

## **CHAPTER 8 – IN THE WATER PRACTICUM**

TIME: Two Hours

**GOAL: Students will experiment with and practice cold water survival skills in a controlled environment.**

### **NEED STATEMENT:**

1. In an emergency, the hands remember what the mind forgets.
2. This is your opportunity to test various types of equipment and practice survival skills in the water, in a supervised, controlled, and comfortable environment.

### **OBJECTIVES:**

This lesson, through practice and hands-on experience, reinforces the objectives in: Preparation for Personal Lifesaving Equipment and Procedures, Cold Water Survival and Life rafts.

### **SKILLS CHECKLIST:**

The in-water practical affords the opportunity to “check off” items on the skills checklist prior to the practice drills. This will be dependent upon the amount of time allotted for the exercise and equipment available but can include:

- \* Properly don an immersion suit.
- \* Enter the water wearing a PFD and/or immersion suit.
- \* Demonstrate HELP and Huddle positions.
- \* Launch a liferaft or buoyant apparatus.
- \* Right a capsized liferaft.
- \* Enter a survival craft wearing a PFD or immersion suit.

The lesson outline presents a series of demonstration and practice exercises. **SELECT THE ACTIVITIES THAT ARE MOST APPROPRIATE FOR YOUR GROUP.** Should circumstances eliminate your option to provide open water or pool practice, you will have to try to devise alternatives for your students to practice these skills; as mentioned, some may be checked off during the practice drills.

## **EQUIPMENT NEEDED:**

Immersion suits

One or more of each of the following PFDs:

Type I

Type II

Type III – vest, float coat, anti-exposure coveralls

Type IV – buoyant cushion, ring buoy

Type V – special work PFD

Inflatable types

Non USCG approved devices

Lubricant or wax for immersion suit zippers

Throwable rescue device(s)

Emergency flotation: buoys, coolers, etc.

Liferaft, buoyant apparatus, and/or inflatable buoyant apparatus.

Bags for hauling wet gear.

## **SPECIAL PREPARATION:**

This lesson should only be carried out by a trained instructor.

Before the session.....

1. Arrange for pool time and fee.
2. Make sure a lifeguard will be on duty.
3. Request that clean clothing be permitted in the pool.
4. See if the pool can help furnish any survival equipment.
5. Share your lesson plan with pool personnel; let them in on what you plan to do!

Prepare yourself and students.....

1. Gather survival equipment (see list).
2. Arrange for co-instructors and aides and spotters if needed (prior students are a great source).
3. Tell students what to bring.

- a. Own equipment if possible.
  - b. Dry clothing, towel.
  - c. Pool clothing (shorts, sweats, etc.) must be clean.
4. Ask students to let instructor at each station know if they are non-swimmers and/or uncomfortable in the water.
  5. Go over pool rules with students.
  6. Request students LEAVE VALUABLES AT HOME.

At the pool.....

1. Greet students; ask them to show up in in “swimming clothes.”
2. Do not allow any person under the influence of drugs or alcohol to enter the water.
3. Ask students again to identify to the instructor any medical/physical issues they have.
4. Divide the class into skill sections (immersion suit, liferaft, PFDs) and explain how they will rotate from one skills station to the next station. Within each section have them pair up (buddy system) for safety.
5. At the liferaft righting station if possible it is useful to have an instructor and a spotter to prevent entrapment under raft.
6. Instructors need to maintain close eye to eye contact with students and be alert for any panic or signs of medical/physical issues.
7. Ask students to enter water slowly except at jumping stations and emphasize no running, no yelling for help unless a real emergency.
8. Establish hand signals for “stop,” “OK,” “I need help”

After the lesson.....

1. Rinse all equipment with fresh water – on the pool deck or in the showers.
2. Find a warm, dry place to dry equipment.
3. Make students responsible for overhauling gear as much as possible.

### **SPECIAL CONSIDERATIONS FOR OPEN WATER PRACTICALS:**

1. Take great care in selecting your location:
  - \* away from vessel traffic patterns
  - \* a place where you can set boundaries for students
  - \* check water health advisories
  - \* permission from local owners
  
2. Keep in mind that open water practicals take place in a less controlled environment; you must be extra prepared for the unexpected:
  - students swimming out of bounds
  
  - vessel traffic
  
  - weather
  
  - other hazards including marine mammals, currents, pollution
  
  - accidental immersions; docks and floats get crowded with students donning immersion suits.
  
3. Consider extra supervision if doing open water practice.

### **TEACHING TIPS:**

- \*THE SAFETY OF THE STUDENTS COMES FIRST. Students should be in good physical condition. NO ONE UNDER THE INFLUENCE of drugs or alcohol should be allowed to participate.
  
- \*Do all talking and explaining possible in class BEFORE students arrive at the pool or practice site.
  
- \*The fear of water for non-swimmers is real. Be gentle with them. Work with them one on one.
  
- \*No one should be forced, coerced, intimidated or shamed in completing a skill if they have a medical, physical or panic reaction in the water.
  
- \*All students should be wearing a PFD in the water. In cold water students should only enter water with an immersion suit.
  
- \*Beware of demonstrating “poor technique;” people remember what they see and in the chaos of the pool may not hear your explanation.

- \*With large groups, ask students to enter the water on a rotating basis, to avoid large numbers in the water all at once. If you have more than one instructor, organize stations, for demonstration and practice.
- \*Do not permit students to practice with any equipment that is intended for lifeguard use only.
- \*Beware of students overheating in an indoor pool environment, especially in immersion suits.
- \*Allow for transit time to pool and overhauling of equipment afterwards. It's not difficult to rinse and turn one immersion suit; it is an effort to do 20. Involve your students! It helps familiarize them with equipment and gives them practice in maintaining gear.

## **INSTRUCTIONAL OUTLINE:**

### **I. IMMERSION SUITS**

#### **A. Demonstrate**

1. Proper donning of immersion suits.
  - a. Keep clothes on. Remove shoes or use plastic bags over shoes make donning easier if desired.
  - b. Sit down, insert legs first. Insert feet all way to bottom.
  - c. Knee or stand.
  - d. Check to make sure zipper toggle and hood are outside suit.
  - e. Insert weaker arm, raise hood overhead, insert stronger arm last.
  - f.. Bend slightly backwards to straighten out zipper and grab zipper toggle.
  - g. Zip up completely with a smooth motion. Do not force through if snagged
- H. Face flap secure, ankle velcro secure if so fitted.
2. Proper entry from height (deep water!)
  - a. Face bow or stern, sideways to boat (pool or dock).
  - b. Arm nearest boat (dock) protects head and hand holds hood in place.
  - c. Squat down with opening at neck to “burp” extra air out of suit.
  - d. Stand while hand holds suit hood away from face to let air escape, and covers mouth and nose.
  - e. DO NOT inflate air bladder before jumping to prevent injury to suit and person.
  - f. Check water for debris or people.
  - g. If possible, slip slowly into water; if not jump out and away, feet first and legs crossed.
3. Proper floating position and inflation of pillows/rings.

- a. Float on back.
  - b. Inflate pillow or ring with mouthpiece.
  - c. Familiarize student with valve inspection and operation.
4. Proper swimming techniques.
- a. On back safest and driest.
  - b. Most propulsion is with arms.
  - c. Must always protect airway, especially in rough seas.
  - d. Tandem swimming:
    1. Lay with head on buddy's torso and body between his/her legs.
    2. Coordinate timing of swim strokes.
    3. Energy effective and helps keep people together.
5. Assume "star" position with heads towards center and locking arms  
OR  
Feet towards center while holding neighbors arms or hands.
6. Proper exit – remind students that immersion suits will float even if full of water although exit from water is more difficult.
- B. Practice – steps 1 and 2 are best performed in the classroom before pool.
1. Inspection
    - a. Have students inspect their own suits.
      1. Seams
      2. Reflective tape
      3. Bladder inflation
      4. Condition of material
    - b. Lubricate zippers with products recommended by manufacturer.
    - c. Provide toggles for zippers if necessary.

2. Donning suits.
  - a. Students don suits correctly.
  - b. Help each other.
3. Entry:
  - a. Students enter from the side of the pool.
  - b. Enter water one at a time from low diveboard.
  - c. Watch for panic – remind students buoyancy rings can come up over face even when deflated; students may surface feet first.
4. Flotation, inflation, swimming and exit:
  - a. Have students practice different swimming positions.
  - b. Students may need to take turns using suits.

## **II. EMERGENCY/IMPROVISED FLOTATION (optional)**

### **A. Purpose**

1. People who fall into the water in heavy clothing do not have to drown. Sufficient air trapped in clothing can provide buoyancy.
2. Demonstrate the proper technique for floating in heavy clothing.

### **B. Demonstrate**

1. Flotation in heavy clothing
  - a. Have assistant don as many layers of clothing possible including boots.
  - b. Enter backwards with knees/feet slightly bent upward to trap air.
  - c. Float on back motionless, or with slow, sculling motion.

Person must remain calm to avoid letting out trapped air.

- d. Swim slowly to the side of pool or emergency flotation – use head up, underwater stroke with modified kick to conserve heat and energy.



e. Point out the heaviness of wet clothes by weighing assistant before and after getting wet.

C. Practice (optional)

1. Any practice on this lesson should be done after all planned exercises are completed.

2. Practice should be done in 5 - 6 feet of water.

### III. COLD WATER SURVIVAL SKILLS

A. Students may be required to shower before participating in the following exercises in their street clothing.

B. Demonstrate Exercise #1.

1. Don PFD.

2. Always enter the water feet first.

3. ENTER THE WATER AS SLOWLY AS POSSIBLE to avoid cold water shock. Jumps here are to simulate falls or on large falls with no alternatives.

a. Stand sideways to water.

b. With one hand, hold nose and cover mouth.

c. Hold the PFD in place by crossing the other arm over to their opposite shoulder of PFD.

d. Check for other people, debris in water.

e. Jump sideways, cross ankles as soon as possible for water entry.

4. Demonstrate Exercise # 2. HELP position.

a. Roll slightly on back.

b. Hold arms tightly against sides of chest to protect armpits.

c. Hold hands on upper chest/neck to protect high heat loss areas.

d. Bend knees; pull up legs to protect groin. (In type III PFDs you may need to drop the knees to keep from overturning. Cross ankles to protect inner leg/groin heat loss.)

- d. Reminder: this position can only be done with a PFD on.
  - e. Hold HELP position for at least one minute.
  - f. After one minute, have students spread arms and legs out to feel the difference in temperature.
5. Demonstrate Exercise #3. Huddle position:
- a. Small groups should form tight huddles so bodies work together to protect high heat loss areas. Keep legs together.
  - b. Hold back of neighbors' shoulders, not shoulder top, to prevent submersion of neighbor!
  - c. Reminder: small children/injured persons/those without PFDs can huddle in an inner circle.
  - d. After huddling for one minute, have students let go and feel the difference in temperature.
6. Demonstrate Exercise #4. Survival swimming:
- a. On back, head up, arms pressed to sides.
  - b. Swim with modified kicks, flicking action of hands.
  - c. Note: Swimming increases heat loss by 30%.
  - d. Swimming short distances may be necessary to reach assistance.
  - e. Swimmers usually have at least 10 to 15 minutes of swimming ability even in cold water.

C.. Additional Practice

- 1. Allow students to experiment with a variety of PFDs.
- 2. Encourage students to practice donning immersion suits in the water.
- 3. Point out use of buoyant cushions (should be worn on chest).
- 4. Practice ring buoy assists, throw bags.
- 5. Allow students to practice with emergency flotation (buoys, ice chests, wood).

6. Ask students to try floating face down to see which PFDs right them.
7. Ask students which PFD they liked best and why.

#### **IV. LIFERAFTS AND BUOYANT APPARATUS**

- A. Begin with students already in immersions suits.
  1. Assign a group size that meets the capacity of the raft you are using or use smaller raft for group of 5.
- B. Liferaft righting
  1. Must be done from CO<sub>2</sub> canister side of raft (to avoid being hurt by the canister).
  2. Grab righting strap with open hand. **DON'T WRAP AROUND HAND.**
  3. Climb strap and arch backwards, pulling raft back.
  4. Land on your back and follow the strap to outside of raft. If raft lands on top of you, push up on floor to make an air pocket. **DO NOT** turn on belly to swim out if entangled.
  5. Use the wind and seas to your advantage when righting.
- C. Life raft boarding
  1. With SOLAS ramp
    - a. Climb onto ramp.
    - b. Pull yourself into raft belly first with inside straps.
    - c. Get assistance from those inside raft/provide assistance to others.
    - d. Beware of landing face first in water on raft floor or other people.
  2. Without ramp
    - a. Grab top of buoyancy tube.
    - b. Bob up and down and use buoyancy and foot kick to heave your upper body on top of the buoyancy tube.

- c. Grab straps inside of raft and pull/kick yourself in.
- d. Get assistance from those inside raft/provide assistance to others.

D. Life in the raft

1. Inflate the floor if possible.
2. Find safety knife.
3. Close doorways and viewing ports.
4. Locate lights and survival pack.
5. Stay in enclosed raft at least 5 minutes.
6. Students outside the raft are usually more than happy to provide, rough seas and rain for liferaft occupants. Make it real.
7. Remember the 7 steps to survival. Go through them in the raft.

**V. DEBRIEF POOL EXERCISE**

- A. What did you learn?
- B. What worked well? What didn't?
- C. What limitations did you observe/experience?
- D. Which PFD do you prefer for yourself?

**VI. SUMMARY**

- A. Water exercises provide realism for persons learning survival skills and reinforce the lessons taught in class.
- B. For the many who do not believe that a PFD will keep them afloat, or an immersion suit keep them dry, this opportunity to practice builds confidence.
- C. These learning experiences are stored away, and in an emergency, action replaces panic.
- D. This is often the most well liked part of the program. It should be an opportunity for students to learn for themselves by doing.

E. Instructor should fill out checklist for each student.