to the rescue swimmer:
    - a. NAVAIR 13-1-6.1.2 Inflatable Survival Equipment Show manual
    - b. NAVAIR 13-1-6.5 Rescue and Survival Equipment Show manual
- C. ATP 10 NATO Search and Rescue (SAR) Manual Show manual.
1. Manual deals with operations based upon the doctrine of search and rescue. It presents the techniques and procedures for Allied SAR problems.
  2. Rescue swimmers should be aware of this manual and familiarize themselves with it.
- D. NWP 3-04.1 Helicopter Operating Procedures For Air-Capable Ships Show manual.
1. This publication sets forth the mandatory operational procedures and training requirements for the employment of helicopters.
    - a. Para 1.3.14 - Ship Search and Rescue Team.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Para 4.3.2 - Search and Rescue Requirements.
- c. Para 4.3.2.2 - Plane Guard Ship Procedures.
- d. Para 4.3.2.2 - SAR Helicopter Equipment.

E. NWP 3-22.5 SAR TACAID

Show publication.

- 1. Promotes standardized, efficient, and sound SAR tactics.
- 2. Every SAR capable ship and aircraft carries this publication.

F. OPNAVINST 3130.6 Naval Search and Rescue (SAR) Standardization Program

Show instruction

- 1. Provides for standardization of Navy search and rescue policies, procedures, training and evaluation programs.
- 2. Contains requirements for initial and refresher training.
- 3. Outlines minimum annual proficiency training requirements.

G. Joint Pub 3-50/3-50.1/3-50.2 National Search and Rescue Manuals

Show manuals

- 1. Provides guidance to federal agencies concerning implementation of the National Search and Rescue Plan.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Establishes standards and provides common procedures, techniques, and terminology to all federal forces, military and civilian, that support civil search and rescue (SAR) operations.

H. OPNAVINST 3710.7 NATOPS General Flight and Operation Instructions

Show manual

1. This instruction prescribes general flight and operating instructions and procedures applicable to the operation of all naval aircraft and related activities.
2. Chapter 8 is of interest to aircrew and rescue swimmers. Briefly explains initial training, extended wear of wet suits, and effects of exercise, smoking, alcohol, illness and drug use.

I. Locating SAR Reference Publications

These publications are stored in the Combat Information Center (CIC) of ships and may be checked out from the NWP custodian for short periods. In squadrons, the pubs are held by the Technical Publications Librarian.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION:

A. Completing the rescue report form (SAR form 3-50-1/1), utilizing rescue scenario.

Review with students Job Sheet (4.7-1) rescue scenario. Help them complete the report.

EVALUATION: Written test

ASSIGNMENT: Complete Job Sheet (4.7-1) rescue report for the given scenario.

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.8

LESSON TOPIC: Helicopter Operations

ALLOTTED LESSON TIME: 1.0 Classroom  
3.5 Laboratory

INSTRUCTIONAL SUPPORT:

1. Classroom Instructor
  1. Laboratory Instructor
- Safety personnel and additional instructors as required per Annex E, Staffing Requirements, of Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NAVAVSCOLSCOM/OMD Joint Command Agreement
2. NAVAVSCOLSCOM Inclement Weather Instruction
3. NWP 3-50.1 Navy Search and Rescue Manual

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment, for at-sea and overland rescues, as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.40 List procedures for day water entry from a search and rescue helicopter.
- 3.41 Perform day water entry from a search and rescue helicopter.

CRITERIA TEST: None.

HOMEWORK: None.

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Two pair foamy earplugs per student
3. Student's Rescue Swimmer Equipment
4. Instructor's Rescue Swimmer Equipment
5. SAR Capable Helicopter with 2 Crewmen
6. One Safety Boat with:
  - a. PDSM on-board
  - b. Hospital Corpsman on-board
  - c. Two PRC-90's
  - d. Safety swimmer
  - e. Megaphone
  - f. Binoculars

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Reiterate DOR and TTO policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives.

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

DISCUSSION POINT

1. Motivating Statements

2. Lesson Overview

a. Lesson Topic: Day Helicopter Operations

b. Major Teaching Points:

(1) Classroom Briefings

(2) Overview of Operation

RELATED INSTRUCTOR ACTIVITY

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. Classroom Briefings

1. Divide students into groups.
2. Briefly review deployment procedures.
  - a. Emphasize crewman's safety belt.
  - b. Standby position
  - c. Deployment.
  - d. Hand signals.
3. Hoisting procedures
  - a. Re-emphasize discharge of aircraft static electricity through hoist.
  - b. Student uses upraised hand on underside of aircraft to turn survivors back facing cargo door.
  - c. Student faces cargo door and places fins on lower edge, hands on inside of upper edge.
  - d. Student pulls himself in on top of survivor, unhooks, rolls to side.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Swimmer's equipment inspection
  - a. Masks shall have lanyard attached to swimmer's harness.
  - b. Swimmer's harness lifting device stowed properly.
  - c. SAR-1 (LPU-28) vest cartridge checked.
  - d. Two pair of foamy earplug inserts per student.

B. Overview of Operation

Inspect swimmer's equipment. Draw pictures of area on board.

1. Inform students of group organization and why.
2. Explain aircraft deployment, pick up, and flight pattern.
3. Explain procedures for return to school by groups.
4. Gear Clean Up.
  - a. Wash all gear thoroughly with fresh water.
  - b. Hang wetsuits to dry. NO WIRE HANGERS!

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

Check for understanding.

APPLICATION:

Execute day helicopter operation.

HELICOPTER JUMPS AND HOIST

**TRAINING:** Instructors and students shall wear a complete set of RFT rescue crewman equipment (i.e. mask, snorkel, fins, SAR vest (LPU-28), wetsuit/shorty and harness (HBU-11), IAW CNETINST 3710.1. A power boat shall be used to transport students to the operating area and as a safety/pick up boat.

The primary instructor shall ensure that all students have met the prerequisites prior to operations and that all students are physically qualified to participate.

Students and instructors shall board the boat and proceed to the operating area. The primary instructor shall maintain communications with the helicopter and Rescue Swimmer School Office via two-way radio. When

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

the helicopter is in position and ready for operations, the primary instructor shall direct two students at a time to enter the water and execute proper hoist procedures.

The primary instructor shall remain on the boat to supervise the operation and one instructor shall be in the water with each set of two students for safety and to ensure that proper procedures are used. Students shall make a minimum of two hoists and two jumps, however if circumstances permit, students shall receive at least three hoists and three jumps. The requirement for hoists/jumps may be waived by the Commanding Officer in situations where students are unable to complete this training due to weather, or aircraft/facility availability.

**TRAINING TEAM:** The training team shall consist of a minimum of one fully qualified RSS instructor per each set of two students in the water, a primary instructor, and a corpsman/EMT that will be on the safety/pick up boat.

**NOTE:** Students shall demonstrate proper jumps and hoist procedures in the training tank (pool) prior to live helicopter operations. Students shall be thoroughly briefed on sequence of events, safety precautions, and emergency procedures prior to open water operations.

**SAFETY:** Instructor shall ensure that weather conditions are within limits of reference (2), all

DISCUSSION POINT

students are physically qualified to participate, and no more than six students and three instructors in the water at any time.

Instructors shall ensure that all students wear foamy ear plug inserts during entire evolution.

When the water temperature is below 60 degrees Fahrenheit or less, full wetsuits shall be worn.

EVALUATION: Performance Test

ASSIGNMENT: None.

RELATED INSTRUCTOR ACTIVITY

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0500  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 4.9

LESSON TOPIC: SAR Tactics

ALLOTTED LESSON TIME: 1.5 Classroom  
19.0 Laboratory  
17.0 Exam

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCE:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. Quartermaster 3&2 (sea state chart)
3. NWP 3-22.5 SAR TACAID

INSTRUCTIONAL AID:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction the student will demonstrate proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.42 State the five stages of Search and Rescue operations.
- 3.43 Describe the SAR area conditions and survivor conditions which will allow for the execution of a multiple victim rescue.
- 3.44 Develop a rescue plan to effect a rescue of multiple survivors, when given a rescue scenario.
- 3.45 Describe the procedures for recovery of survivors from a motor whale boat/RHIB boat and forecastle.

- 3.46 Identify hand signals applicable to the specific rescue, when given a rescue scenario.
- 3.47 Demonstrate the procedures for parachute disentanglement of multiple victims in a simulated rescue scenario.

CRITERION TEST: Job Sheet 4.9, written test.

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

During this lesson, you will receive all the information needed to provide a sound, safe search and rescue (SAR) tactics foundation. Although it is not possible to provide answers to all the different rescue scenarios, applying these basics principles will enable you to deal with any situation that arises.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson overview

Briefly outline material to be covered.

a. Lesson Topic: SAR Tactics

b. Major Teaching Points:

- (1) The Search and Rescue System
- (2) Rescue Platforms
- (3) Rescue Scene Initial Assessment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (4) Conditions for Multiple Rescues
- (5) Swimmer Deployment
- (6) Survivor/s and Swimmer Recovery Procedures

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Search and Rescue System

The search and rescue system is a system that consists of a sequence of events called stages. Each stage represents a part of the logical approach to the overall rescue operation.

1. Awareness stage - SAR system becomes aware of incident.
2. Initial Action Stage - SAR facilities are alerted.
3. Planning Stage - Plan of operations is developed.
4. Operations Stage - SAR facilities proceed to the rescue scene, conduct search, rescue survivors, assist distressed craft, provide emergency care for survivors and deliver to suitable medical facility.

**NOTE**

The NWP 3-50.1 contains information for the safe and effective application of search and rescue (SAR) procedures and the execution of SAR operations. However, it is not a substitute for sound judgment. A dynamic SAR environment may require on-site deviations or modifications from procedures prescribed therein to successfully accomplish a SAR mission. The existing risk of deviation must continually be weighted against the benefit of deviation from the NWP 3-50.1. Some examples of areas where deviations or modifications of procedures are most strongly advised against are as follows: The proper application and use of rescue equipment restraint straps, safety straps and safety devices as mandated by the

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NWP 3-50.1 manual.

If a rescue crewmember makes the decision not properly utilize/apply any of the above mentioned safety devices or deviate from authorized procedures he/she shall communicate his/her intentions to the rest of the SAR crew prior to deviation. This will help utilize the full potential and experience of the crew to make a decision to deviate from authorized procedures.

In all cases, all associated risks should be weighed prior to a decision to deviate from or modify a procedure as set forth in the NWP 3-50.1.

5. Mission Conclusion Stage - SAR platforms return to base. Rescue swimmer assists in completion of rescue report.

B. Rescue Platforms

**NOTE**

The helicopter is normally the primary means of rescue during all weather day and night operations, except when the weather is below 300 feet and 1 mile visibility, then Motor-Whale Boat or Forecastle will be used. However, the goal is to use the fastest and most effective rescue platform for the given situation. Whichever is first on the scene will effect the rescue unless unable. The others should stay clear so as not to hamper the rescue operation and remain ready to assist if needed.

1. Helicopter
2. Motor whaleboat or RHIB (Rigid Hull Inflatable Boat)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. Forecastle

C. Rescue Scene Initial Assessment (from Rescue Platform)

Upon arrival at the accident scene, assess the situation. Assessment begins in the rescue platform prior to swimmer deployment. The following factors should be determined prior to rescue swimmer deployment.

Review with students Information Sheet 4.9-1 in Trainee Guide.

Explain the three rules of SAR tactics basic guidelines

**NOTE**

Swimmer must be aware that the situation can change.

1. Number of survivors
2. Location of survivors and their relation to, and distance from, each other and the rescue craft
3. Visible injuries to the survivors:
  - a. Conscious/unconscious
  - b. Visible bleeding
4. Flotation devices inflated/not inflated
5. Parachute entanglement problem/presence of ballooned parachute.
6. Sea state/wind direction/water temperature.
7. Fuel in the water.
8. Debris littering the scene and its relation to survivors.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

9. Presence of sea predators.
10. Feasibility of attempting multiple/single rescue.
11. Rescue order established according to apparent injuries. The worst injured survivor shall be rescued first.

D. Conditions for Multiple Rescues

1. A multiple rescue occurs when there is more than one survivor and the rescue swimmer remains in the water aiding in the recovery of survivors.
2. Factors which should be considered before attempting a multiple rescue;
  - a. Sea state.
  - b. Visibility.
  - c. Your location.
  - d. Distance between survivors.

Remind students of the basic rules for SAR Tactics

**WARNING**

**To avoid fatigue, the rescue swimmer shall avoid multiple rescues when a great deal of swimming is required between survivors. Additionally, the reduced visibility during night/IFR rescues makes multiple rescues hazardous.**

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. In the event of a multiple rescue the rescue swimmer shall.
  - a. Signal the helicopter to deploy raft(s).
  - b. Inflate the raft(s) if necessary and commence boarding the survivors into the raft(s).

E. Swimmer Deployment

1. Day - 10 FT 10 KTS or 15 FT 0 KTS, on command from the helicopter aircraft commander (HAC), the crew chief will give the swimmer the signal to jump.  
  
Night - the swimmer will be lowered to the water using the hoist for safety.

F. Survivor/s and Swimmer Recovery Procedures

**NOTE**

Should a survivor be entangled in a submerged parachute and the rescue swimmer is unable to extract the survivor in sufficient time, a hover should be established directly over the survivor. The survivor may then be attached to the rescue hook by the rescue swimmer. The survivor's head may be maintained above the water while the rescue swimmer disentangles the parachute and readies the survivor for hoisting. The hoist operator shall adjust the hoist to compensate for hover variations to maintain the survivor's position. Under no circumstances shall the survivor be hoisted out of the water while the parachute is attached.

1. Motor whaleboat/RHIB and helicopter recoveries shall be performed per NWP 3-50.1.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE**

Prior to all rescue boat deployments, Aviations SAR swimmers shall familiarize themselves with Rescue Boat recovery procedures as outlined in NWP 3-50.1.

The Rescue Boat shall remain close, but stay clear of the rescue until the helicopter rotating anti-collision lights are turned off. At this signal, the Rescue Boat will assume the responsibility for the rescue.

2. All recoveries of personnel in the water shall be attempted with the survivor facing the gunwale of the boat.
3. Ship-Alongside Rescue
  - a. When helicopter is not available.
  - b. The sea precludes lowering of boat/RHIB.
  - c. When the rescue can be accomplished more expeditiously by ship.

**NOTE**

When directed from the bridge, every attempt should be made by the deck recovery detail to deploy life rings, yellow low padded monkey fist, etc., to gain contact or positive control of the survivor. If the distance is too great, a swimmer should be lowered into the water.

4. Shipboard recovery (Forecastle)
  1. Hoisting

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Primary means for hoisting personnel from the water to the forecastle is the J-Bar Davit system with modified rescue strop attached. Advantages:
  - 1. Aircrew survivors are familiar with the strop.
  - 2. Rescue strop floats.
  - 3. The rescue strop can be tossed a short distance, which is an advantage over nets, litter, and seats that must be brought directly over or under the survivor.
  
- 5. Helicopter recovery procedures
  - a. The rescue swimmer signals the helicopter to move in for pick up.
  - b. Rescue swimmer places survivor in the appropriate rescue device.
  - c. Swimmer signals ready for hoisting.
  - d. Crewchief hoists/assists survivor and swimmer into the helicopter.
  
- 6. First Aid
  - a. On board rescue platform, First Aid and treatment for shock shall be administered to survivor as necessary for shock.

Explain to students that the use of the J-bar davit and snatch block makes the task easier.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE**

Rescue reports show that almost all survivors are in some form of shock.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

- A. State Lesson Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.  
Briefly summarize.

APPLICATION:

**NOTE**

It is unrealistic for a survivor to act aggressively and chase the rescue swimmer. This is an impractical simulation of an active drowning victim as defined by the American Red Cross (Life guarding manual, pg. 56); GAO report (pg. 17) calls "belligerent and aggressive victims is a poor teaching method and an ineffective way to mentally condition students to perform under stress." Survivors **SHALL** be briefed to exhibit the following characteristics as detailed by the ARC:

1. Struggle to keep the face above water in an effort to breathe.
2. Have arms extended to the side, pressing down for support. There is no supporting kick.
3. Have a vertical body position in the water.
4. Struggles at the surface, unable to move forward, for approximately 20 to 60 seconds before submerging.

**IN NO CASE WILL THE SURVIVOR CHASE THE RESCUE SWIMMER.**

**SAFETY NOTES:** Students shall wear a complete set of rescue swimmers equipment including a SAR-1 vest during all training sessions. The mishap plan shall be activated by any of the instructors, safety observers, or pool monitors whenever he observes an accident/injury. Instructor shall ensure all pool drain covers are installed prior to commencing any disentanglement training.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**SCENARIO #1**

Survivor #1

Equipment... Integrated Torso Harness,  
FULLY INFLATED LPU-28 with  
parachute, HGU helmet, MBU-12  
oxygen mask, SKU/RSSK

Scenario.... Under ballooned chute,  
Unconscious

survivor #2

Equipment... Integrated Torso harness,  
FULLY INFLATED LPU-28 with  
parachute, HGU helmet, MBU-12  
oxygen mask, SKU/RSSK

Scenario.... Under ballooned chute,  
Conscious

**SCENARIO #2**

Survivor #1

Equipment... CMU-33, FULLY INFLATED LPU-33,  
HGU helmet

Scenario... In a multi person raft,  
unconscious

Survivor #2

Equipment... CMU-33, PARTIALLY INFLATED LPU-  
32, HGU helmet

Scenario... In a multi-person life raft  
assisting unconscious survivor

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**SCENARIO #3**

Survivor #1  
Equipment... CMU-33, FULLY INFLATED LPU-33,  
HGU helmet  
Scenario... In a single man life raft  
conscious

Survivor #2  
Equipment... Free floater with FULLY INFLATED  
LPU-32  
Scenario... Unconscious

**SCENARIO #4**

Survivor #1  
Equipment... Integrated torso harness from  
E-2 Hawkeye, PARTIALLY INFLATED  
Flotation, O2 mask, RSK/SKU and  
HGU helmet and parachute  
connected  
Scenario... Unconscious floating next to  
raft

Survivor #2  
Equipment... Integrated torso harness from  
E-2 Hawkeye, FULLY INFLATED  
flotation, O2 mask, RSK/SKU  
HGU helmet and parachute  
connected  
Scenario... Unconscious floating in raft w/  
parachute in raft.

**SCENARIO #5**

Survivor #1  
Equipment... Integrated torso harness FULLY  
INFLATED flotation, helmet O2  
mask RSK/SKU and attached



DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

configured gear one of the survivors is waving at the helicopter the other is unconscious. There is a third survivor floating out and away from the raft who is also unconscious and not breathing.

- c. During a routine training flight an E-2 has ditched, the crewmembers are as follows:

Three crewmembers are in the water two in rafts one in the water holding on to one of the rafts the survivor holding on to the raft has partially inflated flotation, but is otherwise fine. The occupant of the raft supporting the man in the water has fully inflated flotation and is unconscious and not breathing. The last man in a raft has fully inflated flotation is conscious and has a deployed parachute and is complaining of back pain.

**NOTE**

During the final multi's a litter shall be used and graded.

**NOTE**

Final multi's are scheduled for four evolutions. During a testing evolution only one scenario shall be selected and utilized and during the next successive evolution it shall not be reused. During the fourth evolution a scenario may be reused but then may not be used during the retest portion of the schedule. Retests consist of two evolutions each evolution shall consist of one of the two remaining scenarios.

DISCUSSION POINT

EVALUATION: Final multiple and written test.

ASSIGNMENT: None.

RELATED INSTRUCTOR ACTIVITY

JOB SHEET 4-9  
FINAL MULTIPLE RESCUE SCENARIO "C"

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_

INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either **Q, CQ, UQ**.

"\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure.

A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0

Minimum average score for passing is **3.6**

If an item is not applicable line out that item and do not add it to the overall average

First survivor	ACTION	SCORE	POINTS
Assess the situation	Q	CQ	UQ _____
Deployment	Q	CQ	UQ _____
Look left, right and center			
Signal, "I'm all right"			
Approach survivor (using correct approach)	Q	CQ	UQ _____
Establish communication			
Utilize ballooned canopy procedures (use ballooned canopy job sheet)			
In close in control			
Remove O2 mask			
Check breathing			
Give two rescue breaths if necessary			
Clear head, neck and chest	Q	CQ	UQ _____
Remove any debris			
Remove raft lanyard			
Ensure that it is safe to inflate flotation			
Inflate and/or check flotation	Q	CQ	UQ _____
Disentanglement head to toe	Q	CQ	UQ _____
Remove KOCH fittings			
Safe survivor (if necessary)			
(when and if swimmer returns)			
Sweep arms/cross arms across chest			
Side control			
Release oxygen hose on SKU			
Release SKU			
Sweep legs			

Raft (if applicable)	Q	CQ	UQ _____
Proper raft procedure			
Discarded raft completely			
Final check	Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device <b>(If litter signaled go to litter job sheet)</b>	Q	CQ	UQ _____
Properly use lifting devices			
Perform safety check for lifting device			
Signal up hoist			

**SECOND SURVIVOR**

ACTION

Assess the situation	Q	CQ	UQ _____
Approach survivor (using correct approach)	Q	CQ	UQ _____
Establish communication			
In close in control			
Remove O2 mask			
Check breathing			
Give two rescue breaths if necessary			
Clear head, neck and chest	Q	CQ	UQ _____
Remove any debris			
Remove raft lanyard			
Ensure that it is safe to inflate flotation			
Inflate and/or check flotation	Q	CQ	UQ _____
Disentanglement head to toe	Q	CQ	UQ _____
Remove KOCH fittings			
Safe survivor (if necessary)			
(when and if swimmer returns)			
Sweep arms/cross arms across chest			
Side control			
Release oxygen hose on SKU			
Release SKU			
Sweep legs			
Raft (if applicable)	Q	CQ	UQ _____
Proper raft procedure			
Discarded raft completely			
Final check	Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device <b>(If litter signaled go to litter job sheet)</b>	Q	CQ	UQ _____
Properly use lifting devices			
Perform safety check for lifting device			

Signal up hoist

### THIRD SURVIVOR

	ACTION			
Assess the situation		Q	CQ	UQ _____
Approach survivor (using correct approach)		Q	CQ	UQ _____
Establish communication				
In close in control				
Remove O2 mask				
Give two rescue breaths if necessary				
Clear head, neck and chest		Q	CQ	UQ _____
Remove any debris				
Remove raft lanyard				
Ensure that it is safe to inflate flotation				
Inflate and/or check flotation		Q	CQ	UQ _____
Disentanglement head to toe		Q	CQ	UQ _____
Remove KOCH fittings				
Safe survivor (if necessary)				
(when and if swimmer returns)				
Sweep arms/cross arms across chest				
Side control				
Release oxygen hose on SKU				
Release SKU				
Sweep legs				
Raft (if applicable)		Q	CQ	UQ _____
Proper raft procedure				
Discarded raft completely				
Final check		Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device		Q	CQ	UQ _____
<b>(If litter signaled go to litter job sheet)</b>				
Properly use lifting devices				
Perform safety check for lifting device				
Signal up hoist				

### LITTER

	ACTION			
Signaled helicopter		Q	CQ	UQ _____
Maintained control of survivor				
Signal was clear and correct				
Approached trail line while maintaining control of survivor		Q	CQ	UQ _____

Attained control of trail line  
Donned gloves

Signaled down hoist Q CQ UQ \_\_\_\_\_  
Litter pulled to swimmer

Disconnect litter from double rescue hook Q CQ UQ \_\_\_\_\_  
Put survivor into litter  
Stage lifting sling to not get fouled  
in restraint straps  
Attach chest strap over chest and under arms  
Disconnect from survivor if necessary

Attach waist strap Q CQ UQ \_\_\_\_\_

Attach upper leg strap Q CQ UQ \_\_\_\_\_

Attach lower leg strap Q CQ UQ \_\_\_\_\_

Perform safety checks Q CQ UQ \_\_\_\_\_  
Carabiners red to head/white to the feet  
Survivor tight and secure within four  
restraint straps

Signal Helicopter to move in for pickup Q CQ UQ \_\_\_\_\_

Swim litter to double rescue hook Q CQ UQ \_\_\_\_\_

Connect two lifting rings to double rescue Q CQ UQ \_\_\_\_\_  
hook

Perform safety checks Q CQ UQ \_\_\_\_\_  
Two lifting rings attached to large end of  
double rescue hook  
Cables clear and taught

#### HEADWORK

Established and maintained effective Q CQ UQ \_\_\_\_\_  
communication throughout rescue

Safed and/or Staged all survivors Q CQ UQ \_\_\_\_\_

Recovered survivors in logical order, Q CQ UQ \_\_\_\_\_  
worst first/least last

Student exercised sound SAR tactics Q CQ UQ \_\_\_\_\_

Student did not jeopardize the well being Q CQ UQ \_\_\_\_\_  
of any survivor

Student was able to adapt to a changing scenario                    Q            CQ            UQ \_\_\_\_\_

Student used available resources to Facilitate the rescue                    Q            CQ            UQ \_\_\_\_\_

$$4.0 \times \text{number of } \mathbf{Q} = \underline{\hspace{2cm}}$$

$$2.0 \times \text{number of } \mathbf{CQ} = \underline{\hspace{2cm}}$$

$$4.0's + 2.0's = \text{Total grade}$$

$$\text{Total grade} \underline{\hspace{2cm}} \text{ divided by } \underline{\hspace{2cm}} \text{ (number of items tested)} = \underline{\hspace{2cm}}$$

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.10

LESSON TOPIC: Overland SAR Operations

ALLOTTED LESSON TIME: 1.0 Classroom  
7.5 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional  
instructors as required per annex E,  
Staffing Requirements, of Curriculum  
Outline

INSTRUCTIONAL REFERENCES:

1. NAVAVSCOLSCOM/OMD Joint Command Agreement
2. NAVAVSCOLSCOM Inclement Weather Instruction
3. NWP 3-50.1 Navy Search and Rescue Manual

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction, the student will demonstrate proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.48 List procedures for day/night overland SAR, to include SAR carries and litter procedures.
- 3.49 Demonstrate day/night procedures for overland SAR in a simulated rescue environment, to include SAR carries and litter procedures.

CRITERIA TEST: None.

HOMEWORK: None.

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Two pair foamy earplugs per student
3. Student Flight Equipment
4. Instructor SAR Equipment
5. 4 SAR MEDIVAC litters
6. SAR Capable Helicopter with 2 Crewmen
7. Eye protection

INTRODUCTION:

A. Establish Contact

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Reiterate DOR and TTO policy.
5. Ask the following questions:

- a. Has anyone gone to the hospital/branch

Display name and lesson topic.

Refer questionable cases

DISCUSSION POINT

clinic for treatment within 24 hours, and are you taking any medications?

- b. Has anyone taken over-the-counter medications within 24 hours?
- c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

B. State Lesson Objectives.

C. Establish Readiness

1. Motivating Statements

While Naval SAR-capable units have traditionally operated within the maritime environment, it is becoming increasingly necessary for those units to also operate inland. Because of increased air traffic density, military training areas both in the United States and abroad have been positioned inland, often over the most remote and rugged terrain.

2. Lesson Overview

a. Lesson Topic: Overland SAR Operations

RELATED INSTRUCTOR ACTIVITY

to department medical representative for disposition.

Turn to cover page of Lesson Plan and paraphrase objectives.

Establish importance and relevance of lesson material using personal experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

b. Major Teaching Points:

- (1) Overland Rescue methods
- (2) Practical applications

PRESENTATION:

**WARNING**

Regardless of the type of rescue to be utilized, when effecting a military SAR in the immediate vicinity of the aircraft crash site, extreme care shall be used due to the possibility of carbon fiber hazards and unexpended ordnance; i.e., parachute ballistic spreaders, ejection-seat ordnance, etc.

**WARNING**

Inhalation of composite fibers resulting from aircraft fires or damaged aircraft materials may be harmful to rescue personnel. If smoke is present, rescue personnel shall be deployed upwind and will approach the aircraft in a manner as to avoid any smoke.

A. RESCUE METHODS

1. There are five basic rescue methods which can be utilized:
  - a. Landing to effect a rescue
  - b. Rescue via hoist

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- c. Rescue via one skid/wheel
  - d. Rappelling
  - e. Short haul evolution
2. Landing to effect a rescue.
- a. The preferred rescue method in all overland cases is to land. A landing rescue is more expeditious, reduces pilot/crew fatigue, and is more simplified than other rescue methods.
  - b. Procedures for a rescue by landing
    - (1) If the survivor's location is beyond the sight of the aircraft, the travel between the two should be kept to a minimum to reduce crew fatigue. In such instances, on the first trip to the survivor(s) the following gear should be carried.
      - (a) Hand held radio
      - (b) Medical kit (first aid kit)
      - (c) Rescue litter/SAR MEDEVAC litter
    - (2) When the survivor(s) is beyond the

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

sight of the pilots, the crewman must perform a Primary Survey and keep the pilots appraised of the survivor(s) condition and requirements via the hand-held radio. When only one crewman is on board, the copilot may be

required to aid the crewman in first aid treatment and recovery of the survivor(s).

3. Rescue Via Hoist

**WARNING**

**Only as a last resort should the crewman be lowered through trees or dense foliage to the survivor. This is to be performed only when absolutely no clear area exists in the proximity of the survivor(s) and the condition of the survivor(s) appears to require immediate medical attention.**

- a. Terrain or foliage may prohibit landing to effect the rescue. In such cases, a hoist recovery is most advantageous. Even though rescue via hoist is not the most desirable method, it is a widely used rescue technique and training should be geared toward its use.
- b. The crewman shall evaluate the survivor's medical condition and determine which type of rescue device is required. If the survivor is suspected of having neck/back

DISCUSSION POINT

injuries, a rescue litter shall be used.

- c. Procedures For a Hoist Recovery:

**WARNING**

**Buildup of static electricity necessitates that the crewman allow the rescue hook to touch the ground before it is touched.**

Prior to hoisting, perform a final check:

- (1) Survivor and/or crewman are properly attached to rescue device.
- (2) Knurled fittings on locking carabiners are down and locked.
- (3) Hoist cables are not obstructed/entangled.

4. Rappelling

- a. Rappelling to a survivor is the most expeditious means of getting a crewman to the deck when a landing is not practical.
- b. Rappelling has many advantages over hoisting, the ability of the crewman to control the descent allows for a safer means of descending through trees, dense foliage, and rugged terrain.
- c. Rappelling reduces hover time and the increased speed of the evolution combined with the advantage of controlled descent makes rappelling a valuable rescue technique

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

in the inland rescue environment.

RELATED INSTRUCTOR ACTIVITY

**NOTE**

Only rappel-qualified crewman shall conduct SAR rappelling operations in accordance with OPNAVINST 3130.6 series.

5. Short Haul Evolution

- a. The short-haul evolution is a rescue method utilized for the extraction of a survivor on vertical or near vertical terrain.
- b. It may also be used in cases where the hoist cable length is insufficient or the hoist is inoperative.
- c. The short-haul evolution terminates at a predetermined landing zone. This provides a rapid means of rescue from inaccessible locations.

6. Overland SAR Carries and Litter Training

a. Preparation

- (1) Assess, Decide, React (ADR). Crewchiefs and Gunners will have to make quick decisions that may affect flight safety and mission success. Aircrewman must Assess the situation, make a Decision that will not

Explain: Though it is a non-combative environment, Rescuers still need to be aware of their surrounding for hazards. ADR gives a

DISCUSSION POINT

adversely affect or violate safety, crew or mission integrity, and then React to the situation accordingly. This process, at times, will have to be done in a split second.

- (2) Ensure that the Litter is ready to go prior to landing.
- (3) Two person Primary Survey/Proper Log Roll Technique.
  - (a) Face Down
  - (b) Face Up

b. Carries (Fireman's-Chair-Drag)

- (1) This provides options when litter is all ready being utilized.
- (2) Requires headwork
  - (a) Fireman's Carry
    - a. Used for extremity injury
    - b. Two man carry
    - c. Lift with legs not back
    - d. Crewman must be relatively the same size

RELATED INSTRUCTOR ACTIVITY

good foundation for proper headwork.

Explain: This will include the medical kit and Radio(s).

Demonstrate the proper technique for primary survey being conducted by two rescuers and proper log rolls face down/up.

During Day Overland SAR, these carries will be demonstrated and practiced while the student is waiting for next event.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (b) Chair Carry
  - a. Used for abdominal injury
  - b. Two man carry
  - c. Reverse or Front
  
- (c) Drag
  - a. Life over limb
  - b. Last resort

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize and check for understanding.

APPLICATION:

Execute day overland SAR operations.

HELICOPTER HOISTING OPERATIONS

**TRAINING:** Instructors and students shall wear a complete set of RFT equipment (i.e. helmet, flight suit, flight boots, and Rescue Swimmer gloves IAW

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

CNETINST 3710.1. A duty van shall be used to transport students to overland training area. Overland SAR hoisting shall be conducted in accordance with references (1), (2), and (3). Procedures used shall be per reference (3).

The instructor in charge shall ensure that all students have met the prerequisites prior to operations and that all students are physically qualified to participate. The instructor in charge shall not be in the training area under the helicopter but outside the area keeping watch on the training. The instructor in charge shall position himself where the Operations Instructor and staging Instructor will always be able to see him.

Another Instructor (Staging Instructor) shall be with the students waiting to go into the training area. Before students go into the training area he shall make a final inspection on the students safety equipment. This Instructor also shall be in charge of the safety of students not in the training area.

Students and instructors shall don flight equipment prior to entering the operating area. The instructor in charge shall maintain communications with the helicopter and Rescue Swimmer School Office via two-way radio. When the helicopter is in position and the TSM has cleared training operations to commence the staging instructor shall send in two students to the operations Instructor who shall direct the training of

DISCUSSION POINT

hoisting operations.

One instructor (Training Instructor) shall be under the helicopter with two students for safety and to ensure that proper hoisting procedures are used. Students shall make a minimum of one complete hoisting evolution with the SAR MEDEVAC litter using the trail line. The requirement for hoists may be waived by the Commanding Officer in situations where students are unable to complete this training due to weather, or aircraft/facility availability.

**TRAINING TEAM:** The training team shall consist of:

One TSM.

One IOD to be overall coordinator of the training evolution and to maintain radio communications with both the helicopter and the ARSS bridge.

One operations instructor who will be positioned under helicopter with students during training.

One staging instructor who will maintain student safety for all students not in the training area.

One EMT.

One safety officer.

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE:** Students shall demonstrate hoisting procedures in the training tank (pool) prior to live helicopter operations. Students shall be thoroughly briefed on sequence of events, safety precautions and emergency procedures prior to overland SAR operations.

**SAFETY:** Primary instructor shall ensure that weather conditions are within limits of reference (2), all students are physically qualified to participate, no more than two students and one instructors under the helicopter at any time.

Instructors shall ensure that all students wear foamy ear plug inserts during the entire evolution. Students shall keep eye protection on when in and around hoisting area.

Day overland SAR scenario

The day overland SAR scenario will simulate a rescue swimmer being hoisted to the ground to recover an aviator whose is land bound. Instructors shall have students simulate getting hoisted to the deck where they will signal for a level A medical kit. They will go to a pre-positioned simulated survivor and begin a primary survey, once primary survey is completed students will signal for

the litter and simulate putting survivor into litter and hoisting survivor up to helo. The student will then simulate getting hoisted back up to the helicopter where they will do a quick reassessment of the primary survey.

Night overland SAR scenario

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

The night overland SAR scenario will simulate a helicopter making a confined area landing and the crewchief and rescue swimmer having to march overland to get to the survivor.

Instructors shall designate an area that will be the helicopter landing area. The instructor shall take two students and designate one as the crewchief and one as the swimmer and point them in the direction they are to find the downed aviator. A pre-staged survivor some distance away will have a signaling device illuminated. The students job is to find the survivor. Once there, the student designated as the crewchief will begin putting together the SAR Medevac litter and the student designated as the swimmer shall begin a primary survey which will include CPR. Once the primary survey is complete both students will place a simulated survivor into the SAR Medevac litter and carry it back to the helicopter landing area. Once there they will perform a quick reassessment of the primary survey.

EVALUATION: Performance Test

ASSIGNMENT: None.

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer Courses, Q-050-0600, Q-050-0602  
TERMINAL OBJECTIVE: Partially supported by this lesson topic:  
4.0 Upon completion of this unit of instruction, the student will identify and treat medical emergencies using approved SAR medical equipment, as per NAVEDTRA 14295 and NWP 3-50.1 manual, without injury to personnel or damage to equipment.

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 5.1

LESSON TOPIC: American Red Cross CPR for the Professional Rescuer

ALLOTTED LESSON TIME: 4.0 Classroom  
12.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Additional instructors as per American Red Cross CPR for the Professional Rescuer Instructor manual

INSTRUCTIONAL REFERENCES:

1. American Red Cross CPR for the Professional Rescuer Instructor's Manual  
2. American Red Cross CPR for the Professional Rescuer Audiovisual

Enabling Objectives:  
Partially supported by this lesson topic:  
4.1 State CPR procedures per American Red Cross CPR for the Professional Rescuer standards (or equivalent).  
4.2 Demonstrate CPR procedures per current American Red Cross for the Professional Rescuer standards (or equivalent).

CRITERION TEST:  
Written knowledge test and practical skills test per American Red Cross standards.

HOMEWORK: None

INSTRUCTIONAL AIDS:

1. American Red Cross CPR for the Professional Rescuer Manual
2. VCR and Monitor
3. Blankets
4. Resuscitation Masks
5. Bag-valve Masks
6. CPR Mannequins (Adult, Child, and Infant)

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Review training time out policy.
5. Ask for medical concerns:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements

Establish importance and relevance of lesson material

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY  
using personal experience or

anecdote.

2. Lesson Overview

Briefly outline material to  
be covered.

a. Lesson Topic: American Red CPR for the  
Professional Rescuer

b. Major Teaching Points:

(1) Adult CPR

(2) Child CPR

(3) Infant CPR

(4) 2 Person CPR

(5) Bag-valve Mask Resuscitation

PRESENTATION

A. CPR for the Professional Rescuer

Administer American Red Cross CPR for the  
Professional Rescuer course. Refer to current ARC  
directives.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

Students will practice segments of the CPR for the Professional Rescuer course under the supervision of an ARC Instructor during the course.

EVALUATION

A. Practical skills test.

B. Written test.

ASSIGNMENT

None.

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Courses, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 5.2

LESSON TOPIC: Level "A" Medical Kit

ALLOTTED LESSON TIME: 1.5 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCES:

1. NAVAIR 13-1-6.5
2. NWP 3-50.1 Navy Search and Rescue Manual

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Level "A" Medical Kit

INTRODUCTION:

TERMINAL OBJECTIVE:  
Completely supported by this lesson topic:

- 4.0 Upon completion of this unit of instruction, the student will identify and treat medical emergencies using approved SAR medical equipment, as per NAVEDTRA 14295 and NWP 3-50.1 manuals without injury to personnel or damage to equipment.

Enabling Objectives:

Partially supported by this lesson topic:

- 4.3 List the contents "A" Medical Kit.
- 4.4 State the purpose of each item in the level "A" Medical Kit.

CRITERION TEST: Job sheet Unit 5.0

HOMEWORK: None

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Reiterate the TTO policy.
5. Ask the following questions:

- a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
- b. Has anyone taken over-the-counter medications within 24 hours?
- c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

Establish importance and relevance of lesson material using personal experience or anecdote.

1. Motivating Statements

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2. Lesson Overview
  - a. Lesson Topic: Level "A" Medical Kit
  - b. Major Teaching Points:
    - (1) Level "A" Medical Kit
    - (2) References
    - (3) Pre-flighting Equipment

Briefly outline material to be covered.

PRESENTATION:

- A. Level "A" SAR Medical Kit:
  - 1. The Level "A" Medical Kit is designed for all units that maintain helicopters with a SAR capability.
  - 2. It is made of heavy-gauge nylon with labeled pockets for storage of the medical items. In the stowed position it is 22 inches by 11 inches, with a length of 52 inches when fully opened. It contains five separate pockets.
  - 3. Inventory IAW NWP 3-50.1 as follows:
    - a. Medical Kit, Bag and Panel
    - b. Pocket One contains:
      - 1) Two packets of 5 Band-Aids.
      - 2) One box of 10 Ammonia Inhalants.
      - 3) One package of Safety Pins.

Display

Display

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 4) One roll of 3-inch by 5-yard Surgical Adhesive Tape.
- 5) One, 2-inch wide Non-pneumatic Tourniquet.
- 6) One Eye Dressing First Aid Kit, containing two eye patches and two tubes of medicated ointment. Explain - must check expiration dates on medicated ointment.
- 7) One Pocket Mask, one pair of Bandage Scissors, and one Mini Maglight.
- c. Pocket Two contains: Display
  - 1) Two Compression Skull Cap Head Dressings.
  - 2) Four, 4x7-inch First Aid Field Dressings.
  - 3) Four, 37x37x52-inch Muslin Triangular Bandages (Cravats).
- d. Pocket Three contains: Display
  - 1) Three, 4-inch Cotton Roller Bandages (Kerlix).
  - 2) Three, 4.5-inch X 5-yard Elastic Bandage Gauze (Ace Wraps).
  - 3) Five, 4x4-inch Petrolatum Gauze.
- e. Pocket Four contains: Display

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) One, 11 3/4-inch square First Aid Field Dressing.
- 2) Two Universal (SAM) Splints.

f. Pocket Five contains:

Display

- 1) One Burn-Trauma Dressing sheet, One Casualty Blanket, Two USP 0.9% Sodium Chloride Injection (IV) bags.
- 2) Cervical Collars: No Neck, Short, and Regular; one each. One Biological Hazard Protection Kit.

B. References:

1. Information relating to the description, configuration, maintenance, and inspection of the Level "A" Medical Kit can be found in the NAVAIR 13-1-6.5, Section 14-23.
2. Information relating to the development and application of the Level "A" Medical Kit can be found in the NWP 3-50.1.

C. Pre-flighting Equipment:

1. As an essential part of the aircraft preflight, you should always evaluate the condition and security of your medical equipment.
2. Verify that the tamper seal (if applicable) on the medical kit has not been broken and inventory the bag as needed.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION: None

EVALUATION: Job Sheet Unit 5.0

ASSIGNMENT: Review attachments

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Course, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 5.3

LESSON TOPIC: Practical First Aid

ALLOTTED LESSON TIME: 2.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCES:

1. NAVEDTRA 13119, Standard First Aid
2. NAVEDTRA 14295, Hospital Corpsman Manual
3. National Diver's Alert Network  
Underwater Diving Accident Manual
4. Brady, Emergency Care 9<sup>th</sup> Edition

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 4.0 Upon completion of this unit of instruction, the student will identify and treat medical emergencies using approved SAR medical equipment, as per NAVEDTRA 14295 and NWP 3-50.1 manuals, without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 4.5 Explain the purpose of first aid.
- 4.6 List different types of injuries and the appropriate treatment for each.

CRITERION TEST: Written test

HOMEWORK: None

## INSTRUCTIONAL AIDS

1. Trainee Guide
2. Contents of Level "A" Medical Kit
3. Rescue Litter
4. Moulage Kit
5. CPR Mannequin

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Reiterate the TTO policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

Establish importance and relevance of lesson material using personal

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Motivating Statements
2. Lesson Overview
  - a. Lesson Topic: Practical First Aid
  - b. Major Teaching Points:
    - (1) Purpose of First Aid for Rescue Swimmers
    - (2) First Aid Procedures
    - (3) Wounds
    - (4) Shock
    - (5) Head, Neck, and Spinal Injuries
    - (6) Rescue Litter Procedures
    - (7) Fractures and Dislocations
    - (8) Rib Fractures
    - (9) Open and Closed Chest Wounds
    - (10) Abdominal Evisceration
    - (11) Pelvic Fractures
    - (12) Burns
    - (13) Environmental Injuries

experience or anecdote.

Briefly outline material to be covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

(14) Compressed Air Injuries

(15) Dead-on-Arrival

(16) Psychiatric Emergencies

PRESENTATION:

A. Purpose of First Aid for Rescue Swimmers:

1. Save life.
2. Prevent further injury.
3. Prevent infection.
4. Treat for shock.
5. Basic principles of First Aid:
  - a. Act quickly, but effectively.
  - b. Reassure the survivor in a calm manner.
  - c. Reveal only enough of the survivor's injuries to ensure cooperation.
  - d. Do not discuss the survivor's injuries with others while the survivor is in hearing range unless you're uncertain about an injury or course of treatment.
  - e. If the survivor is in danger of further injury, remove them from the danger as quickly and smoothly as possible, without putting yourself at risk.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

B. First Aid Procedures:

1. Treatment begins once access to the survivor has been established.
2. During an overland SAR, perform the Primary Survey only. This is considered a "Load and Go" situation.
3. During an in-water SAR, first aid treatment begins in the rescue platform.
4. All SAR capable aircraft utilize the Level A Medical Kit. The first step in the treatment of injuries is protecting yourself from bodily fluids as much as possible. Always utilize the surgical gloves found in the Level A Medical Kit at a minimum.

Refer students to Information sheet (5.3-1) in Trainee Guide. Display contents of Level A Medical Kit.

C. Wounds:

1. There are 5 classifications of wounds:
  - a. Bruise
  - b. Scrape/Abrasion
  - c. Laceration (torn/ragged edges) and Incision (smooth edges).
  - d. Avulsion - Skin tissue is partially or completely torn away with severe bleeding possible.
  - e. Puncture - Most susceptible to infection.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2. Infection is secondary to a wound. Never close or bandage a wound until it has been irrigated or cleaned out as much as possible.
- 3. If severe bleeding is present, do not worry about cleaning out the wound, control the bleeding.

a. Open Wounds:

1) Three types of bleeding:

- a) Arterial - Large vessels that carry blood away from the heart. Bleeding is bright red and spurts from the wound. This bleeding is life threatening and difficult to control.
- b) Capillary - Small vessels that carry blood to all body parts. Bleeding is slow and oozes from wound.
- c) Venous - Veins carry blood to the heart. Bleeding is dark red and flows in a steady stream.

2) Dressings and Bandages:

- a) Dressings: pads placed directly on the wound to soak up blood and keep germs out. These will not stick to the wound.
- b) Bandages: used to wrap and hold dressings in place, apply pressure

Display

Display

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

to help control bleeding, and help support an injured part body part. Bandages include: Band-Aids, Triangular Bandages, and Roller Bandages made of gauze or elastic material.

- c) Field Dressings are a combination dressing and bandage in one.
- 3) Control severe bleeding using the following methods:
- a) Direct Pressure - place direct pressure on the wound using a sterile field dressing. A dressing may be created using any available equipment as necessary.
  - b) Elevation - elevate the affected extremity above the level of the heart.

Display

**NOTE**

Do not elevate an extremity until it has been properly splinted if a fracture is suspected.

- c) Second dressing - apply a second dressing if the first bandage becomes blood-soaked. Wrap dressings in place with a Roller bandage as needed. Ensure the Bandage is tied off or taped to prevent loosening.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

**NOTE**

Never remove a dressing once it has been applied. Place a new dressing over the existing one.

- d) Pressure points - apply pressure to the artery by pressing against the underlying bone at a point closest to the wound and midway to the heart.
- e) Tourniquet - used as a last resort.
  - When using a tourniquet, you risk sacrificing a limb in order to save a life.
  - Tourniquets are only placed on the extremities (arms and legs). Normally placed 1 to 1.5 inches above the wound.
  - If possible, place the tourniquet below a joint.
  - Write the time and location of the tourniquet on the front of the survivor's shirt.
  - Write a capital "T" on the survivor's forehead.
  - Leave the tourniquet visible.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- **Never** use string, wire, or any thin material less than one inch wide.
- Tighten only enough to control the bleeding.
- **Never** loosen a tourniquet once it is in place.

**WARNING**

**When practicing on a simulated survivor, do not tighten tourniquet.**

- 4) Signs of Internal Bleeding:
  - a) Tender, swollen, bruised, or hard areas of the body (i.e.: the abdomen).
  - b) Rapid, weak pulse.
  - c) Skin that feels cool, moist or looks pale or bluish.
  - d) Vomiting or coughing up blood.
  - e) Excessive thirst.
  - f) Becoming confused, faint, drowsy, or unconscious.

D. Shock:

- 1. A life threatening condition usually due to severe bleeding and caused by a lack of blood circulating

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

throughout the body.

a. Signals of Shock

- 1) Restlessness or irritability (often the first indication).
- 2) Altered level of consciousness.
- 3) Pale, moist, cool skin.
- 4) Rapid breathing.
- 5) Weak, rapid or absent pulse.

b. Late stages of shock include:

- 1) Bluish coloration around the lips, eyes, and/or the nail beds due to a prolonged lack of oxygen.
- 2) Loss of consciousness.
- 3) No breathing or absent pulse.

2. All survivors will be in some form of shock. Position survivor for transport in the rescue vehicle in one of the following five positions:

**NOTE**

Maintain in-line stabilization of the head and neck if a head, neck, or spinal injury is suspected.

a. Traditional Shock Position

Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) Use this position unless the survivor's injuries preclude it (if no other shock position is needed).
  - 2) Feet are elevated 6-12 inches above the level of the heart.
  - 3) When spinal injuries are suspected, lift the foot end of the SAR litter instead of the feet.
- b. Flat on Back Position Demonstrate
- 1) Use when a head injury is suspected, the survivor has an eye injury, flail chest, signs of internal bleeding in the abdomen or torso are present, or the survivor is unconscious upon your arrival.
  - 2) Position the survivor on their back, keeping the body as straight as possible.
- c. Side Position Demonstrate
- 1) Used for survivor with nausea and vomiting, bleeding from the mouth, large amounts of oral secretions, a sucking chest wound or deviated trachea, or if a compressed air injury is suspected.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2) Place a survivor with an open or closed chest wound, injured side down. This position allows gravity to assist in drainage of blood and keeps the uninjured lung up.
- 3) If a compressed air injury is suspected, place the survivor left side down to keep air bubbles from forming in heart vessels.

d. Knee's Flexed Position

Demonstrate

- 1) Used for a survivor with abdominal injuries. (Something going into or coming out of the abdomen). This position is not to include internal bleeding in the abdomen.
- 2) Lay survivor on their back and raise their knees to approximately a 45 degree angle. This will ease tension on the abdominal muscles.

e. Semi-Seated Position

Demonstrate

- 1) Not to be used if you suspect head, neck, or spinal injuries, or the survivor has ejected.
- 2) Used for survivors with medical problems such as a heart attack, stroke, asthma or trouble breathing.
- 3) Position the torso at a 45 degree angle

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

with the legs flat.

**NOTE**

Survivor should be placed in the appropriate shock position upon completion of the Secondary Survey if feasible.

E. Head, Neck, and Spinal Injuries:

1. Only an x-ray can truly determine internal head, neck, or spinal injuries. Suspect a head, neck, or spinal injury when:
  - a. Fall from height greater than the survivor's height.
  - b. Any diving (head first) mishap.
  - c. Any person found unconscious for unknown reasons.
  - d. Any injury involving severe blunt force to the head or trunk.
  - e. Any injury that penetrates the head or trunk.
  - f. Any person thrown from a motor vehicle or not wearing a seat belt.
  - g. Any injury in which the victims helmet is broken.
  - h. Lightning strike.
  - i. Ejected Aircrew.
2. Signals of head, neck, and spinal injures:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Change in level of consciousness.
  - b. Complaints of severe pain or pressure in the head, neck, or back.
  - c. Tingling or loss of sensation in the hands, fingers, feet or toes.
  - d. Partial or complete loss of movement of any body part.
  - e. Unusual bumps or depressions on the head, neck, or spine.
  - f. Blood or other fluids in the ears or nose.
  - g. Heavy external bleeding of the head, neck, or back.
  - h. Seizures.
  - i. Impaired vision or loss of balance as a result of injury.
  - j. Bruising of the head, especially around the eyes and/or behind the ears.
3. Treatment of head, neck, and spinal injuries during in-water rescue:
- a. Treat all unconscious survivors or ejected aircrew as possible head, neck, and/or spinal injury.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Upon gaining access to the survivor and establishing ABC's are present, perform all necessary disentanglement procedures and stabilize the spine utilizing the SAR MEDEVAC litter as required.
- c. This may prevent a potentially life threatening or permanent neurological injury from occurring.
- d. As a Rescue Swimmer, you're goal is to get the survivor into the rescue platform as quickly and effectively as possible.

**WARNING**

**In a water rescue situation, the survivor may be placed in a litter and hoisted horizontally to prevent the effects of hydrostatic squeeze.**

- 4. Hydrostatic Squeeze:
  - a. Water exerts pressure on a body immersed in it. This effect is called Hydrostatic Squeeze.
  - b. Vertical removal from the water relieves the pressure and causes blood to flow back to the lower extremities increasing the level of shock.
- 5. Treatment of head, neck, and spinal injuries during overland rescue:
  - a. Treat all unconscious survivor's or ejected aircrew as possible head, neck, and/or spinal injury.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Upon gaining access to the survivor and establishing ABC's are present, immediately take control of the head and apply a cervical collar.
- c. Complete a Primary Survey by treating all life threatening injuries, logroll the survivor onto to the SAR MEDEVAC litter, and transport using litter-carry harnesses.

Display litter-carry harnesses and demonstrate use.

**NOTE**

Check for a pelvic fracture prior to logrolling survivor. If a fracture is suspected, splint prior to logroll to avoid causing further injuries.

- d. If ABC's are not present, perform one minute of CPR and immediately log roll the survivor onto the litter and get them onto the rescue platform ASAP.

F. Rescue Litter Procedures

Demonstrate

- 1. Requires both a Lead and an Assistant rescuer.
  - a. Lead will establish ABC's, while the Assistant takes in-line stabilization of the head. Assistant will verbally direct the movement of the survivor during transfer to the litter.
  - b. Lead will apply a cervical collar and conduct a Primary Survey treating all life threatening injuries.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- c. Lead will then position the litter next to the survivor and position themselves perpendicular to the survivor's hips.
- d. On the Assistant's 1...2...3...count, Lead will grip the survivor's hips, log roll the survivor toward them, and check the survivor's back for injuries.
- e. The survivor is then rolled onto the litter and secured inside the litter straps.

G. Fractures and Dislocations:

- 1. A fracture is the complete break, chip, or crack in a bone; classified as open or closed.
  - a. Open Fractures:
    - 1) Involve open wounds. Any wound in which bone is seen or exposed is an open fracture.
    - 2) Treat the wound first. Stop the bleeding.
    - 3) Do not attempt to set a broken bone.
  - b. Closed Fractures:
    - 1) Involves a broken bone without an open wound.
    - 2) Splint in place.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 3) Do not attempt to set a broken bone.
- c. Dislocations:
  - 1) The separating of bones between a joint.
  - 2) May be very painful. Splint in place unless circulation below the joint is compromised.
- 2. Splinting - there are three types of splints:
  - a. Rigid Explain
  - b. Soft Explain
  - c. Anatomical Explain
- 3. Splinting is done during the secondary examination. After splinting any extremity, always check for a capillary refill to ensure proper circulation.
- 4. If circulation is compromised or the injured extremity cannot be placed into the litter appropriately, it may be necessary to move the extremity to an in-line position.
- H. Rib Fractures:
  - 1. Simple - 1 or 2 ribs broken, can be in several places. Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Flail Chest - 2 or more consecutive ribs broken in 2 or more places. Usually recognized by a section of the rib cage moving opposite of the normal breathing pattern.

I. Open and Closed Chest Wounds:

1. Open Chest Wound - also known as a "Sucking Chest Wound", occurs when air leaks into the chest cavity from an opening in the chest wall.
2. Due to increased air pressure outside of the body, the air is drawn into the chest as the survivor exhales, and causes the lung to collapse.
3. Closed Chest Wound - occurs due to a puncture in the surface of the lung causing an increased air pressure in the chest cavity and forcing the lung to collapse. May be identified by the presence of a deviated trachea.

Explain that the pressure forces the affected lung and vital organs toward the opposite side of the body, causing the trachea to shift.

J. Abdominal Evisceration:

1. Extensive laceration to the abdominal wall causing some of the internal organs to push out.

K. Pelvic Fractures:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. The upper body rests on the spine connected to the pelvis. The legs are seated in the pelvic girdle. Essentially, the pelvis is the center of the body.
2. A survivor with a pelvic fracture will feel like they are coming apart and may be in extreme pain.
3. Gently press downward and inward against the hips to test for movement, grinding, and survivor response to pain.

L. Burns:

1. Burns result from heat, electricity, chemicals, and radiation.
2. Burns are determined by the depth of tissue damage:
  - a. 1<sup>st</sup> Degree (Superficial) - A sunburn. involves the top layer of skin only.
  - b. 2<sup>nd</sup> Degree (Partial Thickness) - Recognized by the blisters.
  - c. 3<sup>rd</sup> Degree (Full Thickness)- All layers of skin and most or all underlying structures are destroyed. Identified by black or white charred tissue.
3. Steps for care:
  - a. Assess the scene and remove the victim from the source.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Cover with a loose, dry, sterile dressing.
- c. **Do not** use ointments or petroleum products on the burn.

Explain

4. Critical Burn is any that:

- a. Involves difficulty breathing.
- b. Covers more than one body part.
- c. Involves the head, neck, hands, feet, or genitals.
- d. Results from chemicals, explosions, or electricity.

M. Environmental Injuries:

1. Heat related injuries:

- a. Heat Cramps - Painful muscle spasms, usually in the legs or abdomen. Care includes:
  - 1) Laying the victim down in a cool place.
  - 2) Give cool water or **moderate** amounts of commercial sports drink.
  - 3) Light stretching of affected muscles may help.

Explain that the high sodium and sugar contents may cause rebound dehydration.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 4) Do not give salt or salt tablets, as they may worsen the condition.
- b. Heat Exhaustion - A more severe condition of heat cramps. Signals include:
  - 1) Normal to sub-normal skin temperature. Skin may be cool, moist, pale, or flushed.
  - 2) Headache.
  - 3) Nausea/Vomiting.
  - 4) Weakness and Fatigue/Exhaustion.
  - 5) Care is the same as Heat Cramps.
- c. Heat Stroke - The least common, but most severe heat emergency. Signals include:
  - 1) Red, hot, dry skin. Sweating has greatly reduced or has stopped.
  - 2) Change in level of consciousness (may be disoriented).
  - 3) Rapid, weak pulse.
  - 4) Rapid, shallow breathing.
- d. Care for Heat Stroke:
  - 1) Cool the survivor immediately. Apply ice or cold packs to the wrists, ankles, groin, armpits, and neck. These areas

Explain

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

are where heat is retained and the arteries are the most shallow.

- 2) Ice or cold water baths are a last resort as they may trigger dangerous heart irregularities.
- 3) **Do not** apply rubbing (isopropyl) alcohol.

2. Cold related injuries:

a. Hypothermia - Condition where the body core temperature drops because of a failure to keep warm. Signals include:

- 1) Shivering - most important indicator regarding the survivor's condition.
- 2) Numbness.
- 3) A glassy stare.
- 4) Apathy - loss of hope.
- 5) Loss of consciousness.

Explain that shivering produces heat. Once shivering stops, the body can no longer keep warm.

**NOTE**

Even in warm water, hypothermia is a life threatening condition.

Explain

b. Care includes:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) Remove any wet clothing and dry survivor.
- 2) Gradually re-warm by wrapping in blankets and dry clothing (if available).
- 3) Move the survivor to a warm place.
- 4) Buddy-warming may be necessary for survival.
- 5) Never rapidly re-warm the survivor, this may trigger dangerous heart irregularities.

N. Compressed Air Injuries:

1. May occur anytime a survivor breathes compressed gases underwater.
  - a. Helicopter Emergency Egress Device Systems (HEEDS).
  - b. Seat Pan Oxygen.
  - c. Self Contained Underwater Breathing Apparatus (SCUBA).
2. Air Embolus and Decompression Sickness (DCS or "the bends").
  - a. Breathing compressed air under water causes gases to be absorbed into the blood.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Rapid ascent relieves pressure on the gases, causing them to come out of solution.
  - c. Air Embolus and DCS are caused by gas bubbles which expand during ascent. These can either block blood vessels, become trapped within joints, or they may travel between tissues.
  - d. The following symptoms may be present depending upon the location of the bubble:
    - 1) Disorientation or personality change.
    - 2) Dizziness or blurred vision.
    - 3) Numbness, tingling, or paralysis.
    - 4) Chest pain.
    - 5) Bloody froth from the mouth or nose.
    - 6) Convulsions.
    - 7) Coughing or shortness of breath.
    - 8) Unusual fatigue or weakness.
    - 9) Skin itch.
    - 10) Pain in the arms, legs, or torso.
3. Treatment of Air Embolus and DCS:
- a. Both Air Embolus and DCS require urgent recompression. Transport the survivor to

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

capable facilities ASAP.

- 1) Unpressurized aircraft fly at lowest safe altitude and limit altitude changes.
- 2) Ensure Aircraft Commander contacts Hyperbaric Chamber before arrival.
- 3) Administer CPR/Rescue Breathing as required.
- 4) Keep airway open. Survivor may vomit.
- 5) Keep survivor lying (left side down) and quiet. This position causes the bubble(s) to rise away from the heart.

O. Dead-On-Arrivals (DOA'S):

1. Treat the victim as humanely and gently as possible. Recovery is necessary for autopsy investigation and proper burial.

P. Psychiatric Emergencies:

1. A sudden onset of behavioral or emotional responses that, if not responded to, may result in a life-threatening situation. In almost all cases, first aid treatment is a calm, professional understanding demeanor without aggravating the survivor.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION: None

EVALUATION: Written test

ASSIGNMENT: Review attachments

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Course, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 5.4

LESSON TOPIC: Primary Survey

ALLOTTED LESSON TIME: 2.0 Classroom  
2.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Additional instructors as required per  
Annex E, Staffing Requirements, of  
Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NAVEDTRA 13119, Standard First Aid
2. NAVEDTRA 14295, Hospital Corpsman Manual
3. National Diver's Alert Network  
Underwater Diving Accident Manual
4. Brady, Emergency Care 9<sup>th</sup> Edition

TERMINAL OBJECTIVE:  
Partially supported by this lesson topic:

4.0 Upon completion of this unit of instruction, the student will identify and treat medical emergencies using approved SAR medical equipment, as per NAVEDTRA 14295 and NWP 3-50.1 manuals without injury to personnel or damage to equipment.

Enabling Objectives:  
Completely supported by this lesson topic:

- 4.7 List procedures used in a primary survey IAW lesson Plan.
- 4.8 Demonstrate primary survey procedures in a mock trauma (Moulage) scenario.

CRITERION TEST: Job Sheet Unit 5.0

HOMEWORK: None

## INSTRUCTIONAL AIDS

1. Trainee Guide
2. Contents of Level "A" Medical Kit
3. Rescue Litter
4. Moulage Kit
5. CPR Mannequin

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Reiterate the TTO policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated

Refer questionable cases to department medical representative for disposition.

3

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

Establish importance and relevance of lesson material using personal experience or anecdote.

1. Motivating Statements

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Lesson Overview

Briefly outline material to be covered.

- a. Lesson Topic: Primary Survey;  
Identification and  
Treatment of  
Injuries
- b. Major Teaching Points:
  - (1) Primary Survey Procedures
  - (2) Arriving on the Scene
  - (3) Initial Assessment
  - (4) Primary Survey
  - (5) Transport or Continue
  - (6) Rules for Splinting
  - (7) Identification and Treatment of Injuries

PRESENTATION:

A. Primary Survey Procedures:

- 1. A head-to-toe examination conducted in one of two rescue situations. During in-water rescue situations once the survivor is in the rescue platform, and during overland rescues prior to transporting the survivor to the rescue vehicle.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Used to identify all life threatening injuries, which must be treated as they are found.

B. Arriving on the Scene:

Demonstrate

1. Scene Safety - Upon approaching the scene during an overland SAR, it is imperative that you evaluate the safety of the area in order to protect yourself and your crew.

**NOTE**

During in-water rescue scenarios onboard the rescue vehicle, it is understood that the scene is safe. However, it is necessary to evaluate the scene at all times.

Explain that during testing phases, scene safety is a requirement.

2. Body Substance Isolation (BSI) - Take BSI precautions prior to touching the survivor.
3. Determine Responsiveness - Attempt verbal communication with the survivor after or during BSI procedures.

C. Initial Assessment:

Demonstrate

1. Check the Airway -
  - a. If survivor is conscious and talking to you, check for severe bleeding and begin Primary Survey.
  - b. If survivor is unconscious, open the Airway using a "modified jaw thrust."

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. Check Breathing - Verify that the survivor is breathing. If not breathing, give two breaths. If unable to get the breaths in, begin Obstructed Airway procedures.

**NOTE**

If it is necessary to perform abdominal thrusts, expose the abdominal area prior to pressing on the abdomen.

Explain that chest thrusts must be performed if abdominal injuries are present.

3. Check Circulation - Verify that the survivor has a pulse. If no pulse, begin CPR procedures.
4. Check for Severe Bleeding - Take a quick look at the body from head to toe identifying any severe bleeding prior to beginning CPR.

**NOTE**

If severe bleeding occurs during chest compressions, it may be necessary to expeditiously bandage a wound in order to continue.

D. Primary Survey:

Demonstrate

1. Cervical Collar - While maintaining in-line stabilization of the head, sweep the back of the neck checking for blood and/or deformities. Determine the correct size c-collar needed, verify placement, and secure it. Once in place, you may let go of the head
2. Life-Threatening Injuries -

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Quickly look at the head checking for severe bleeding. If no severe bleeding, move directly to the chest.
- b. Expose the survivor's chest and abdomen. Look for and treat all life-threatening injuries present.
- c. Expose an arm, look for and treat all life-threatening injuries. Repeat for the other arm.
- d. Follow the same procedure for the legs.

**NOTE**

Following the order of assessment, if blood-soaked clothing is identified, expose and treat that extremity first.

Explain

- e. Life-threatening injuries include:
  - 1) Problems with ABC's
  - 2) Sucking Chest Wounds
  - 3) Severe Bleeding
  - 4) Amputation with Severe Bleeding
  - 5) Abdominal Evisceration
  - 6) Obvious Bruising (internal bleeding)
  - 7) Critical Burns
  - 8) Head, Neck, or Spinal Injury
  - 9) Heat Stroke

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 10) Severe Hypothermia
- 11) Psychiatric Emergencies
- 12) Severe Shock

- 3. Check Breathing - Check for equal rise and fall of the chest by resting your hands on the survivor's chest, in the front and back. Looking for breathing quality and rate.
- 4. Check Circulation - Check pulses at the wrists (radial) and at the feet (dorsalis pedis), looking for equal quality and rate. Check capillary refill in fingers and toes, looking for circulation return within 2 seconds or less. Check skin temperature by resting the back of a gloved hand on the survivor's forehead and/or chest.
- 5. Perform Blood Sweep - Begin by wiping gloves clean or replacing them with a fresh pair. Starting at the head, sweep under the body and inside the clothing looking for any bleeding you can't see. If blood is found, investigate it.
- 6. Reassess ABC's - Verify that survivor is still breathing and has a pulse.

Explain - Quality refers to the presence of adequate rise and fall of the chest.

Explain - Quality refers to the pulse strength (strong or weak).

Explain - Use same head-to-toe process as in treating life-threatening injuries.

E. Transport or Continue:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. When performing a Primary Survey in an overland situation, once reassessment of the ABC's has been completed (and ABC's are adequate), prepare to transport the survivor to the rescue vehicle. Follow steps for logrolling onto the SAR MEDEVAC litter.
2. During an in-water rescue, upon completion of the Primary Survey, continue directly into the Secondary Survey.

F. Rules for Splinting:

1. Splinting is **always** performed during the Secondary Survey.
2. When splinting legs, ensure extremities are in-line prior to applying a splint.
3. Ensure that the joints above and below the injury are immobilized.
4. If an open wound or bruising is present, ensure a tie is placed above and below the area.
5. Tie knots across the top of the splint, not against skin.
6. Always check capillary refill after splinting.

Demonstrate

G. Identification and Treatment of Injuries:

1. Open Chest Wounds "Sucking Chest Wound"
  - a. Presentation:

Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) Open wound to the chest with a sucking sound during breathing.
  - 2) Bleeding and bubbles coming from the chest.
  - 3) Exit wound may be present.
- b. Treatment:
- 1) Immediately place a gloved hand over the open wound to create a seal.
  - 2) Evaluate wound size. If wound is smaller than a petroleum gauze foil wrapper, use foil to create a one-way valve. If wound is larger, use plastic from an IV bag cut to size.
  - 3) Tape on three sides. Top, bottom, and side closest to the middle of the body.
  - 4) Check for an exit wound. If an exit wound exists, determine its size. Use a combination occlusive and field dressing placed over exit wound using survivor's body weight to create a seal. During an overland SAR, it may necessary to log roll the survivor to get a clear view of the injury prior to treatment.
  - 5) Deviated trachea is a sign that the one-way valve is no longer working.
  - 6) To relieve pressure, peel dressing up

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

using un-taped side and "burp it". May hear a rush of air as pressure is relieved.

- 7) Lay survivor injured side down if feasible.

2. Closed Chest Wounds

a. Presentation:

- 1) Difficulty breathing.
- 2) Deviated trachea.

b. Treatment:

- 1) Place the survivor in an injured side down shock position. Shock Position is the only treatment.

3. Flail Chest

Demonstrate

a. Presentation:

- 1) Difficulty breathing.
- 2) Section of the rib cage moving opposite of normal breathing. (This is not unequal breathing.)
- 3) Bruising to the chest area.

b. Treatment:

- 1) Place a saline bag over the affected

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

area taping the top and bottom of the bag to the chest. May use cravats if needed, but ensure that they're not too tight as to further hinder breathing.

- 2) Check for other broken ribs before placing tape.
- 3) May use a rolled up burn sheet.

3. Amputations

Demonstrate

a. Presentation:

- 1) Severely torn or missing limb.
- 2) May have severe bleeding present.
- 3) Limb may be fractured.

b. Treatment:

- 1) CONTROL BLEEDING FIRST. Apply direct pressure with a field dressing and tightly wrap with an ACE bandage.
- 2) Splint the amputated end during the Secondary Survey. Using a SAM splint, wrap around the end of the amputation in a "U shape" and secure it with at least two ties.

4. Open Fractures

Demonstrate

a. Presentation:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) Visible bone and/or fragments with an open wound.
  - 2) Bleeding can be mild to severe.
- b. Treatment:
- 1) CONTROL BLEEDING FIRST. Place donut-shaped gauze bandage around the exposed bone and cover with a field dressing.
  - 2) If it's necessary to move an arm to control bleeding from an "open hand fracture", visualize and palpate for other injuries before moving it.
  - 3) Ensure the dressing is snug and tied on the side. Do not cross dressing ties over the wound. This will apply unwanted pressure on the exposed bones.
  - 4) Splint fractures during the Secondary Survey.
    - a) For fractures of the lower arms, use a SAM splint underneath the arm (palm side) with hand in the neutral position. Secure with at least three ties with wrist and elbow immobilized.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b) For fractures of the upper arms, use a SAM splint across the outer aspect of the arm and secure with at least two ties. Utilize a sling and swath (swath at a minimum). Ensure the swath is not too tight as to hinder breathing.
- c) To splint fractures of the hands, wrap roller gauze around the hand and wrist, to create a bulky soft splint. Avoid covering fingertips.
- d) For upper leg fractures, use a SAM splint across the side of the leg above the hip to below the ankle. Secure with at least five ties. Ensure the leg is placed in-line prior to splinting and that the hip, knee, and ankle are immobilized.
- e) For lower leg fractures, use a SAM splint across the side of the leg above the knee to below the foot. Secure with at least four ties.

5. Closed Fractures

Demonstrate

a. Presentation:

- 1) Bruising or deformity may be visible.

b. Treatment:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) If bruising is present, assume a bone is broken and treat as a fracture.
  - 2) Some bruising may be difficult to see. A thorough Secondary Survey must be performed to identify all injuries.
  - 3) Splint during Secondary Survey.
6. Abdominal Evisceration Demonstrate
- a. Presentation:
    - 1) Open abdominal wound with internal organs visibly exposed and/or spilling out.
  - b. Treatment:
    - 1) Soak large field dressing with Normal Saline.
    - 2) Place the large field dressing under exposed organs and fold over the organs, covering all wound areas.
    - 3) Tie on the side, ensuring no pressure is placed directly on exposed organs.
7. Pelvic Fractures Demonstrate
- a. Presentation:
    - 1) Instability or grinding feeling when pressing in against the hips.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2) Grinding sounds accompanying pressing in against the pelvis.
  - 3) Survivor may feel like they're coming apart and survivor may be in extreme pain.
  - 4) Bruising to the abdominal and/or pelvic region may be present.
- b. Treatment:
- 1) Fold burn sheet and place it inside of the trauma sheet to fill space between the legs.
  - 2) Place a Triangular Bandage across the hips, two on the upper legs and two on the lower legs (applying cravats at the hips, then applying them from the feet up).

**NOTE**

During overland SAR, the pelvis **shall be checked** and, if necessary, treated prior to logrolling the survivor onto the litter.

6. Penetrating Puncture Wounds

Demonstrate

a. Presentation:

- 1) Foreign object protruding from any area of the body.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Treatment:
  - 1) Secure object with Roller Gauze on each side of the penetrating object.
  - 2) Cut a hole in the middle of a field dressing large enough for the object to fit through and apply field dressing. Tie on the side to avoid direct pressure.
  - 3) Ensure object is secure and visible to personnel to prevent further penetration.
  
- 7. Puncture Wounds Demonstrate
  - a. Presentation:
    - 1) Puncture wound to any area of the body.
  - b. Treatment:
    - 1) Place a field dressing on wound and tie over the top of the wound.
    - 2) Check for an exit wound.
  
- 8. Eye Avulsion Demonstrate
  - a. Presentation:
    - 1) Eye missing or protruding from the socket.
  - b. Treatment:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) If eye is missing, cover affected side with a field dressing. Always cover both eyes to minimize movement due to sympathetic Oculomotor function.
- 2) If eye is protruding from the socket, soak Roller Gauze with Normal Saline. Apply Roller Gauze to each side of the eye and cover both eyes with a field dressing.
- 3) Ensure dressing is snug and tied on the side.

9. Simple Rib Fractures

Demonstrate

a. Presentation:

- 1) Complaining of difficulty breathing.
- 2) Bruising, tenderness, or pain (guarding) to affected area.

b. Treatment:

- 1) Sling and swathe the arm of injured side, if no injuries to the arm are present.

10. Burns

Demonstrate

a. Presentation:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) Signs of second and third degree burns (blisters and/or charred skin) to any area of the body.
  
  - 2) If burns to the chest are present, check for singed nose hairs indicating an inhalation injury.
- b. Treatment:
- 1) Cover burned areas with a burn sheet cut to size, one sheet thick. Secure loosely with safety pins.
  
  - 2) Lightly palpate burned areas for broken bones during Secondary Survey.

**NOTE**

Any sterile dressing that touches the deck or becomes contaminated, is considered useless and SHALL NOT be used.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION: Practical First Aid scenarios

EVALUATION: Job Sheet Unit 5.0

Perform Job Sheet two times

ASSIGNMENT: Review attachments

3

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Course, Q-050-0600  
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 5.5

LESSON TOPIC: Secondary Survey

ALLOTTED LESSON TIME: 1.5 Classroom  
6.0 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Additional instructors as required per  
Annex E, Staffing Requirements, of  
Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NAVEDTRA 13119, Standard First Aid
2. NAVEDTRA 14295, Hospital Corpsman Manual
3. National Diver's Alert Network  
Underwater Diving Accident Manual
4. Brady, Emergency Care 9<sup>th</sup> Edition

TERMINAL OBJECTIVE:  
Partially supported by this lesson topic:

4.0 Upon completion of this unit of instruction, the student will identify and treat medical emergencies using approved SAR medical equipment, as per NAVEDTRA 14295 and NWP 3-50.1 manuals, without injury to personnel or damage to equipment.

Enabling Objectives:  
Completely supported by this lesson topic:

- 4.9 List procedures for a secondary survey.
- 4.10 Demonstrate secondary survey procedures in a mock trauma (Moulage) scenario.

CRITERION TEST: Job sheet Unit 5.0

HOMEWORK: None

## INSTRUCTIONAL AIDS

1. Trainee Guide
2. Contents of Level "A" Medical Kit
3. Rescue Litter
4. Moulage Kit
5. CPR Mannequin

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic.

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Reiterate the TTO policy.
5. Ask the following questions:
  - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
  - b. Has anyone taken over-the-counter medications within 24 hours?
  - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

Establish importance and relevance of lesson material using personal experience or anecdote.

1. Motivating Statements

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2. Lesson Overview
  - a. Lesson Topic: Secondary Survey
  - b. Major Teaching Points:
    - 1) Secondary Survey
    - 2) Shock positions
    - 3) HAC Report
    - 4) Reassessment

Briefly outline material to be covered.

PRESENTATION:

A. Secondary Survey:

- 1. The Secondary Survey is to be conducted upon completion of the Primary Survey in an in-water rescue situation or once the survivor has been transported to the rescue vehicle in an overland SAR situation.
- 2. Examine the survivor from head to toe by physically touching the body. Visually inspect all body surfaces using a Mini Maglight before palpating and squeezing the body part.
- 3. Remove all of the survivor's clothing to ensure a thorough assessment. If needed, cover the survivor with a blanket and expose only the areas necessary to complete the survey yet not chill the survivor.

Explain that there is no break in between the Primary and Secondary if both are performed in the rescue platform.

Explain

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 4. Rip or cut clothes along a seam to expose injuries.

**NOTE**

During the Secondary Survey, treat all non life-threatening injuries and burns; and perform splinting as required.

- |   |             |
|---|-------------|
| a. Head:  | Demonstrate |
| 1) Look for obvious depressions and bleeding around all areas of the head.  |             |
| 2) Gently feel for lumps and soft spots.  |             |
| b. Eyes:  | Demonstrate |
| 1) Look for foreign matter, unequal pupils, eye movement, and pupillary reaction to the light.                            |             |
| 2) Look for swelling, deformity, and bruising around the eyes. (Raccoon Eyes - indicates a possible base skull fracture). |             |
| c. Ears:  | Demonstrate |
| 1) Look for blood or cerebrospinal fluid flowing out.   |             |
| 2) Look for bruising behind the ears. (Battle Signs - indicates a possible base skull fracture).                          |             |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- |    |  |             |
|----|--|-------------|
| d. | Nose:  | Demonstrate |
|    | 1) Look for blood, fluid, or airway obstruction.   |             |
|    | 2) Look for burned nose hairs.   |             |
| e. | Mouth:   | Demonstrate |
|    | 1) Look for foreign objects.   |             |
|    | 2) Amputated tongue or bleeding in the mouth.  |             |
|    | 3) Fractured or displaced teeth.   |             |
|    | 4) Anything that can cause an airway obstruction.  |             |
| f. | Neck:  | Demonstrate |
|    | 1) Deviated Trachea or bleeding.   |             |
| g. | Chest:   | Demonstrate |
|    | 1) Starting at the shoulders, look and palpate across shoulders, collarbones, and sternum. |             |
|    | 2) Palpate for any broken ribs in front and in back.                                       |             |
| h. | Abdomen:   | Demonstrate |
|    | 1) Look for obvious bruising and swelling.   |             |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 2) Palpate for tenderness or rigidity, unless an obvious injury is present. If bruising is present, note it and move on.
  
- i. Pelvis:
  - 1) Gently squeeze hips to check for deformity or fractures.
  - 2) If a pelvic fracture is suspected and has not been splinted, splint at this point.
  
- j. Arms:
  - 1) Cut and remove clothing.
  - 2) Look and feel for broken bones, deformity and swelling.
  - 3) Have the survivor simultaneously squeeze your fingers with both his hands to check for equal strengths and sensations.
  - 4) Do not check for strengths if a fracture is suspected.
  - 5) If a splint is required, perform splinting of the extremity as you come to it.
  
- k. Legs:

Demonstrate

Demonstrate

Explain

Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 1) Cut and remove clothing.
- 2) Look and feel for broken bones, deformity and swelling.
- 3) Have the survivor simultaneously push against your hands (AKA: GAS PEDALS) with both feet to check for equal strengths and sensations.
- 4) Do not check for strengths if a fracture is suspected.
- 5) If a splint is required, perform splinting of the extremity as you come to it.

Explain

1. Back:

Demonstrate

- 1) In an in-water rescue situation, if bleeding from the back is identified, log roll the survivor and examine for any abnormalities. Treat appropriately.

Explain that survivor will already be in litter at time of Secondary assessment.

B. Shock position: treat for the worst injury.

1. Traditional - Use this shock position unless injuries preclude it.
2. Flat - Used for head or eye injury; flail chest; internal bleeding (bruising) of the torso, abdomen, or pelvis.
3. Knee(s) bent - Used for something going into or coming out of the abdomen. May utilize one knee bent if a fracture exists in the other leg.

Demonstrate

Demonstrate

Demonstrate

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- 4. Side down -
  - a. Left side down - Used for compressed air injuries and a left side open or closed chest wound.
  - b. Right side down - Used for a right side open or closed chest wound.

Demonstrate

- 5. Semi-seated - Medical emergencies such as: heart attack, stroke, or shortness of breath.

Demonstrate

C. Helicopter Aircraft Commander (HAC) Report: used to inform the HAC of the survivor's condition. Pertinent information to be passed on to the medical facility should include:

- 1. Approximate age.
- 2. Gender.
- 3. Level of Consciousness (fully, semi, or unconscious).
- 4. Approximate weight.
- 5. What happened; Victim of a --- (describe the incident).
- 6. List of injuries, starting from the head, include cervical collar (if applied), state if CPR or Rescue Breathing was performed, state the injury, bandage applied, and splint used.
- 7. Pulse - Initial and others if taken.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

8. Shock Position
9. List of any known allergies.
10. Any medication taken.
11. Blood Type (A+,A-,B+,B-,AB+,AB-,O+,O-).

**NOTE**

If allergies, medications, and/or blood type are not known, state that they are **"not known."** Do not say **"no kown."**

Explain

Example

I have a 21 year old unconscious male, approximately 175 pounds, victim of a helicopter crash, injuries are as follows...; allergies are (list, if any), patient is on (list medication, if any), Blood type is, breathing is (quality and rate), pulse is (quality and rate), currently in (shock position).

- D. Reassessment: you should reassess your survivor's condition every 5 minutes (at a minimum) until arrival at a treatment facility.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION: None

EVALUATION: Job Sheet Unit 5.0

ASSIGNMENT: Review attachments

JOB SHEET Unit 5  
PRACTICLE FIRST AID/MOULAGE

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either Q, CQ, UQ. "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure. A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0 Minimum average score for passing is 3.6 If an item is not applicable line out that item and do not add it to the overall average

	ACTION		
* Scene Safety	Q	CQ	UQ _____
* Takes or verbalizes gloves on	Q	CQ	UQ _____
Determine responsiveness	Q	CQ	UQ _____
<b>INITIAL ASSESSMENT</b>			
Check airway	Q	CQ	UQ _____
Properly opens airway			
Check breathing			
No breathing-give two breathes			
Check circulation			
Check for severe bleeding			
* No pulse-begin CPR procedures			
<b>PRIMARY SURVEY</b>			
Cervical Collar	Q	CQ	UQ _____
Maintain in-line stabilization			
Sweep back of neck			
Correct size and placement			
Life threatening injuries	Q	CQ	UQ _____
Order of severity			
Proper dressing(s) applied correctly			
Check breathing	Q	CQ	UQ _____
Skin to skin			
Equal rise and fall - front and back			
Check circulation	Q	CQ	UQ _____
Check pulse quality			
Check capillary refill			

Check skin temperature	Q	CQ	UQ
------------------------	---	----	----

Perform blood sweep Q CQ UQ\_\_\_\_\_

Reassess ABC's (overland SAR) Q CQ UQ\_\_\_\_\_

Perform CPR as required

4.0 X number of Q = \_\_\_\_\_

2.0 X number of CQ = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade\_\_\_\_\_ divided by \_\_\_\_\_(number of items tested)=\_\_\_\_\_

**SECONDARY SURVEY**

***VERBIALIZE WHILE PERFORMING THE FOLLOWING:***

Assess the Head Q CQ UQ\_\_\_\_\_

Inspect and palpate scalp

Inspect ears

Inspect eyes

Inspect nose

Inspect mouth

Palpate facial area

Assess the neck Q CQ UQ\_\_\_\_\_

Inspect for bleeding

Inspect for deviated trachea

Assess the chest Q CQ UQ\_\_\_\_\_

Inspect and palpate shoulders

Inspect and palpate chest

Assess the abdomen Q CQ UQ\_\_\_\_\_

Inspect for injuries

Palpate if no injuries present

Assess the pelvis Q CQ UQ\_\_\_\_\_

Inspect and Palpate

Assess the arms Q CQ UQ\_\_\_\_\_

Inspect and palpate

Check pulses and sensory motor

Splint as necessary

Assess the Legs Q CQ UQ\_\_\_\_\_

Inspect and palpate

Check pulses and sensory motor  
Splint as necessary

Assess Posterior	Q	CQ	UQ_____
Management of secondary injuries	Q	CQ	UQ_____
Proper shock position	Q	CQ	UQ_____
HAC report	Q	CQ	UQ_____

Verbalize reassessment of ABC's

CRITICAL CRITERIA

- \_\_\_\_\_ Did not verbalize scene safety prior to entering scene
- \_\_\_\_\_ Did not take or verbalize gloves on
- \_\_\_\_\_ Improperly performed CPR procedures
- \_\_\_\_\_ Did not complete all initial assessment and procedures
- \_\_\_\_\_ Did not identify and/or treat all injuries
- \_\_\_\_\_ Caused further harm to survivor
- \_\_\_\_\_ Did not complete the evolution within 20 minutes

4.0 X number of **Q** = \_\_\_\_\_

2.0 X number of **CQ** = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

JOB SHEET  
FINAL MULTIPLE RESCUE SCENARIO "A"

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either **Q, CQ, UQ**. "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure. A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0 Minimum average score for passing is **3.6** If an item is not applicable line out that item and do not add it to the overall average

**First survivor**

	ACTION			
Assess the situation		Q	CQ	UQ _____
Deployment		Q	CQ	UQ _____
Look left, right and center				
Signal, "I'm all right"				
Approach survivor (using correct approach)		Q	CQ	UQ _____
Establish communication				
Utilize ballooned canopy procedures (use ballooned canopy job sheet)				
In close in control				
Remove O2 mask				
Check breathing				
Give two rescue breaths if necessary				
Clear head, neck and chest		Q	CQ	UQ _____
Remove any debris				
Remove raft lanyard				
Ensure that it is safe to inflate flotation				
Inflate and/or check flotation		Q	CQ	UQ _____
Disentanglement head to toe		Q	CQ	UQ _____
Remove KOCH fittings				
Safe survivor (if necessary) (when and if swimmer returns)				
Sweep arms/cross arms across chest				
Side control				
Release oxygen hose on SKU				
Release SKU				

Raft (if applicable)	Q	CQ	UQ _____
Proper raft procedure			
Discarded raft completely			
Final check	Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device <b>(If litter signaled go to litter job sheet)</b>	Q	CQ	UQ _____
Properly use lifting devices			
Perform safety check for lifting device			
Signal up hoist			

## SECOND SURVIVIOR

	ACTION		
Assess the situation	Q	CQ	UQ _____
Approach survivor (using correct approach)	Q	CQ	UQ _____
Establish communication			
In close in control			
Remove O2 mask			
Check breathing			
Give two rescue breaths if necessary			
Clear head, neck and chest	Q	CQ	UQ _____
Remove any debris			
Remove raft lanyard			
Ensure that it is safe to inflate flotation			
Inflate and/or check flotation	Q	CQ	UQ _____
Disentanglement head to toe	Q	CQ	UQ _____
Remove KOCH fittings			
Safe survivor (if necessary)			
(when and if swimmer returns)			
Sweep arms/cross arms across chest			
Side control			
Release oxygen hose on SKU			
Release SKU			
Sweep legs			
Raft (if applicable)	Q	CQ	UQ _____
Proper raft procedure			
Discarded raft completely			
Final check	Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device <b>(If litter signaled go to litter job sheet)</b>	Q	CQ	UQ _____
Properly use lifting devices			
Perform safety check for lifting device			
Signal up hoist			

**BALLOONED CANOPY**

	ACTION			
Approach Ballooned canopy	Q	CQ	UQ	_____
Establish communications				
Look under parachute to locate survivor				
*Swim to edge of parachute closest to survivor opposite apex				
Grasp edge of parachute and locate shroud line	Q	CQ	UQ	_____
Swim away from parachute pulling shroud line hand over hand				
When survivor is within reach grasp survivor in center of back	Q	CQ	UQ	_____
Lift parachute over survivor's head				
Continue with appropriate disentanglement procedures	Q	CQ	UQ	_____

**LITTER**

	ACTION			
Signaled helicopter	Q	CQ	UQ	_____
Maintained control of survivor				
Signal was clear and correct				
Approached trail line while maintaining control of survivor	Q	CQ	UQ	_____
Attained control of trail line				
Donned gloves				
Signaled down hoist	Q	CQ	UQ	_____
Litter pulled to swimmer				
Disconnect litter from double rescue hook	Q	CQ	UQ	_____
Put survivor into litter				
Stage lifting sling to not get fouled in restraint straps				
Attach chest strap over chest and under arms				
Disconnect from survivor if necessary				
Attach waist strap	Q	CQ	UQ	_____
Attach upper leg strap	Q	CQ	UQ	_____
Attach lower leg strap	Q	CQ	UQ	_____
Perform safety checks	Q	CQ	UQ	_____
Carabiners red to head / white to the feet				

Survivor tight and secure within four restraint straps

Signal Helicopter to move in for pickup	Q	CQ	UQ _____
Swim litter to double rescue hook	Q	CQ	UQ _____
Connect two lifting rings to double rescue hook	Q	CQ	UQ _____
Perform safety checks Two lifting rings attached to large end of double rescue hook Cables clear and taught	Q	CQ	UQ _____

**HEADWORK**

Established and maintained effective communication throughout rescue	Q	CQ	UQ _____
Safed and/or Staged all survivors	Q	CQ	UQ _____
Recovered survivors in logical order, worst first / least last	Q	CQ	UQ _____
Student exercised sound SAR tactics	Q	CQ	UQ _____
Student did not jeopardize the well being of any survivor	Q	CQ	UQ _____
Student was able to adapt to a changing scenario	Q	CQ	UQ _____
Student used available resources to Facilitate the rescue	Q	CQ	UQ _____

4.0 X number of **Q** = \_\_\_\_\_

2.0 X number of **CQ** = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

JOB SHEET  
FINAL MULTIPLE RESCUE SCENARIO "B"

TRAINEE NAME/RATE \_\_\_\_\_ SSN \_\_\_\_\_  
INSTRUCTOR/EVALUATOR \_\_\_\_\_ DATE \_\_\_\_\_

Evaluation Instructions Critical Steps: Observe trainee performing each step. Watch for correct use of equipment and adherence to safety regulations. Indicate trainee's performance by circling either Q, CQ, UQ. "\*" Denotes a critical area. Failure to adhere to items marked with an asterisk will result in automatic failure of this Performance test however a momentary deviation from prescribed procedures does not constitute an automatic failure. A mark of CQ on an asterisk item does not constitute an automatic failure the grade will be computed in for a final score. A mark of UQ on an asterisk item constitutes an automatic failure. A mark of Q = 4.0 a mark of CQ = 2.0 and a mark of UQ = 0.0 Minimum average score for passing is 3.6 If an item is not applicable line out that item and do not add it to the overall average

First survivor	ACTION	SCORE	POINTS
Assess the situation	Q	CQ	UQ _____
Deployment Look left, right and center Signal, "I'm all right"	Q	CQ	UQ _____
Approach survivor (using correct approach) Establish communication In close in control *Check breathing Give two rescue breaths if necessary	Q	CQ	UQ _____
*Clear head, neck and chest Remove any debris Remove raft lanyard Ensure that it is safe to inflate flotation	Q	CQ	UQ _____
Inflate and/or check flotation	Q	CQ	UQ _____
Safe Survivor (If applicable)	Q	CQ	UQ _____
*Disentanglement head to toe Sweep arms/cross arms across chest Spinal highway/side control (insure survivor has no back injuries) Sweep legs using appropriate method	Q	CQ	UQ _____
Raft (if applicable) Proper raft procedure	Q	CQ	UQ _____

Discarded raft completely

Final check (if applicable)	Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device <b>(If litter signaled go to litter job sheet)</b> Properly use lifting devices *Perform safety check for lifting device Signal up hoist	Q	CQ	UQ _____

**Second survivor**

ACTION

Assess the situation	Q	CQ	UQ _____
Approach survivor (using correct approach) Establish communication In close in control *Check breathing Give two rescue breaths if necessary	Q	CQ	UQ _____
*Clear head, neck and chest Remove any debris Remove raft lanyard Ensure that it is safe to inflate flotation	Q	CQ	UQ _____
Inflate and or check flotation	Q	CQ	UQ _____
Safe Survivor	Q	CQ	UQ _____
*Disentanglement head to toe Sweep arms/cross arms across chest Spinal highway/side control (insure survivor has no back injuries) Sweep legs using appropriate method	Q	CQ	UQ _____
Raft (if applicable) Discarded raft completely	Q	CQ	UQ _____
Final check (if applicable)	Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device <b>(If litter signaled go to litter job sheet)</b> Properly use lifting devices *Perform safety check for lifting device Signal up hoist	Q	CQ	UQ _____

**Third survivor**

ACTION

Assess the situation	Q	CQ	UQ _____
Approach survivor (using correct approach)	Q	CQ	UQ _____
Establish communication			
In close in control			
*Check breathing			
Give two rescue breaths if necessary			
*Clear head, neck and chest	Q	CQ	UQ _____
Remove any debris			
Remove raft lanyard			
Ensure that it is safe to inflate flotation			
Inflate and or check flotation	Q	CQ	UQ _____
Safe Survivor			
*Disentanglement head to toe	Q	CQ	UQ _____
Sweep arms/cross arms across chest			
Spinal highway/side control			
(ensure survivor has no back injuries)			
Sweep legs using appropriate method			
Raft (if applicable)	Q	CQ	UQ _____
Proper raft procedure			
Discarded raft completely			
Final check (if applicable)	Q	CQ	UQ _____
Signal helicopter for the appropriate lifting device <b>(If litter signaled go to litter job sheet)</b>	Q	CQ	UQ _____
Properly use lifting devices			
*Perform safety check for lifting device			
Signal up hoist			

**LITTER**

ACTION

Signaled helicopter	Q	CQ	UQ _____
Maintained control of survivor			
Signal was clear and correct			
Approached trail line while maintaining Control of survivor	Q	CQ	UQ _____
Attained control of trail line			
Donned gloves			

Signaled down hoist Litter pulled to swimmer	Q	CQ	UQ _____
Disconnect litter from double rescue hook Put survivor into litter Stage lifting sling to not get fouled in restraint straps Attach chest strap over chest and under arms Disconnect from survivor if necessary	Q	CQ	UQ _____
Attach waist strap	Q	CQ	UQ _____
Attach upper leg strap	Q	CQ	UQ _____
Attach lower leg strap	Q	CQ	UQ _____
Perform safety checks Carabiners red to head / white to the feet Survivor tight and secure within four restraint straps	Q	CQ	UQ _____
Signal Helicopter to move in for pickup	Q	CQ	UQ _____
Swim litter to double rescue hook	Q	CQ	UQ _____
Connect two lifting rings to double rescue hook	Q	CQ	UQ _____
Perform safety checks Two lifting rings attached to large end of double rescue hook Cables clear and taught	Q	CQ	UQ _____
<b>HEADWORK</b>			
Established and maintained effective communication throughout rescue	Q	CQ	UQ _____
Safed and/or Staged all survivors	Q	CQ	UQ _____
Recovered survivors in logical order, worst first/least last	Q	CQ	UQ _____
Student exercised sound SAR tactics	Q	CQ	UQ _____
Student did not jeopardize the well being of any survivor	Q	CQ	UQ _____
Student was able to adapt to a changing scenario	Q	CQ	UQ _____

Student used available resources to facilitate Q CQ UQ \_\_\_\_\_  
the rescue

4.0 X number of Q = \_\_\_\_\_

2.0 X number of CQ = \_\_\_\_\_

4.0's + 2.0's = Total grade

Total grade \_\_\_\_\_ divided by \_\_\_\_\_ (number of items tested) = \_\_\_\_\_

INSTRUCTORS MAY USE THE REMAINING PORTION OF THIS PAGE TO MAKE ANY  
COMMENTS CONCERNING STUDENT'S PERFORMANCE