personal flotation device
CHAPTER 5
PERSONAL FLATATION DEVICE
POOL PRACTICAL

GOAL
To provide students the opportunity to practice using PFDs in the water and to practice water rescue skills.

OBJECTIVES
The students will be able to:

1. Demonstrate putting on PFDs.
2. Demonstrate the H.E.L.P. position.
3. Demonstrate the Huddle position.
4. Demonstrate a successful reach-to-rescue operation.

NOTE TO INSTRUCTOR
This lesson is designed to follow-up and review the classroom lesson on cold water survival skills.

If possible, conduct both the PFD Pool Practical and outdoor Survival Suit Practical (Chapter 6) exercises. Students can become familiar with the equipment in the pool, and then experience a more realistic, outdoor cold-water exercise.

EQUIPMENT
The pool may be able to supply some PFDs. Be sure all equipment is marked so it is identifiable to the owner.

1. At least nine of the following PFDs (three for each station):
   - Type I
   - Type II
   - Type III, vest, float coat (optional),
   - Type IV, seat cushion or ring buoy (only one is necessary)
   - Type V, flotation coveralls (optional)
2. Reach-to-Rescue items (variety)
   - Oar
   - Long stick
   - Gaff hook
   - Life ring with line attached

3. Optional: Airline seat cushion and state ferry PFD.

4. Instructor may want to have garbage sacks to carry out wet gear.

5. Students should bring swim suit, towel, extra clothes, etc.

**SAFETY AND TEACHING TIPS**

1. If waivers are required, be sure they are filled out and returned. The use of waivers depends on school policy.

2. As with all training, the safety of the student comes first. No student should be forced to participate and only students in good physical condition should be allowed to participate.

3. Arrange for pool time and any required fee well ahead of time.

4. Know where phones are and be sure emergency numbers are posted at the pool area.

5. It is required that a lifeguard be on duty and available at all times at the pool. Do not permit students to practice with any rescue equipment that is intended for the lifeguard's use only.

6. At least three adults should be at the pool (in addition to the lifeguard) and at least one should be a good swimmer. All adults should know the order of activities and their responsibilities during these activities.

7. Students must comply with all pool rules.

8. Find out in advance if any students can't swim or are afraid of the water. Don't embarrass students by discussing this in front of all of the others. Make special arrangements for one-on-one instruction for non-swimmers who are willing to try on PFDs in the water. Be prepared to deal with students who have a fear of water and panic when they are forced to be around or in it.

9. Rope off the shallow end of the pool to keep non-swimmers from deep water. Optional: Rope off deep end to allow for free swimming when students are finished.

10. Use the station method, with students rotating from one station to the next. Limit the number of students in the water to three at each station.

11. Be sure the students understand the order of activities and that horseplay will not be tolerated.

12. Assign students to rinse off all gear with fresh water at the end of session.
TEACHING PLAN

Ask students to shower and put on swimsuits. When they report to the pool room, have them put on PFDs and circulate from station to station.

Stations

1. H.E.L.P.
2. Huddle
3. Reach-to-Rescue

One chaperone should be at each station to coordinate activities and ensure proper conduct around the pool.

Station 1: H.E.L.P.

Ask three students, wearing PFDs, to get into the water and demonstrate the H.E.L.P. position for 1 minute. Move to Station 2.

Station 2: Huddle

Have same three students Huddle for 1 minute. Move to Station 3.

Station 3: Reach-to-Rescue

Chaperone should demonstrate the correct reach-to-rescue technique to the group of three, and then have students practice reach-to-rescue using a life ring or floating object attached to a line.

If time is available, have students try various PFDs in the water. Have them practice getting into a float coat or a Type I or II in the water.

Clean up area and ask students to rinse off a piece of equipment while they are taking their shower. Head back to the classroom.
SURVIVAL SUIT

survival suit

PRACTICAL
CHAPTER 6
SURVIVAL SUIT PRACTICAL

GOAL
To provide students the opportunity to practice using survival suits in an open water setting.

OBJECTIVES
The students will be able to:

1. Demonstrate how to properly get into a survival suit.

2. Demonstrate how to properly get into the water while wearing a survival suit.

3. Demonstrate how to position themselves in the water while wearing a survival suit.

NOTE TO INSTRUCTOR
Many students will not have survival suits on board their family boats. However, the survival suit practical gets students in the ocean with a PFD on, which is a valuable exercise in itself. It is also a favored activity of the students and can be considered a bonus.

This activity is separate from the PFD pool activity because it commands a lot of attention, and detracts from the importance of the other PFDs as useful and necessary pieces of survival equipment.

EQUIPMENT
1. One to four survival suits and one float coat or coveralls for instructor.
   One survival suit for chaperone in water.

2. One ring buoy tied to long length of rope.

3. One other reaching or throwable device.

4. Non-petroleum wax for survival suit zippers.

5. Optional: Stepladder to get out of water onto dock, manned rescue boat or inflated survival raft in the water, and first aid kit.
SAFETY AND TEACHING TIPS

1. As with all physical activities, the safety of the student comes first. No student should be forced to participate.

2. No one should be allowed in the water without a survival suit on. Have one adult wearing a survival suit in the water, or one adult wearing a PFD in a skiff or in an inflated raft.

3. Only two to four students should be allowed in the water at one time. They should enter the water in a slow, controlled manner. Only one of the two to four can be a non-swimmer. A non-swimmer should be accompanied by an adult in the water. Head-first diving must be prohibited.

4. The instructor must be aware of the swimming ability and comfort level of each student. Students should not be allowed to go beyond the rescuer's reach.

5. The instructor and chaperones should be wearing a flotation device at all times when students are in the water, and should have a rescue device within reach. The instructor and chaperones must be able to recognize a panicked or distressed swimmer, and be ready and able to assist a student in the water if necessary.

6. At least one adult should be current in CPR and First Aid.

7. For young students who are afraid of the water, pair the youngster with a chaperone or older student to work with the younger person. Get the youngster in the suit and gently slide him or her into the water and between the legs of the older student (both on their backs). The younger student can use the legs of the older student for support. The older student can propel the two around in the water until the younger student feels comfortable enough to try it on his own. This looks like a mother otter with her baby.

8. If some students are afraid of the water and will not get into the water, have them put on the suit but don’t force them in the water.

9. All equipment should be marked and identifiable to the owner.

10. This exercise should not be done on a sandy beach. Sand would clog open the valve in the feet, allowing water to enter freely. The suit would get wet, and everyone who used the suit would get wet and cold.

TEACHING PLAN

Have two to four students put on suits at one time. The students who are getting into the suits should be assisted by the students who will get into the suits next. All other students should be separated from this activity to avoid confusion.

The students should enter the water one at a time off the dock, either stepping off or sitting down and sliding in.
The students who are not directly involved should be sitting down, and noise should be kept to a minimum until the routine is established. The swimming area should be free of obstacles.

**DONNING SURVIVAL SUITS**

Demonstrate how to get into a survival suit and discuss proper entry into the water.

Remind students that they would keep their clothes and boots on in a real situation. Ask students to take shoes off to minimize wear on the survival suits. Plastic bags can be placed over foot to ease the foot into the suit, minimizing wear and tear on the suit.

Ask the students to try to zip their own suits. Hold the bottom of the zipper with one hand, and pull zipper up with the other hand at the same time. This also helps to ensure the zipper will not break.

Have only one student blow up air bladder. Don't spread germs by having more than one try it.

For those jumping into water, make sure the air bladder is not inflated to prevent injury to the student's neck and to the air bladder.
HOW TO PUT ON A SURVIVAL SUIT FAST

This is a quick way to get into a survival suit in an emergency. It can help you when seconds count. If you have time, put on warm garments and leave shoes on for additional hypothermia protection and use on the shore.

Practice this in a pool or at the dock.

Step 1
- Lay the suit flat with the zipper side up.
- Sit on the dock and work legs into feet of suit.
- Scoot down into the suit like a sleeping bag.
- Put straps around ankles.
- Stand up.

Step 2
Put your non-dominant arm into the suit first (your left arm if you are right handed). Pull the hood over your head with your free hand. You can do this while standing, or from a kneeling or sitting position.

Step 3
Put your dominant arm in the suit last. Grab lanyard on zipper and pull zipper all the way up. Fasten face flap over face.
IN AND OUT OF THE WATER WITH A SURVIVAL SUIT

The best way to get into the water while wearing a survival suit is slow entry.
• Sit down on dock with feet dangling in water.
• Slide into water and float on your back.
• Hesitant students can hold onto a chaperone’s hand or to the dock edge.

Or you can step off.
• Face sideways to dock.
• Protect your head with your arm nearest dock.
• With your other hand, hold suit away from the face to let air escape.
• Step out and away, feet first.
• Float on your back.
While you are wearing a survival suit, the best way to swim is on your back. Much of the swimming action is with your arms.

Allow students 2-5 minutes (time will vary depending on size of class) to float around on their back and feel comfortable in the suits.

Assist in the exit from the water to ensure minimum impact on the students and survival suits.

1. Have two students on the dock assist with water exit. The student who is exiting the water should keep his or her face toward the dock to avoid back injury.

2. If a ladder is available, the student can exit using the ladder. Because of the bulkiness of the suit's feet, the student will likely need assistance climbing the steps.

3. Try to avoid getting creosote on the suit during the exit.

If time is available allow students a second opportunity to go in the water. Then ask the students who get the second opportunity to help carry the suits back, rinse them off, and hang them to dry.

**SUIT CLEANUP**

Suits must be well rinsed in fresh water on the outside and inside and allowed to dry in a cool, dark, dry place. Turning the suit inside out first to dry will save time and ensure that the inside is not forgotten. After the suits are dry, the zippers should be coated with a non-petroleum wax. The suits should always be stored with the zipper open.
CHAPTER 7
OUTDOOR SURVIVAL PRACTICAL

GOAL
To familiarize the student with survival skills through hands-on outdoor activities. Time allotted is one full day.

OBJECTIVES
The students will be able to

1. Collect and eat at least two foods not tried before. The instructor will boil water for 20 minutes and cook edible foods for 2-5 minutes.

2. Make a garbage sleeping bag (grades K-1), build a debris bed (grades 2-4/5), or build a debris shelter (grades 4/5-12).

3. Construct at least two signals, one visible by air and one visible by land or sea.

4. Build a fire using magnesium fire starter, or flint box, and keep the fire going for at least 10 minutes.

SAFETY AND TEACHING TIPS
1. Choose a location where there is suitable material to build shelters (wooded area). Get permission to use the land if necessary, and know the rules of the area. (Are brush cutting and fires allowed?)

2. The location can be a beach fringe for teaching edible sea life, or wooded area for teaching a “lost in the woods” experience.

3. Learn local edible and non-edible plants and animals. Take a wild-foods expert along if necessary. The reference pages in this manual include books on survival foods for Alaska.

4. For a beach fringe, choose a day with a low tide during the morning or early afternoon, and plan activities with the low tide in mind.

5. Be sure students know the schedule of activities and their responsibilities.
6. Pair students up (buddy system) and have two pairs act as one working group (four students per group).

7. Ask students to bring survival kits, a sack lunch, something to drink, tissue paper, and extra clothes. They should wear warm clothing including a hat, gloves, and rain gear.

8. The instructor should bring a coffee can for cooking collected shellfish, small plastic bags for collecting food, a first aid kit, a knife, extra clothes, a survival kit, lunch, and something to drink.

9. Waiver forms will depend on school or organization requirement (see Chapter 1).

10. It is best to have one adult chaperone for each group (one chaperone per four students). The instructor should not function as a chaperone because he or she will need to monitor the progress of all groups. Be sure the chaperones are familiar with the planned activities and know what their role is. They can use the enclosed check-off sheet to monitor and record activities of their group.

11. The instructor may want to pack cooking water if there is no water at the site, or if it is inconvenient to boil water for 20 minutes.

**INTRODUCTION**

See Agendas on pages 3, 4, and 5.

The order of events varies depending on the situation.

While still at the school, organize students in groups of four with their chaperone. Review the planned activities for the day, and review what is expected of the students. Go over any rules. Ask students if they have any last minute questions. Check to see that students have their survival kits, gear, lunch and drink, and rain gear before heading out the door.

Transport (or walk) to location and hike into area.

Organize in one main camp area where backpacks, lunches, etc., can be left. Sit the students down and go over planned activities. Briefly review Seven Steps and discuss recognition and inventory. Ask them what they could use if they were in an emergency in this area. (They will be using items in their survival kits.) Tell students and chaperones approximate times for each of the activities. Break into groups and begin activities.

**COLLECTING FOOD**

(¾ to 1 hour)

The instructor or other expert must be familiar with the various plants and animals in the area.

Give each group one or two plastic bags and ask them to collect a variety of edible plants and animals. If students are not sure what to collect, tell them
to collect anything that looks like an animal or plant for eating or discussion purposes. What they collect will depend on where they are.

Warn students not to collect volumes of critters and plants if they do not plan on eating them all. Regroup and have students pile edibles on plastic that has been spread open. Show each edible food type and discuss how to clean, prepare, and eat. Discuss inedible foods.

After the students have been sent off to the next activity, the instructor should rinse seafoods in fresh water and clean and prepare the foods. Throw back extra shellfish if necessary. If cooking water is collected from a local water source (creek) it needs to be boiled for a total of 20 minutes to ensure it is safe to drink. Boil the water for 15 minutes (in the coffee can), then toss in edible sea life and boil another 5 minutes. If water is brought from home, boil water only long enough to cook the catch (5 minutes).

Edible plant preparation depends on the plant. Most leaves and berries can be eaten raw.

Have each student eat two edibles that they have not tried before. The chaperone should tell the students whether the food is safe to eat, and record the food eaten by each student in their group.

BUILDING SHELTERS

(1½ – 2 hours)

Ask groups (of four students) to choose a location for their shelter. Make sure groups are not too close to one another, so they will not compete for resources. But keep them all within the boundaries of a designated area.

Give students 1 to 1½ hours to construct one shelter per group, big enough for one person. Shelter types will depend on age group: garbage sleeping bag for K-1, debris bed for grades 2-4/5, and debris shelters for grades 4/5-12.

Monitor groups to be sure they are sticking to their activity. Some groups may have difficulty working together. The garbage sleeping bag and debris bed groups will finish quickly. Approve their shelter, ask them to save it for presentation, and then allow them to start a debris shelter if they want to, although they will likely not finish it. Or offer their mid-morning snack if that is what they are used to.

After time is up, regroup. Move from one shelter to another and ask each group to discuss their shelter. Have someone from each group demonstrate getting into it. Discuss the location and ask for suggestions for improvement, emphasizing positive suggestions. Discuss the good points of the shelter. Does it meet the three criteria?

- Small
- Insulative
- Weatherproof
The instructor will probably choose to break for lunch after the shelter-building exercise.

**COLLECTING WATER**

(15 minutes)

During or after lunch discuss how drinking water can be collected. Discuss water collectors and sources of water.

Have groups set up a water collection system near their shelter and compare their collectors with those built by other groups.

**SIGNALS**

(½ hour)

Have each group construct two signals:

- A signal that can be seen by someone from the air. For example, a 3' x 18' SOS made from white or contrasting rocks, grass, seaweed, driftwood, etc.

- A signal that can be seen from land or water. For example, hanging debris.

The students should use what they find in the area in addition to what they have in their survival kit.

NOTE: Do not allow groups to use fires as a signal. Also, the whistles can be a problem. As a general rule, it may be best not to allow students to use whistles, and confiscate (for the day) every whistle that is blown. As a compromise, offer a whistle blowing time (e.g. ten minutes during lunch or at the end of the day).

The chaperone or instructor should answer the following questions when evaluating the two signals: Is the SOS large enough, is the hanging debris in groups of three? Would Search and Rescue see and rescue this group if they were searching from the air or from the beach?

Have students look at and discuss signals built by other groups. Ask which ones are good and why. Ask how signals would be different for a different area (woods vs. beach fringe).

Students should destroy signals at the end of the exercise or before leaving the area.

**BUILDING A FIRE**

(20 to 30 minutes)

Each group should work together using a magnesium fire starter or flint kit. Each fire must burn for at least 10 minutes. Do not allow students to start the fire until they have collected enough fuel to burn for 10 minutes. The 10
minute time is to ensure that the students can keep a fire going beyond the initial start up.

**CLEANUP**

Regroup and clean the area, making sure all plastic is taken out.

Return to school or home. Rest.

NOTE: Consider replacing items in survival kits that students used, such as twine, garbage bags, surveyor tape, etc.
**OUTDOOR SURVIVAL PRACTICAL CHECK SHEET**

Chaperones: Please use this check sheet to record whether each student has completed the tasks during the outdoor exercise and whether the student has participated and worked with the group.

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<thead>
<tr>
<th>Student Name</th>
<th>Chaperone</th>
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<tr>
<th>Completed task</th>
<th>Participated in events</th>
<th>Cooperated with group</th>
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**Organized**

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<th>Shelter:</th>
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<td>• small</td>
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<tr>
<td>• insulative</td>
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<td>• weatherproof</td>
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<tr>
<th>Signals:</th>
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<td>• 1 by air, SOS</td>
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<td>• 1 by water, hanging debris</td>
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<th>Water Collector</th>
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<th>Food:</th>
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<tr>
<th>Fire:</th>
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<tr>
<td>• burned for 10 minutes</td>
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REFERENCES

The following references were used by the author in assembling this curriculum. They should be used by the teacher to better prepare for teaching outdoor safety and survival. It is particularly important that the instructor is competent in teaching water safety and edible foods, because incorrect information can result in an injury or life-threatening situation for a student.

In addition to using these materials, the instructor should call on the services of local experts such as a wild foods expert for edible and poisonous wild foods, the local search and rescue team or the U.S. Coast Guard to assist in outdoor water exercises, and first aid personnel for poolside water safety.

For further assistance in your education efforts, you may contact the Alaska Marine Safety Education Association (AMSEA). AMSEA is dedicated to reducing the loss of life to outdoor emergencies through education. They have an army of survival instructors located throughout Alaska who may be willing to help. You may also call on AMSEA to borrow numerous videos and other educational materials, including the comprehensive Marine Safety Instructor Training Manual, upon which this curriculum is largely based.

AMSEA
PO. Box 2592
207 Moller Dr. Rm. 113
Sitka, AK 99835
Phone (907) 747-3287

The Alaska Sea Grant Marine Advisory Program has field offices throughout coastal Alaska who offer marine safety and survival courses and videos. Contact the main office in Anchorage for information on the Marine Advisory office nearest you.

Marine Advisory Program
University of Alaska
2221 E. Northern Lights Blvd Suite 110
Anchorage, AK 99508-4140
Phone (907) 274-9691

INSTRUCTOR REFERENCES


Horan, M. 1987. Lost in the Woods. Family Safety & Health, Spring, p. 4-6. Article on how young people should react to being lost in the woods.

How to Avoid Becoming Lost... What to Do if It Happens. 1985. Kal Kan. Distributed by Southeast Alaska Dogs Organized for Ground Search, PO Box 244, Juneau, AK 99802. Pamphlet.


Hypothermia... The Cold Facts. 1990. Boat and Water Safety, Minnesota Department of Natural Resources. 500 Lafayette Road, St. Paul, MN 55155-4046, (612) 296-6157. 26 p., free.


PFD Information. Mustang Manufacturing Inc., PO Box 5844, Bellingham, WA 98226, (206) 676-1782. 4 p. Pamphlet on types of PFDs.


**Survival,** National Rifle Association, Kearneysville, WV 25430. (800) 336-7402. $2.95. Booklet.


**Waterproof Your Family,** 1988. Michigan Sea Grant College Program and Dive Rescue. Available from Dive Rescue, 201 N. Line Lane, Fort Collins, CO 80524-2712, $249.95. A teaching kit with 28 p. program guide, 20 min. slide show, 75 min. video, 10 posters, 100 handouts.


VIDEOS


**Drowning: A Preventable Alaska Tragedy**, Alaska Village Patrol Safety Officer Program, Alaska Department of Public Safety, 5700 E. Tudor Road, Anchorage, AK 99507, (907) 269-5511. 24 min., free.


STUDENT READING MATERIALS


Water Safety Coloring and Activity Book. Minnesota Department of Natural Resources, Box 46, St. Paul, MN 55146.

Wilderness: A Survival Adventure (computer game). Peachtree Software, 3445 Peachtree Road N.E., Atlanta, GA 30326-1276. Computer game for Apple II plus, IIe, or IIc; 48 K RAM.
