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Unit organization of two topics in water safety augmented by a series of two by two slides

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UNIT ORGANIZATION OF TWO TOPICS IN WATER SAFETY
AUGMENTED BY A SERIES OF TWO BY TWO SLIDES

Submitted by

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the Degree of Master of Education
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CHAPTER I
INTRODUCTION

1. The Problem

The problem stated.—The problem of this thesis is to apply the basic educational principles and procedures set forth in Fundamentals of Secondary School Teaching1 and in the course The Unit Method in the Secondary School2 to the organization and presentation of two units in water safety and to supplement existing teaching materials with a series of 2x2 slides.

Scope.—The course content is selected mainly from Life Saving and Water Safety3, chapters III and VIII. Chapter III deals with personal safety and self-rescue in the use of small craft and chapter VIII deals with the use of small craft as an aid to the rescue of a drowning victim. Material from other sources has been added to provide additional information and contrasting points of view. The techniques and content of instruction is consistent with that taught

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at the National Aquatic School at Camp Kwanis.

Definition of small craft.—In order to avoid confusion the following definition of small craft is adopted for this thesis:

"By small boats are meant those craft which have no decks, are light of construction and propelled by one or two pairs of oars. This definition includes the well-known square-end punt, the skiff or sharpie, the dinghy, the jolly-boat or wherry, the steel-boat, the dory-skiff and the Adirondack guide boat (a rowing canoe). Small sailboats include the sailing dinghy and any other open or partly decked small boat which uses leeboards or centerboard and carries no weight on the keel and no ballast.

Canoes may be open or partially decked and as a class include all types. The graceful high-ended canvas covered (or aluminum) craft in common use, the guide model, the racing canoe, the Kayak, the sailing canoe and the sponson.

Any boat equipped with a motor, either inboard or outboard, which has no decks or is decked except for a cockpit and does not exceed a length of eighteen-feet may also be classed as small craft.

Justification.—The justification for this thesis comes from the alarming rate with which the yearly small craft accident statistics have been mounting. During the year 1954 there was a total of 6,200 drowning accidents in the United States and 1,000 of these deaths were due to non-swimming accidents. These figures become even more alarming when one considers that small craft activity is limited to a few months over most of the nation. Accidents cause more deaths among persons...

1/ The National Aquatic School operated by the American National Red Cross at Camp Kwanis in South Hanson, Massachusetts. The school is operated for the training of water safety instructors during the month of June.


age 1-24 than any disease and drowning ranks second only to motor vehicle accidents among the five to forty-four age group.

**Education the answer.**—The use of small boats and canoes for recreation is a means of enjoying a wholesome activity in the out-of-doors. Anyone who has paddled a canoe along a wilderness stream or piloted a sporty little dinghy in a good stiff breeze, knows the fun and relaxation that can come of it. Indeed it is a tragedy that we turn an activity primarily designed for pleasure into a means of destroying the lives and happiness of so many. A means of educating the general public toward the understanding of a few simple rules of safe practice could do much toward the elimination of all but a very small percentage of these accidents.

**What is being done?**—Organizations such as the American National Red Cross, the Boy Scouts, the Girl Scouts, the Y.W.C.A., the American Camping Association, and many others have done a great deal to present this information to the public. Until recently the main emphasis seemed to be on safety in the water rather than on safety on the water. One reason for this was that many times instruction in water safety was given in situations where small craft equipment was not available. Also many times an instructor who is well versed in swimming and swimming rescue techniques is far from being an authority on small craft. More recently with the addition of organized courses in small craft and schools for the training of instructors, this situation is being remedied.
Use of the unit method.—Rarely would the teacher of the secondary school level find such a wide variance among the pupils of a class as does the instructor in the area of water safety. These courses are taught in ponds, in indoor pools and at the seashore. They are taught to people of all ages, from all walks of life, with greatly differing background, aptitude and educational preparation. Such a subject lends itself easily to unit organization and presentation.

2. Use of the Units

Groups to be taught.—The two units contained in chapters II and III of this thesis were prepared mainly for use with classes being taught in indoor pools or in other situations that do not have the benefit of the actual equipment. However, much of the material as well as the slides has been used in summer camp programs where the equipment was readily available. Certain changes must be made according to the type of class and availability of the equipment. The materials were prepared with the idea in mind of being understandable to the younger groups and that the optional related activities would vary enough in interest and difficulty to attract the more advanced and older groups.

Time allotment.—A tentative time allotment of six hours for each unit should be set up. Since the total time usually given for the senior life saving course is only seventeen hours, this will make necessary an increase in the total time allotment for the teaching of the entire course. Where this extra time can be gained is largely an individual problem according to the conditions under which the course is being offered.
CHAPTER II

UNIT ORGANIZATION OF THE TOPIC
PERSONAL SAFETY AND SELF RESCUE IN THE USE OF SMALL CRAFT

1. The Unit Assignment

General Statement of the unit.—The ability of a person to keep himself safe while engaged in small craft activities is not difficult when fully understood. The usual way in which most people are observed to move about a boat or canoe, is neither safe nor does it show any great amount of skill. The experienced small craft user knows that safe practices do not hamper, but rather are a requisite to the full enjoyment of the sport.

If it is true that safe practices depend partly upon understanding, then the individual must gain knowledge of the underlying principles of the stability of the various types of small craft, if he is to have good reason for these safe practices. Safety will depend upon a knowledge of the limitations as well as the advantages of the craft.

Rowboats are generally considered to be more safe than canoes, but they too can present many hazards when not used properly. Of course, even the experienced small craft user occasionally misjudges and does capsize, but it is the novice, that is using new and increasingly difficult skills, that is more often involved. For this reason the growth of the individual in the ability to perform more difficult skills, should be paralleled by a growth in ability to perform safety skills. Some of
these skills should be learned before any small craft use is attempted, and many are difficult enough to challenge the most skilled person.

Delimitation:

1. No one who is unable to care for himself in the water should go out in a canoe unless a trained life-guard is with him. There should never be more than one non-swimmer for each life-guard. Even the comparatively safe rowboat should be used by the non-swimmer only under special conditions.

2. When moving about in a boat or canoe, keep one hand in contact with the side. This accomplishes a two-fold purpose: (1) it is a safeguard against falling; and (2) it keeps the weight of the individual low and adds to the stability of the craft.

3. Whenever it is necessary to grasp the side of the boat or canoe, the fingers and thumb should be placed on the inside. If the hand is placed so that the fingers or the thumb are on the outside, they may easily be jammed between the side of the boat or canoe, and some stationary object such as a dock.

4. If it is necessary to exchange positions while afloat, the following rules apply:
   a. Place all movable articles so they will not be in the way.
   b. Only one person moves at a time.
   c. Each person must keep one hand on the canoe as he moves.

5. Never leave a capsized boat or canoe, as it will support the weight of all its occupants provided that it has not been overloaded. Even a very strong swimmer should not attempt a swim to shore unless it is absolutely necessary.

6. If the inexperienced person is to go out in a boat or canoe as a passenger, it is a good practice for the person in charge of the craft to assist that person aboard with one hand, while the other hand holds the canoe or boat firmly against the dock. The person in charge of the craft boards last.

7. The canoe, which is generally considered to be unstable, and therefore dangerous, can be used with safety when it is used by persons having a sound knowledge of its limitations. Knowledge and skill are a requisite to safe small craft operation.

8. It is almost impossible for a person lying flat in the bottom of the canoe to tip it over no matter how hard he tries. It becomes a little easier from a sitting position, and still easier as we go from the sitting position to a full standing position.
9. Kneeling is the safest and most efficient paddling position. If the canoe is being paddled by two persons, one should kneel near the bow, and one near the stern of the canoe. Passengers generally sit flat on the bottom of the canoe. The best position for a single paddler is slightly back of the center of the canoe.

10. As more weight is added to a boat or canoe, it becomes less stable. If the boat or canoe itself were made heavier, it would then become more stable. A canoe is less stable than a rowboat because it is both narrow and light.

11. A safe load may be determined in two ways: (1) by determining just how much weight the craft will support when it is full of water; and (2) by measuring the distance from the water line to the top of the side. This distance is usually called the freeboard and should be at least six inches in length. Actually an overloaded boat or canoe will not handle properly and is easily detected by the experienced person.

12. A fifteen-foot canoe is generally used for one person; a sixteen-foot canoe, for two; a seventeen-foot canoe, for three; and an eighteen-foot canoe, for four. Of course, a great deal depends upon the conditions of wind and water.

13. The stability of any type of small craft is increased by keeping the weight of its occupants as low as is possible and practical.

14. Many different circumstances could cause an oar or paddle to be lost overboard. Unless the person is able to recover the oar or paddle, many hours may be lost before he reaches safety. One of the simplest means of recovery is to use the hands in the water as paddles, while sitting on the bottom of the craft. Of course, such an emergency could be prevented with the carrying of an extra paddle or oar.

15. Every person who goes out in a canoe or boat should learn how to use a swamped craft to the best advantage. Any person who finds himself faced with this problem should:
   a. Right the small craft.
   b. Swim in and sit on the bottom.
   c. Hand-paddle to shore.
16. Another skill well worth the time spent learning it, is the ability to jump out of a canoe and climb back in again without capsizing it. As the person goes over the side, he must always retain a grip on the canoe to prevent it from drifting away. The procedure for getting back into the canoe takes quite a bit of practice and is outlined below:
   a. Grasp the side nearest you with both hands.
   b. Kick feet to the surface.
   c. Reach for the opposite side with one hand and press down.
   d. Pull body across the near side and turn over.
   e. Sit in the bottom of the canoe.

17. It is possible for one person to completely empty a canoe of water in less than one minute, without the aid of any equipment. This method, which is performed in deep water, is difficult and tiresome to learn, but provides the advanced canoeist with a skill that is useful and practical. This skill, known as the "thrust and shake out", is never used in a narrow stream, but is of the utmost value when faced with the problem of a capsized canoe in the middle of a large lake. It is of course, of particular use to the sail-canoeist.

18. When boarding a rowboat, face the bow so that any movement of the craft will be quickly detected.

List of Probable Indirect and Incidental Learning Products:

1. An attitude of safety and care in using all types of small craft.

2. An appreciation for the knowledge and skill of those who "do it right" and a desire to imitate those who observe safe practices.
SELECTED ANNOTATED BIBLIOGRAPHY FOR THE TEACHER


Outlines course offerings at the Red Cross aquatic schools. Nine sections—section six contains eight pages of small craft requirements. No factual material given. Includes a bibliography on boating and canoeing.


A series of posters on safe load, paddling positions and self rescue. Includes both boats and canoes. Available from area offices and most local chapters.


Outline of safety demonstrations using rowboats, outboard motor boats, and canoes. Also a section on novelty events for aquatic shows. Twenty-four pages. Available from area office.


Includes 56 pages on the teaching of life saving and water safety. Illustrations of class teaching arrangements. Outlines both the senior and junior courses. Designed to be used with Red Cross text on life saving and water safety. Available to qualified instructors at area and local chapters.


Includes 36 pages of traditional lesson plans on teaching various types of small craft. Available to qualified instructors at area and local chapters.
6. American Red Cross, Instructor Courses in Boating, Canoeing and Sailing for Use at Small Craft Schools and in Chapter Programs, Form 1080, American National Red Cross, Washington, D.C., 1952.

Ninety-Four pages on small craft. An excellent bibliography on boating, canoeing and sailing. Outlines the extensive, three year course offered at the small craft schools. Available to the faculty members at the school.


Organization, administration, duties of personnel, charts and diagrams of good waterfront layout, health and safety. Suggestions on course offerings in boating, canoeing and surfing. Eighty-eight pages.
2. The Unit of Work

Core Activities

A. Introductory:

1. The instructor discusses the following points:
   a. Use of various types of small craft in our modern world
   b. Limitations of the various types commonly used
   c. Necessity of swimming ability as a must in safe small craft operation
   d. Skill in handling the particular type of small craft of equal or greater importance than swimming ability.

2. A class discussion centering around: (1) the types of small craft used by various members of the class; (2) common accidents that they have seen or have experienced while using small craft; (3) the nature of the skills necessary for safe operation with each type; and (4) prevention of accidents in the future.

B. For small group and individual investigation:

1. What do we mean by small craft? 2:56. (This will mean to read page 56 of the second reference on your reading list.)

2. Is swimming ability a "must" in the safe operation of small craft? What do you consider a good preliminary swimming test? Is swimming ability the only thing to be considered? 2:56-60; 10:137.

3. More information may be found in 10:13-15 & 20. Is this author consistent with the American Red Cross' treatment of the same topic?

4. What type of test should logically follow the preliminary swimming test before the individual is ready for safe small craft operation? 1:17.

5. May the experienced boatman or canoeist go alone without fear of misadventure? 2:59. Is this point of view consistent with the "Canoeing Code of Safety Rules" as published by the American Camping Association? 1:23.

6. Do you think that the skilled canoeist would observe all of the rules stated in the above reference? If not, which ones would he omit and why?

8. Compare your usual method of entering a boat or canoe with that described on page 60-61 of Life Saving and Water Safety. Is this method consistent with that of the American Camping Association? 1:27.

9. Would the experienced small craft user be likely to use these rules exactly?

10. You will be shown a series of colored slides on the various methods of entering a canoe. Be ready to pick out the good points and the weaknesses. Compare the methods shown in the slides with those mentioned in the activities above.

11. Is there any difference between the positions of the fingers on page 61 of Life Saving and Water Safety, and the position of the fingers as shown in the colored slides? How does it differ? Which method is better and why?

12. What do you think are the three most important rules to observe when changing places in a boat or canoe? The answer should come mostly from your own thinking, but suggestions may be found in the following references: 2:63; 1:18 and 10:16-17.

13. What is the main disadvantage of exchanging places in a canoe as given in the above references?

14. Can you make up a new method that will be both practical and safe? Keep in mind your answers to questions 12 and 13.

15. Is there any good reason why a person might fall out of a boat or canoe? Is this situation serious for the accomplished swimmer? Why? 2:71.


17. Study the pictures given on page 66 & 67 of Life Saving and Water Safety. Could the canoeist stand in the canoe instead of on the dock or shore? Why? On page 67 how is he steadying the canoe? Would the techniques be any different if a rowboat were used? If so, how?

18. You will be shown a series of slides on methods of assisting a passenger into a boat or canoe. Compare the methods given in the slides with those given in Life Saving and Water Safety.
19. What responsibilities must we assume when taking a passenger out in a boat or canoe?

20. Study the pictures on page 73 of Life Saving and Water Safety. What important point has been omitted? How is the canoeist using his right arm in figure 29? Name several instances where this ability might come in handy.

21. What would you do if faced with the problems of a lost oar or paddle? Give several instances where the solution might be different. What is the best preventive measure? 2:69-70.

22. A capsized craft is not easily seen at any distance. How might the victim attract attention to his situation?


24. What is the safest method of bringing a swamped canoe or rowboat to shore? How else might this be accomplished? Which is safer? Which way is faster? 2:74-77; 1:17.

25. Would it be advisable for the experienced swimmer to leave his craft after it had overturned? If so, under what conditions? 9:20; 2:74-79. What do you regard as true concerning this important safety rule?


27. What is meant by "trimming" a boat or canoe? How does it affect the safe operation of small craft? Do we always trim the craft in the same way? What factors affect trim? What is the main safety rule to observe when considering the added weight of passengers and gear? 2:67-69 and 1:23; 4:1065-17.

28. Do you think it possible to capsize a canoe by lying in the bottom and rocking it back and forth? By sitting? By kneeling? By sitting on a thwart (seat)? By standing? Which of these is the safest and most efficient paddling position? 2:63; 1:17.

29. What do you think constitutes a safe load for a boat or canoe? Upon what factors does it depend? How many different ways can it be determined? Should the capacity be reckoned in terms of number of persons, or in pounds of weight? 2:65-66; 1:17.

31. Are the conditions for safe operation of small craft always the same? If not, upon what factors does it depend? 10: Chapter II.


33. Why is it difficult to get most persons, teenagers and adults alike, to use safe practices in the use of small craft?

34. What conclusions have you drawn in regard to the safe operation of all small craft? Write a short paper comparing your ideas on small craft operation at the beginning of the unit, with your ideas right now.

Optional Related Activities

1. What is meant by each of the types of small craft mentioned on Pages 56–57 in Life Saving and Water Safety? 10: Chapter I; 9: Chapter 1 and 2; 3–9.

2. What is meant by such terms as bow, stern, gunwale, deck and thwart? Are these terms applicable to boating, canoeing or both? (see special guide I & IV)

3. Why is it necessary for the occasional small craft user to acquire a "small craft vocabulary"? What terms would you include for him to learn? (see special guide I & IV)

4. What are the usual ways in which a canoe or rowboat may be damaged by the untrained person? What is meant by the "bang plate" and why should this term be discarded? (see special guide I)


6. If you have paddled a canoe, you might like to see how much you know about the many strokes used in canoeing. First, read Pulling, Chapter III and Pinkerton, Chapters IV and VI. For further information on strokes you may ask the instructor for special guide II. Second, you might like to take a self-scoring test on strokes which are available from the instructor.

7. If you have studied the various classifications of levers in one of your science courses, you might like to discover what
class lever the oar and paddle actually are. If you decide to do this activity, ask the instructor for special guide III.

8. What makes a canoe tip over? Why does a canoe capsize more easily than a rowboat? If you are interested in knowing more about the stability of the canoe, ask the instructor for special guide III.

9. Is it possible to tow a canoe? Where would the tow line be attached? Is it dangerous? 1:53; 10:17-20: 75-76; also h: Canoe Towing Bridle Form 1065.

10. There are many positions from which the canoeist may paddle his canoe. You might like to read about some of them in the following references. 9:53-66; 1:30; 2:62-63. What three factors would determine which one is best? Which one would you use?

11. Is the canoe usually launched bow or stern first? Is there any time when it would be advisable to reverse the procedure? If so, when? 1:27.

12. If a canoe is available you might like to try the "thrust and shake out". 1:22; 2:78.

13. Outboard motorboats are becoming more popular with the coming of each new season. Many persons who have used them for years do not know how to handle them properly. If you have had experience with the outboard motor you might like to check yourself by reading the eighth reference on your reading list. Make a list of the points that you always observe, a list of those you sometimes observe, and a list of those you never observe. Are there any points in the manual with which you do not agree? If so, why?
SELECTED ANNOTATED BIBLIOGRAPHY FOR THE PUPIL

   Includes eighty-two pages on all phases of canoeing. An excellent manual for quick over-all coverage of the subject. Available from the association for $1.50 per copy.

   Includes two-hundred-sixty-eight pages on all phases of life saving and water safety. Used as a text for the junior and senior life saving courses as offered by the Red Cross. Available from local and area offices for $0.60 per copy.

   A pamphlet prepared as a guide for the canoeing merit badge. Excellent material for beginning and advanced work by this well-known expert. Available from the Boy Scouts of America for $0.25 per copy.

   A number of diagrams pertinent to operation and safety in small craft use. Available free from local and area offices. (samples included in appendix A of this thesis)

   Includes one-hundred-twelve pages on all phases of campcraft. Many excellent illustrations. Available for $1.00 from the Girl Scouts of America.

An excellent modern text on canoe camping in the wilderness. As easily read as a story book. Describes some of the many wonderful experiences open to the advanced canoeist and camper. Available for $3.75 from the above address.


A pamphlet of forty pages on canoe techniques and rescue. Many excellent photographs on self rescue, paddling positions and techniques, and rescue work. Available for $.50 from the association.


An excellent pamphlet on outboard motorboat handling. Includes fourteen pages on motor installation, loading, boarding, getting underway, passing, docking, mooring and anchoring. Many good photographic illustrations. Available free from The Outboard Boating Club at the above address.


An older text on canoeing. As good today as it was in the time of original publication (1911). Includes one-hundred-sixty-two pages with many excellent illustrations. Available for $1.75 from the publisher.


An excellent book, now out of print, but still available in libraries and used book stores. Contains information on paddling skills rarely described in other publications. Good for study by those already having some knowledge of canoeing techniques.
CHAPTER III

UNIT ORGANIZATION OF THE TOPIC
THE USE OF SMALL CRAFT AS A DEVICE FOR RESCUING A DROWNING VICTIM

1. The Unit Assignment

General statement of the unit.— In most cases the use of small craft in the rescue of a drowning victim has long been considered to be superior to a swimming rescue. The underlying principle is that it affords greater safety to the rescuer and is actually a more efficient and faster means of rescue. This is borne out by the old slogan of the life saving service — "Row-Throw-Go-Town".

Since many life saving and water safety courses are taught in indoor pools and other areas where boats and canoes are not available, this phase of life saving is apt to be neglected or omitted entirely. Good visual materials in the form of still pictures, 2x2 slides and motion pictures can do much to help the interested student learn about this all-important phase of life saving.
Delimitation of the Unit.

1. The rescue of the drowning victim by the use of a rowboat is far superior to a swimming rescue. Of course, many times it would be impossible or illogical to employ this means of rescue.

2. The ability to perform a rowboat rescue is an absolute necessity for the person who considers himself to be an accomplished life saver. It may well save his life or the life of a drowning victim.

3. The rowboat rescue is superior in many ways to the swimming rescue. Through its use the trained person may overcome many handicaps and can perform rescues that would be impossible without it.

4. There are five different situations which the life saver should be prepared to face:

   a. the actively drowning victim
   b. the passive or unconscious victim
   c. the tired swimmer, or a swimmer who is fast becoming a potential victim
   d. the submerged victim
   e. the capsized victim (s).

5. In the case of the actively drowning victim the procedure is as follows:

   a. Row toward the victim while maintaining a constant watch on him by glancing over the shoulder.
   b. The boat should pass the victim on the lee side.
   c. As the boat glides past the victim several things happen in quick succession:
      1. One oar is slid behind the rescuer
      2. The oar on the side near the victim is slipped out of the lock
      3. The lock is dropped into the boat
      4. The car is extended to the victim
      5. The victim is brought around to the transom.
   d. All that remains to complete the rescue is for the victim to be helped into the boat or secured so that he will not lose contact with the boat as he is brought ashore.

6. In the case of the passive or unconscious victim who is still on the surface of the water, the procedure differs but slightly from the one outlined above:

   a. Row toward the victim while maintaining a watch on him by glancing over the shoulder.
b. The boat should pass the victim on the lee side to avoid hitting the victim.

c. As the boat glides past the victim several things happen in quick succession:

1. The oar and lock on the side nearest the victim are dropped into the boat.
2. The rescuer grasps the victim’s wrist as the boat glides past.
3. The other oar is then slid behind the rescuer.
4. The victim is brought around to the transom, and brought into the boat or secured in some manner. This will depend upon the circumstances.

d. The victim is brought to shore and proper first aid is administered.

7. In the case of the tired swimmer, or the swimmer who is caught in a current or is in some other way in danger of becoming a victim, the procedure is as follows:

a. The rescuer rows out to the victim and turns the boat so that he may grasp the transom.

b. The victim may be helped aboard or allowed to hang on until shore is reached.

c. In this rescue as well as all of the others, the boat should approach from the lee-side of the victim to avoid injury.

8. In the case of the victim who has already slipped beneath the surface, the rescuer must be very certain to keep an eye on the exact spot where the victim was last seen. Bystanders on the shore can help with this. The rescuer should row out to the vicinity of the victim, anchor his boat, and dive overboard. When and if the victim is contacted, he may then return to his boat and bring the victim to shore. The main difficulty is encountered when the rescuer endeavors to maintain a hold on the victim while climbing back into the boat. If the victim is not breathing, artificial respiration should be started immediately. If necessary, this can be done in the boat. Success in this type of rescue depends largely upon the physical strength of the rescuer.

9. The canoe over rowboat rescue is a useful and efficient means of emptying a capsized craft of water without bringing it to shore. It combines speed with a minimum of safety to the rescuer and the victim(s). It is performed exactly the same as the canoe over canoe rescue (item 19). It is not particularly difficult and does not require a great amount of strength.
10. The rescue of a drowning victim by use of a canoe should be attempted only by those persons well acquainted with the canoe and its handling. For a novice to attempt such rescues would be sheer folly for, in all probability, he himself would be faced with a problem as great as that of the original victim.

11. For the advanced canoeist there are the same five situations which he must face in using the rowboat to effect a rescue. (Item 4.)

12. The rescue of the active victim is by far the most dangerous to perform, for the rescuer must cope with an unreasoning individual as well as with a craft that lacks stability to any great degree.

13. The active victim rescue is performed as follows:
   a. The rescuer paddles out toward the victim. As he is about to pass him, the paddle is extended so that the blade is directly against his chest. This enables the rescuer to hold the victim away until he quiets down.
   b. The rescuer then extends his paddle to the victim and brings him in so that he can grasp the side of the canoe.
   c. The rescuer sits on the bottom of the canoe on the side opposite to that of the victim.
   d. The rescuer then places his paddle in the water on the opposite side and performs a series of push-away strokes as the victim climbs in over the side. This push-away stroke is executed so that the side of the canoe is forced down as the effort is applied. This counterbalances the weight of the victim on the opposite side as he climbs into the canoe.

14. By far the most difficult is the passive or unconscious victim rescue. The rescuer must balance the canoe while the victim is pulled in over the side.

15. The passive victim rescue is performed as follows:
   a. The rescuer paddles very close to the victim and as the canoe glides past, the rescuer reaches down and grasps the wrist of the victim.
   b. The victim is held above water until the advisability of bringing him aboard is determined.
   c. If it proves necessary and possible, the victim is brought aboard and taken to shore.
16. By far the safest and easiest of the five rescues is the rescue of the tired swimmer. All the skill needed by the rescuer is the ability to paddle out to the victim, and the ability to execute a push-away stroke (one of the four basic strokes). (See special study activity guide on canoe strokes.)

17. The tired swimmer rescue is performed as follows:

   a. The rescuer paddles out to the victim and determines that he is actually a tired swimmer.

   b. Still keeping a safe distance to the lee side, the rescuer explains the procedure to the victim so that he will not capsize the canoe.

   c. The rescuer then extends his paddle to the victim and brings him in so that he can grasp the side of the canoe.

   d. The rescuer sits on the bottom of the canoe on the side opposite to that of the victim.

   e. The rescuer then places his paddle in the water on the opposite side and performs a series of push-away strokes as the victim climbs in over the side. This push-away stroke is executed so that the side of the canoe is forced down as the effort is applied. This counterbalances the weight of the victim as he climbs into the canoe.

18. The canoe over canoe rescue is a useful and efficient means of emptying a capsized craft of water without bringing it to shore. It combines speed with a maximum of safety to the rescuer and the victim(s). It is not especially difficult and may be performed by twelve year old boys or girls.

19. The canoe over canoe rescue is performed as outlined below:

   a. The rescuer comes near to the swamped canoe on the lee side and gains the attention of the victim. Care must be taken to stay beyond the reach of the victims for in their excitement they may swamp the rescuer's canoe. The rescuer should engage the victims in conversation and gain their confidence.

   b. After the rescuer has become reasonably sure that the victims are not unduly excited he should allow the victims to cling to each end of his own canoe.

   c. The rescuer then turns the capsized canoe over and removes any equipment that may be inside of the canoe.
d. The rescuer's canoe is then moved into a position so
that the keel of the victims' canoe is perpendicular
to the rescuer's canoe and so that one end of the
victims' canoe is just touching the rescuer's canoe
at the center.

e. The rescuer then lifts the end of the victims' canoe
and turns it slightly so that the "air lock" is broken.

f. The victims' canoe is then lifted so that the end is
hanging over the side of the rescuer's canoe.

g. The victims' canoe is then slid up and across the res-
cuer's canoe until it is completely out of the water.
It will then be at right angles to the rescuer's canoe
and will be completely free of water.

h. The victims' canoe is then rolled over into an upright
position.

i. The victims' canoe is then slid back into the water.
Care must be taken to lift it slightly to avoid damage
to the rescuer's canoe.

j. After the canoe is back in the water and is floating
free of the rescuer's canoe it is brought along-side the
rescuer's canoe. The rescuer is then able to hold the
victims' canoe until they climb back into it. This is a
safeguard against the canoe being capsized when the vic-
tims get into it.

20. The victim who has already slipped beneath the surface always
presents a large problem to a potential rescuer. With a canoe,
the procedure is essentially the same as that employed with a
rowboat except that a canoe would not be equipped with an anchor.
It is advisable to have the canoe properly outfitted with painters,
one of which should be long enough to allow the rescuer some free-
dom of movement and distance while attached to it. In this way
the rescuer can keep in contact with the canoe while searching the
bottom for the victim. If no painter exists, the rescuer may in-
tentionally capsize his canoe to insure that it will not blow away
on a windy day.
List of Probable Indirect and Incidental Learning Products

1. An appreciation for the ability of those who are able to use all rescue techniques at their disposal to the best advantage.

2. Realization that the safest possible rescue technique is the best one that can be employed by any life saver. The most spectacular rescue is not always the best rescue.

3. A desire to improve one's own small craft skills and safety techniques.

Large number of illustrations. Good text material covering areas represented by the title.


Some good material on small boat handling. Includes use of oars and sails. Also other valuable material pertinent to the safe use of small craft.


A good booklet on knotting and splicing manila and wire ropes.


Charts and booklets on rope, knots and splices. Available from either company free of charge.

For additional references see bibliography for Chapter II. The materials listed for the American Red Cross are equally useful in this unit.
Core Activities:

A. Introductory:

1. A class discussion should be held during the class time prior to the actual teaching of this unit. This discussion should center around the following points:

   a. the importance of the boat and canoe rescue techniques in the development of the complete "water safetyist".
   b. use of these techniques does not mean that the individual is weak in his swimming rescue techniques, but rather, is a sign of his understanding of the entire field of water safety.
   c. swimming rescue vs. small craft rescue.
   d. importance of practice in small craft rescue.

2. A discussion centering around the means that are available to this particular class to learn the skills necessary to small craft rescue.

B. For small group and individual investigations:

1. Upon what factors will the decision to use a swimming rescue or small craft rescue depend? Give several examples of instances where a swimming rescue would be indicated and give several examples of instances where a small craft rescue would be indicated. 2: 203-204.

2. Would the person who is an expert swimmer and who is well acquainted with the techniques involved in swimming rescue be more apt to use a swimming rescue than a small craft rescue? Why? 2: 203-204; 2: 228-229.

3. What five different situations relative to the condition of the victim might face the potential rescuer? 2: 229-237. Is this reference only applicable to canoe rescue? Can you think of any other situation where the condition of the victim might differ when using a swimming rescue or a rowboat rescue?

4. Compare section A on Special Study and Activity Guide I with the method for rescuing an active victim described in reference 2: 207. Are any important factors omitted? Are they really omitted or are they implied by the pictures Figures 108-111? Can you see any errors in these pictures?
5. Using the material supplied in Special Study and Activity Guide I, be prepared to point out any errors that you may see in the colored slides that will be shown at the next meeting of the class.

6. In a similar manner compare the remaining sections of the Special Study and Activity Guide I with the methods offered in reference 2: 203-212.

7. What would be some of the advantages of using a two or three-man team while effecting a rowboat or canoe rescue? How would the techniques differ from a single-man rescue? 2: 221-228.

8. What equipment is carried in a lifeboat? What is the reason for including each item? 2:40-41.

9. What specific rowing skills do you now have? Under what conditions would you now be able to use a rowboat as a rescue device? Do you feel that you need improvement in rowing skills to further your own safety? To further the usefulness of the rowboat as a rescue device? How do you plan to learn and practice these skills?

10. Using materials offered in Special Study and Activity Guide II, be prepared to point out any errors that may exist in the colored slides that will be shown at the next meeting of the class.

11. Compare techniques given on Special Study and Activity Guide II with those described in reference 2:229-237. Is the study guide in complete agreement with the text? What alternate method is offered in the text for preventing the victim from capsizing the canoe? When might this method be used and under what conditions might it not be practical? Give reasons.

12. Of the five possible situations given in the text 2:229-237, which do you consider to be the most difficult? Which do you consider to be the most practical for you? Take into consideration your present level of canoeing skills.

13. Do you feel that the canoe is acceptable as a rescue device? If so, under what conditions?


15. Is the canoe over canoe rescue difficult? Must a person be very strong to perform this rescue?
16. Could this same general technique be used to rescue a capsized canoe from some other type of small craft? Any other that is not mentioned in this reference?

17. In which step is the rescuer most apt to capsize? Least apt to capsize?

18. What is meant by the "air lock" and how does it affect the performance of the canoe over canoe rescue?

19. If you were asked to patrol a swimming area at an organized camp or beach by means of a rowboat, how would you go about it? What equipment would you expect to be provided? What information would you consider necessary for proper supervision of the area?

20. What organizations conduct schools in the field of small craft?

**Optional Related Activities.**

1. What is meant by the term "painter" as it applies to small craft? How is the painter attached to a rowboat? How should the painters be attached to a canoe? How is the painter used in life saving work? See Special Study and Activity Guides I (unit one).

2. In the light of your answer to questions 9 and 12 in the General Study Guide, make a well prepared plan of study and practice that will enable you to become more proficient in rowing and/or canoeing. It might be well to list the skills that you now know and a second list of those you intend to acquire. See Special Study and Activity Guides I, II, and IV of unit I, also bibliographies that have been provided for this course.

3. Knots are a practical and necessary part of all small craft work. If you have not already done so, you might like to learn some of the knots that are most commonly used. Chapter 9 and 2.

4. For your own future reference you might like to outline the steps used in all of the possible boat and canoe rescues. This paper might well serve as a guide at some later date when a boat or canoe is available to you. The instructor will gladly check this paper for you.
5. What rules of conduct would you set up as a standard for the small craft department in a typical girls' or boys' summer camp? What is the best way of "enforcing" these rules?

6. Most organized camps have well supervised general or free swims. How would you, as a person responsible for the lives and safety of a group of approximately 100 campers, organize the available personnel of 11 counselors to watch and supervise the entire swimming and boating area? If you would like to work out this activity, ask the instructor for Special Study and Activity Guide IV which contains diagrams of a typical camp waterfront with suggestions for such an organization.

7. Consider your answer to question 20 on the General Study Guide. You might like to make a comparison of the various small craft schools as to: curriculum, faculty, emphasis of instruction, cost, season of the year, location and admission standards. Information on these schools might well be acquired by writing direct to the organization or by interviewing graduates of the school.

8. Read the description of some of the ways in which a torpedo buoy may be used in swimming rescue. Find out as much as you can about the use of this rescue device and make a report to the class. There are two large posters available from the instructor showing three ways in which the torpedo buoy is used. Also there is a series of slides that you may show and describe to the class showing all four of the accepted methods of rescue. You might also like to try these rescues at the pool.
SELECTED ANNOTATED BIBLIOGRAPHY FOR THE PUPIL


   Includes one-hundred-sixty-eight pages on all phases of life saving and water safety. Used as a text for the junior and senior life saving courses as offered by the Red Cross. Available from local and area offices for $.60 per copy.


   A pamphlet dealing with the most commonly used knots, hitches and splices. Many illustrations.


   A complete manual of six-hundred-eighty-eight pages. Pictures and diagrams for use with sea scout groups. Has some information of use with the two units of this thesis. Available from the Boy Scout headquarters.


   A pamphlet prepared as a guide for the Rowing merit badge. Available from Boy Scout headquarters for $.25 per copy.

1/ For additional references see the bibliography supplied as a part of Chapter II. Many of the references contained therein are equally useful as a part of unit two.
CHAPTER IV
THE SIX SLIDE SERIES

1. Purposes of the Slides

Material covered by the slides.-- As a part of this thesis one-hundred-fifty-six 2x2 slides were prepared. These slides take into consideration the material found in chapters III and VIII of Life Saving and Water Safety dealing with personal safety and self rescue in the use of small craft, and with the use of small craft as a rescue device.

Reasons for including the slides.-- The slides were prepared with three main purposes in mind. First, many times water safety instructors must teach in situations such as the indoor swimming pool where the actual use of small craft equipment is impractical or impossible. Generally under such conditions the content of the two units of this thesis is either partially or wholly omitted. It is felt that a series of 2x2 slides showing the various techniques accurately performed would provide a better opportunity to present the important material contained in the two units. Second, many times some of the pupils enrolled in a typical water safety course have had previous experience in the use of some of the types of small craft. For these pupils the showing of the slides can do much to correct some of the common misconceptions concerning the safe use of small craft.

For the pupils with no previous experience with small craft, the showing of the slides and the teaching of the two units will give an opportunity to realize the necessity of receiving good small craft instruction and in many instances some of the facts and techniques will be remembered and used later. Third, there seems to be very little published material that will show or describe the exact techniques that are to be used. This is particularly true in the area of rowing where there seems to be an extreme scarcity of published materials. The techniques as pictured on the slides are by no means the only good method but are consistent with the techniques taught at the National Aquatic School at Camp Kwanis. The slides may also be used when the equipment is available as review material, for testing or as a large still picture for class study.

**How the pictures were made.** The slides, both in color and in black and white were taken on a Leica camera (model G) equipped with a 50mm Summar f2 lens and an Elmar 90mm telephoto lens. The indoor pictures were made on Kodachrome Type A film and were taken at the Babson Institute pool in Wellesley, Massachusetts and at the YWCA pool in Brockton, Massachusetts. Illumination was provided through the use of twin BC flash guns with two number 6 photoflash bulbs. Most of the outdoor pictures were taken at Camp Kwanis during 1953, 1954 and 1955 and were made on Kodachrome Daylight Type film.

1/ The National Aquatic School operated by the American National Red Cross at Camp Kwanis, South Hanson, Massachusetts. The school is operated for the training of water safety instructors each year during the month of June.
2. Annotated List of Slide Series

Series One. -- Safe boarding, Debarking and Landing Techniques.

A. Boarding procedure from a dock to a canoe. Correct boarding of the bow-man, the stern-man and one passenger. A sequence of six colored slides. Slides number:


2. Shows bow-man boarding canoe. Emphasis on good hand position, balance of the canoe and continued control of the stern-man.


4. Shows stern-man assisting passenger aboard. Main emphasis on continued control and responsibility of the stern-man.

5. Shows stern-man boarding the canoe. Emphasis on good balance and hand placement.

6. Shows all three aboard canoe and ready to leave. Emphasis on two different paddling positions shown and passenger keeping hands inside the canoe.

B. Boarding procedure from a beach to a canoe. Shows control of the bow-man and the boarding of both persons. A series of five colored slides.

1. Shows correct procedure as the stern-man boards the canoe. Emphasis on good hand placement, low position of the stern-man as he boards, and on the control of the bow-man as he steadies the craft between his knees.

2. Shows position of the stern-man as he kneels in the stern. Emphasis on good hand placement and continued control of the bow-man.

3. Shows the bow-man getting the canoe off the beach. Emphasis on fact that there is no need to use paddles to push off the beach.
4. Shows bow-man as he boards canoe. Main emphasis on good balance and keeping weight low while boarding.

5. Shows bow-man aboard canoe with canoe afloat. Emphasis on the care of the canoe when correct procedures are followed.


1. Shows correct position preparatory to boarding the canoe. Emphasis on good hand placement, (also note that the canoe is to be paddled stern-first.)

2. Shows canoeist reaching for the opposite gunwale. Emphasis on the position of that hand.

3. Shows canoeist with both hands in contact with the canoe. Emphasis on balance and centering of the foot over the keel of the canoe.

4. Same as above.

5. Shows correct kneeling position of single paddler. Emphasis on good hand placement and stability.

6. Shows an alternate kneeling position of single paddler. Emphasis the same as slide 5.

D. Correct boarding and debarking in a rowboat. Good hand position. Also illustrates correct position of the pull and feather position. A sequence of eight black and white slides.

1. Shows oarsman boarding rowboat from the dock. Emphasis on position of left foot and on good hand placement.

2. Shows oarsman aboard boat. Emphasis on the fact that a boat should be boarded while facing the bow.


5. Shows boat turned stern-end to the dock and oarsman positioning second oar. Main emphasis on ease of performance.

6. Same as slide #5 but one step further.

7. Shows boat completely free of dock. Emphasis on correct pull of the oars.

8. Shows boat further away from dock. Emphasis on correct feather position.

F. Correct landing of rowboat. Shows boat approaching dock, boating of oars, turn of boat and final landing. A sequence of five black and white slides.


2. Shows oarsman boating oar as he nears the dock. Emphasis on the need for practice for correct timing.

3. Same as slide #2 but with oar completely in boat.

4. Shows turn of the boat as it nears dock. Emphasis on care of equipment.

5. Shows completed dock landing. Emphasis on hand placement of the oarsman and on keeping the outboard oar in the water for control.

F. Correct dock landing in a canoe with a tandem team. Bow-rudder and correct stern stroke, turn of the canoe and final landing. A sequence of five black and white slides.

1. Tandem team shown traveling toward a dock.

2. Shows canoe as it nears the dock. Emphasis on position of the bow-rudder and stern draw.

3. Shows turn of the canoe as strokes begin to take effect. Emphasis on the necessity of speed in this type of landing.

4. Shows canoe as a landing is completed. Emphasis on speed of the canoe and the skill and timing of the team.
5. Shows the completed landing. Emphasis on the continual maneuvering of the team.

Series Two.— Capsize and self rescue.


1. Shows canoe as it goes over. Emphasis on danger of head injury if the victim neglects to hold on to gunwale.

2. Shows position preparatory to entering a swamped canoe. Emphasis on position of hands on the bilge and the horizontal position of the swimmer’s body.


4. Shows next step in entering a swamped canoe. Emphasis on the turnover and necessity of allowing the canoe to balance itself.

5. Shows victim in swamped canoe. Emphasis on the fact that any swamped canoe will support the weight of its occupants for an indefinite period of time.

6. Shows victim in a swamped canoe using an alternate hand-paddling technique. Emphasis on the fact that a canoe may be brought to shore through the use of this technique. This also allows complete safety from the danger of drowning to the person or persons involved.

H. Correct procedure for vaulting out of a canoe into deep water. Boarding the canoe from deep water. Also includes the use of one painter as a two line for a swimmer. A sequence of eight colored slides.

1. Shows position preparatory to leaving a canoe into deep water. Emphasis on the necessity of learning this technique.

2. Shows paddler as he leaves the canoe. Emphasis on retaining a hold on the canoe at all times.
3. Shows paddler in the water holding on to the side of the canoe.

4. Shows painter being used as a tow line for the canoe. Emphasis on the use of this technique.

5. Shows paddler preparing to enter an empty canoe from deep water. Emphasis on the need for this skill and on the position of the paddler's body in this picture.

6. Shows paddler pulling himself into the canoe. Emphasis on the necessity for pressing down on the opposite gunwale as the canoe is boarded.

7. Shows paddler almost completely into the canoe. Emphasis on getting the hips over the gunwale before the last step is attempted.

8. Shows paddler as he turns over and sits in the bottom of the canoe. Emphasis on the value of this method over climbing in.

7. Illustrates the "thrust and shake out" technique. The canoe is shown during all stages from the beginning of the thrust to the point where the canoe is completely emptied of water. A series of nine colored slides.

1. Shows position of the paddler's hands preparatory to the "thrust". Emphasis on not submerging the end of the canoe any more than necessary.

2. The first "thrust." Same emphasis.

3. Shows canoe after the first "thrust".

4. Shows canoe during the second "thrust".

5. Shows the beginning of the "shake out". Emphasis on the motion of the wave within the canoe.

6. Shows canoe during the "shake out". Emphasis on the fact that the wave should splash directly in the operator's face.

7. Continuation of the "shake out".
8. Shows the wave hitting the opposite gunwale and starting back toward the operator. Emphasis on the need for keeping this wave in motion during the entire process.

9. Shows "shake out" as the canoe is almost completely emptied of water.

Series Three.—Canoe Rescue Techniques.

J. Canoe over canoe rescue from beginning to end. Step by step progression. A sequence of eleven black and white slides.

1. Shows victim's position during entire rescue. Also the angle between the two canoes at the beginning of the rescue.

2. Shows rescuer removing equipment.

3. Shows the rescuer breaking the "air lock". Emphasis on the reason for this all-important step.

4. Shows the next step in the rescue. Emphasis on the danger to the rescuer during these first four pictures.

5. Shows position of the capsized canoe as it comes up over the rescuer's canoe. Emphasis on care of equipment.

6. Capsized canoe completely emptied of water. Emphasis on the fact that it is impossible to tip over either canoe at this point.

7. Shows rescuer ready to turn capsized canoe.

8. Shows capsized canoe empty of water and right-side up about to be pushed into the water. Emphasis on possible damage to either canoe at this point.

9. Shows capsized canoe partially back into the water.

10. Shows rescuer locking the gunwales of the two canoes together. Emphasis on the reason for this step.

11. Shows victim climbing back into canoe. Emphasis on the assistance being given by the rescuer.
K. Active victim rescue from a canoe. Approach, contact and final rescue. A sequence of six colored slides.

1. Shows rescuer approaching victim. Emphasis on the potential danger to the rescuer when attempting this type of rescue.

2. Shows rescuer extending paddle to the victim. Emphasis on the necessity for holding victim away from the side of the canoe.

3. Shows rescuer bringing victim in to the side of the canoe. Emphasis on the potential danger to the rescuer.

4. Shows victim climbing aboard canoe. Emphasis on the techniques used by the rescuer to keep the canoe from capsizing.

5. Shows victim nearly into canoe.

6. Shows victim into canoe. Emphasis on weight placement of both occupants in order to avoid capsizing.

L. Passive victim rescue from a canoe. Approach, contact and bringing victim aboard. A series of four colored slides.

1. Shows rescuer making contact with the victim. Emphasis on the necessity for low placement of weight of the rescuer.

2. Shows rescuer bringing victim into canoe. Emphasis on danger of injury to the victim and ease with which the canoe may be capsized.

3. Shows victim being brought aboard canoe. Same emphasis.

4. Shows the completed rescue. Emphasis on good first aid procedures.

Series Four.—Surfboard (paddle board) rescues.

M. Canoe over surfboard rescue in step by step progression from beginning to end. A series of eleven black and white slides.

1. Shows rescuer on surfboard alongside canoe. Emphasis on removing equipment.
2. Breaking the "air lock". Reason for this all-important step.

3. Shows canoe as it is brought across the surfboard. Emphasis on care of equipment.

4. Shows canoe as it is brought across the surfboard.

5. Shows canoe completely across surfboard.

6. Shows canoe as it is lifted and pushed away from the rescuer.

7. Shows canoe empty of water and in correct position.

8. Shows canoe completely emptied of water and right side up and partly back in water. Emphasis on position of rescuer on board.

9. Shows canoe floating free of surfboard.

10. Shows rescuer helping victim back into canoe.

11. Shows victim back in canoe.

N. Rescue of an active victim by the Costello (flip turn) Method. Contact, turn and position of the board. A series of eleven colored slides.

1. Shows rescuer making contact with the victim.

2. Shows board as rescuer begins turn. Emphasis on the need to keep victim's elbow at the corner of the board to avoid injury.

3. Shows position of the victim after the first turn and the position of the rescuer preparatory to making second turn. Emphasis for the need of retaining a firm grasp on the victim's wrists.

4. Shows board half way through second turn.

5. Shows second turn completed.


7. Shows rescuer seated on the board with the victim.
8. Shows rescuer positioning the forward arm of the victim.

9. Shows rescuer turning victim on to board.

10. Shows rescuer positioning victim on the board. Emphasize care in movement to avoid capsizing at this point.

11. Shows rescuer bringing victim ashore. Emphasize need for first aid care that must follow.

C. Rescue of an active victim by the Lake method. Shows steps from contact to final rescue. A series of seven colored slides.

1. Shows rescuer making contact with the victim.

2. Shows rescuer in position preparatory to bringing the victim onto the board.

3. Shows rescuer positioning victim's arms.

4. Shows rescuer lifting victim to a horizontal position in the water.

5. Shows rescuer bringing victim aboard. Emphasize necessity of counterbalancing the weight of the victim during this step.

6. Shows rescuer positioning victim on the board.

7. Completed rescue.

E. Rescue of a tired swimmer by the Pohl-Grader method. Correct position of the victim before, during and after the turn. A sequence of seven colored slides.

1. Shows the rescuer making a correct approach to the swimmer.

2. Shows tired swimmer in contact with the board.

3. Shows rescuer assisting victim to proper position.

4. Shows victim and rescuer in proper position preparatory to the turn.
5. Shows rescuer turning board to upright position.
6. Shows board right side up with victim on it.
7. Shows rescuer on board with completed rescue.

Series Five. — Resuscitation.

Q. Turn over, hand placement, and steps in back-pressure. Arm-lift method. A series of eight black and white slides.

1. Shows correct position for turn over.
2. Shows correct position of operator preparatory to application of pressure.
3. Shows correct position of operator directly before pressure is applied. Emphasis on operator sitting on heels.
4. Shows correct position of hands on back. Emphasis on fingers pointing to the toes of the victim.
5. Pressure applied.
6. Correct position of rescuer's hands at the elbow of the victim.
7. Shows correct arm-lift technique.
8. Returning victim's arms to the ground.

Series Six. — Shows four methods of using a torpedo buoy as a rescue device.

R. A tired swimmer rescue performed with a tow line to shore. A sequence of eleven colored slides.

1. Shows rescuer ready for take-off from a dock.
2. Shows rescuer as he leaves dock.
3. Shows rescuer as he approaches the victim with the torpedo buoy in tow.
4. Shows rescuer as he prepared to contact the victim.
5. Shows rescuer passing end of torpedo buoy to the victim. Emphasis on the need for passing the end of the buoy which has the tow line attached.

6. Shows victim grasping buoy correctly.

7. Shows rescuer as he begins to move to the rear of the victim.

8. Shows rescuer almost completely behind victim.

9. Shows rescuer giving signal to the team ashore.

10. Shows torpedo buoy in motion as the two are brought to shore.

11. Shows completed rescue.

F. A tired swimmer rescue performed without a tow line to shore. A sequence of three colored slides.

1. Shows rescuer before passing the end of the buoy to the victim.

2. Shows buoy being passed to the victim.

3. Shows the method of towing the victim to shore.

T. An actively drowning victim rescue performed with tow line to shore. A series of seven colored slides.

1. Shows rescuer in position prior to making contact with the victim. Emphasis on quick reverse.

2. Shows rescuer making contact with the victim. Emphasis on need for maintaining reversed position.

3. Shows victim in "chin-pull". Emphasis on necessity for maintaining control over victim during this phase.

4. Shows victim secured in the "chin-pull".

5. Shows rescuer preparing to place victim in a "cross-chest carry".
6. Shows victim in "cross-chest-carry" and rescuer reaching for the buoy.

7. Shows rescuer and victim being brought to safety.

8. Shows an actively drowning victim rescue performed without the aid of a tow line to shore. A series of nine colored slides.

1. Shows rescuer approaching the victim.

2. Shows the rescuer as he makes contact with the victim. Emphasis on necessity of using the quick reverse.

3. Shows rescuer after making contact.

4. Shows rescuer as he secures the victim in a "chin-pull".

5. Shows rescuer as he prepares to place victim in a "cross-chest-carry".

6. Shows rescuer as he reaches for the torpedo buoy.

7. Shows rescuer with victim in "cross-chest-carry" and establishing contact with the buoy.

8. Shows rescuer placing victim's arm in place for maximum support.

9. Shows method of bringing victim to shore.
APPENDICES
APPENDIX A

AVAILABLE RED CROSS MATERIALS AND DIAGRAMS

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2. Basic Boating Course Skill Sheet ............................................. 47
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12. Homemade Canoe Trailer ......................................................... 57
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14. Boat Mooring Layouts for Lakes .............................................. 59
15. Canoe Paddling Strokes ........................................................... 60
16. Proper Trim of Canoe for Different Conditions ....................... 62
Use ARC 1079 for teaching this course.

Use check (✓) for satisfactory performance in each test item. Check off items accomplished as course progresses.

Final grades for those completing course should be: E-excellent; G-good; P-passing; F-failed.

Submit two completed copies of this form to the local chapter. Retain one copy for your own records.

The chapter will issue certificates.

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COURSE GIVEN AT: (chapter, camp, club, school, etc.)

LOCATION (City and state)

DATE COURSE BEGAN

DATE COURSE COMPLETED

NAME AND ADDRESS OF ORGANIZATION FOR WHICH COURSE WAS CONDUCTED

SIGNATURE OF INSTRUCTOR

CERTIFICATES ISSUED:

FOR CHAPTER OR AREA USE
- Use ARC 1079 for teaching this course.
- Use check (✓) for satisfactory performance in each test item. Check off items accomplished as course progresses.
- Final grades for those completing course should be: E-excellent; G-good; P-passing; F-failed.
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COURSE GIVEN AT: [chapter, camp, club, school, etc.]
LOCATION [city and state]

DATE COURSE BEGAN | DATE COURSE COMPLETED | SIGNATURE OF INSTRUCTOR

FOR CHAPTER OR AREA USE

CERTIFICATES ISSUED:

FOR USE BY AREA OFFICE ONLY

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BASIC SAILING COURSE SKILL SHEET
(For use by authorized Red Cross sailing instructor.)

- Use ARC 1070 for teaching this course.
- Use check (✓) for satisfactory performance in each test item. Check off items accomplished as course progresses.
- Final grades for those completing course should be:
  E=excellent; G=good; P=passing; F=failed.
- Submit two completed copies of this form to the local chapter. Retain one copy for your own records.
- The chapter will issue certificates.

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<th>WINNING AND JUDGING</th>
<th>MARLINSPIKE SEAMANSHIP</th>
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COURSE BEGAN: ___________________________ DATE COURSE COMPLETED: ___________________________
SIGNATURE OF INSTRUCTOR: ___________________________

CERTIFICATES ISSUED: ___________________________
AMERICAN RED CROSS

SIZE OF BIGHT TO SUIT CANOE END

BOWLINE

STERN THWART

QUICK-RELEASE TOWING BRIDLE
DEVISED BY E. ROSS ALLEN
A.C.A.-10166

DRAWN BY: W. VAN B. CLAUSSEN APRIL 1944
STORM LINE TO SECURE CANOES IN CASE OF WIND. HOOKS ON 10-4 NAILS BENEATH CROSS-BAR.

2X4" 

21" MAX TO FACILITATE STEPPING OVER.

CANOE'S STORED FLAT. ANY CANOE IMMEDIATELY AVAILABLE. REQUIRES NATURAL SHADED SITE. WASTEFUL OF SPACE, BUT SIMPLE AND INEXPENSIVE TO BUILD.

MOST ECONOMICAL OF GROUND SPACE, 6' BY LENGTH OF CANOES. CANVAS ROOF HAS CURLING RIGGING IN CASE OF WIND STORM. CANOES LASHED WITH STORM LINES.

8X CANOE ILLUSTRATED; WITH CAREFUL PLANNING A STACK OF EIGHT 15' "JIBWAY" WILL FIT IN SAME OVERALL HEIGHT, 9' TO TOP CROSS-BAR.

SCREW-EYE TYPE PORCELAIN INSULATORS AS LINE GUIDES.

SINGLE-BAR RACK, CONVENIENT FOR ADULT ONE-MAN HANDLING. ANY CANOE IMMEDIATELY AVAILABLE. REQUIRES NATURAL SHADED SITE, AND AMPLE GROUND SPACE. LAYOUT IS BASED ON 16' CANS CANOES.

TYPES OF OUTDOOR CANOE STORAGE RACKS

AMERICAN RED CROSS, WASHINGTON, D.C.

W. VAN B. CLAUSSEN

DECEMBER 1944
SAILBOAT NOMENCLATURE

THE AMERICAN NATIONAL RED CROSS

W. VAN B. CLAUSEN
DEC. 1945

Masthead
Headboard [In peak of sail]
Jib Stay
Jib Halyard

Battens
Leech
Luff
Mainsail

Shroud

Cockpit Coaming

Deck

Chainplate

Bow

Hull

Rudder

Main Sheet
Tiller

Rudder Head

Foot

Boom

Jib Sheet

"SNIPE"

One-Design

L.O.A. 15' 6"
Beam 5'
Depth 20"

Sail Area 100 Sq. Ft.

FEET:

Midships

Stern

Centerboard

01-81675m

ARC 1065-6 (5-46)
CANOE CATAMARAN
FOR
ALL UTILITY PURPOSES
AND
PAGENTRY

THE AMERICAN
NATIONAL RED CROSS

USE TWO OR MORE CANOES. CANOES MUST BE ABSOLUTELY PARALLEL. LASH CENTER BEAM FIRST; IF THWART IS MISSING, PASS LASHING AROUND THE HULL. LASH THE CENTER CANOE AND THE TWO OTHER BEAMS WHEN LASHING THE PLATFORM. WITH HEAVY LOADS AND CHOPPY WATER, LEAVE CANOES OPEN FOR BAILING, OTHERWISE PLATFORM CAN BE SOLID.

W. VAN B. CLAUSSEN  FEB. 1945
PORTABLE STORAGE RACK FOR SURFBOARDS

THE AMERICAN NATIONAL RED CROSS

W. VAN B. CLAUSSEN
JANUARY 1945

BILL OF MATERIAL:
101 LINEAL FEET 2X4" DRESSED LUMBER
29 - 1/4" CARRIAGE BOLTS, 4 1/2" LONG
4 - 9/16" " " 7"

OR

2 1/2 LBS. 20D. WIRE NAILS
INBOARD LENGTH OF LOOM EQUALS \( \frac{1}{2} \) THE SPAN BETWEEN ROWLOCKS PLUS 2".

TOTAL LENGTH OF OAR EQUALS ONE-SEVENTH OF INBOARD LENGTH MULTIPLIED BY 25.

LEVERAGE RATIO = 7:18.

DISTANCE, BUTTON TO HANDLE, EQUALS \( \frac{7}{25} \) TOTAL LENGTH OF OAR.

OAR SHOULD BALANCE WITHIN 12" OF BUTTON.

AMEERICAN NATIONAL RED CROSS

FORMULA FOR CORRECTLY FITTING OARS TO A BOAT

W. VAN B. CLAUSSEN
AUGUST 1949.
BOAT MOORING

[DEEP WATER AND/OR ROCKY BOTTOM]
SCOPE OF 1/4" GALV CHAIN AT LEAST THREE TIMES DEPTH OF WATER BENEATH BUOY.
E.J.WILLIS P-754 16' x 24' CAN-BUOY OR SEE MARCH-APRIL 1948 "REPORTER" FOR HOME-MADE BUOYS.

STEM-TO-STEM BUOY MOORING
E.J.WILLIS P-755 BUOY, OR HOME-MADE TYPE, WITH CHAIN OF 3-1 MIN. SCOPE AND CEMENT-BLOCK OR GALV. IRON ANCHOR OF APPROPRIATE WEIGHT FOR NUMBER AND SIZE OF BOATS TO BE MOORED.

BOAT MOORING LAYOUTS FOR LAKES.
THE AMERICAN NATIONAL RED CROSS WASHINGTON, D.C.
W. VAN B. CLAUSEN MARCH 1950

MOORING SLIPS
WITH SINGLE-PLANK CATWALKS AND ROPE BRIDLES TO BOW.

INDIVIDUAL COUNTERWEIGHT-AND-STAKE MOORINGS.

"PIKET-LINE" WITH INDIVIDUAL COUNTERWEIGHTS.

BOAT DOCK MOORING
ROPE, GARDEN-HOSE, OR CORK-FILLED CANVAS FENDERS BETWEEN ADJACENT BOATS.

BOAT BASIN
1/2" GALV. CHAIN OR WEIGHTED ROPE BOW MOORING LINES.
CANOE PADDLING STROKES

TO GO STRAIGHT AHEAD

"BOW" STROKE

"J-STROKE" FOR STERN MAN

"BACKWATER" STROKE FOR BOW MAN

"BACKWATER" STROKE FOR STERN MAN

TO MAKE A PIVOT TURN TO PORT

HALF "REVERSE-SWEEP" STROKE FOR BOW MAN

HALF "SWEEP" STROKE FOR STERN MAN

THE AMERICAN NATIONAL RED CROSS
WASHINGTON, D.C.

W. VAN B. CLAUSSEN + FEB. 1951
CANOE PADDLING STROKES

**DIAGONAL SLIDE TO STARBOARD TO AVOID A SNAG**

**BOW MAN HOLDS “BOW-RUDDER”**

**DIAGONAL SLIDE TO PORT**

**BOW MAN HOLDS “CROSS BOW-RUDDER”**

**QUARTER “REVERSE SWEEP” FOR STERN MAN**

**DIAGONAL “DRAW” STROKE FOR STERN MAN**

**TO MOVE BROADSIDE TO STARBOARD**

**“DRAW” STROKE FOR STERN MAN**

**“PUSH-OVER” STROKE FOR BOW MAN**

THE AMERICAN NATIONAL RED CROSS
WASHINGTON, D.C.

W. VAN B. CLAUSSEN
FEB. 1951
PROPER TRIM OF CANOE FOR DIFFERENT CONDITIONS

ONE MAN IN STRONG HEAD- OR SIDE-WIND, OR WHEN MAXIMUM MANEUVERABILITY IS NEEDED IN FAST WATER OR RAPIDS

ONE MAN IN MODERATE SIDE-WIND OR A Stern-WIND

ONE MAN IN SMOOTH WATER, WITH CAMPING DUFFLE ABOARD

THE AMERICAN NATIONAL RED CROSS WASHINGTON, D.C.

W.VAN B. CLAUSSEN FEB. 1951
## APPENDIX B

**SPECIAL STUDY AND ACTIVITY GUIDES**

FOR USE WITH OPTIONAL RELATED ACTIVITIES

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SPECIAL STUDY AND ACTIVITY GUIDE I

CANOEING NOMENCLATURE AND CARE

UNIT I
A. Nomenclature

1. What is meant by such terms as: Bow, stern, thwart, keel, deck, gunwale and rib? 1: 79 & 11; 9: lb-19; b: 1065-10 1/ and page 2 this guide.

2. Are the above terms applicable to rowboats or canoes? (See page 3 this guide.)

3. Is it important for users of small craft to acquire a small craft vocabulary? Why?

4. Which of the terms included in the references given in question one above, do you consider necessary for the occasional user of small craft to know? Give reasons. 2/

B. Care of Equipment (9:59-67; 1:10)

1. What are some of the ways in which a canoe may be damaged?

2. How should a canoe be stored when not in use?

3. What type of footwear is best suited to canoeing?

4. Why is it necessary to keep sand out of canoe and how can this be done?

5. What is meant by the "bang plate"? Why should this term be discarded? 9:138.

1/ Canoe Nomenclature and Details, The American National Red Cross Form 1065-10.

2/ See special guide IV for a description of the terms required in a typical summer camp.
SPECIAL STUDY AND ACTIVITY GUIDE II

CANOEING STROKES

UNIT I
If you have paddled a canoe you may be familiar with some of the strokes used in canoeing. Such strokes as the quarter-sweep, the J-stroke and the draw-stroke are but a few that might be mentioned. All of the fifteen to twenty strokes used by the advanced canoeist can be broken down into four basic, one element strokes. These four strokes are as follows: (1) straight away, (2) backwater, (3) draw, and (4) pushaway. Each of these strokes is a one element stroke because it moves the canoe in only one direction. Likewise the J-stroke is a two element stroke because it consists of two elements — the straight-away, and the pushaway. In the same way all of the other strokes used in canoeing may be broken down into two or more elements.

A. Strokes (see ORA 6.) Read 8: Chap. IV; 9: Chap. III; and 1:32-34.

1. How many strokes listed in 1:32-34 have you seen or used? What elements are contained in each?

2. What does Pulling consider as the five basic strokes?

3. What stroke is added to the list of four at the top of this guide?

4. Is this stroke really a one element stroke? If not, of what element is it made?

5. Why do you think that Pulling considered it a basic stroke? Consider the difference between the word "basic" used in Pulling and the words "one element" used at the top of this page.
B. Lever classification of the oar and paddle (see ORA 7)

In solving this problem first consider the oar, later supply what you find out to the paddle. Before drawing any conclusions consider each of the following questions:

1. When we row a boat, what are we trying to move – the water or the boat?
2. Would you accept a definition of resistance that stated that it was the thing acted upon by the effort?
3. What then, is your conclusion on the question of whether the boat or the water is the resistance?
4. Where is the fulcrum? What makes this fulcrum unique?
5. Is your thinking consistent with 1:26; and 3:30?
6. Is the answer the same for oars and for paddles?
7. In paddling, which arm is used to deliver the effort?
8. Why should the lower hand grasp the paddle as close to the blade as is possible?
9. Which arm should tire first? Why?
10. How could the oarsman best use this information? The paddler? Which one needs to understand this concept more?
SELF-SCORING TEST ON CANOE STROKES

Directions Consider in the following set of questions that the bow-man is paddling port and the stern-man is paddling starboard. Choose the best answer to the question from the following list, and place the corresponding letter in the blank to indicate your choice. Number one is done for you.

- a. draw
- b. pushaway
- c. straightaway
- d. backwater
- e. hold
- f. quarter-sweep
- g. half-sweep
- h. full-sweep
- i. back-sweep
- j. J-stroke
- k. emphasized-J-stroke
- l. diagonal-draw
- m. sculling
- n. reverse-sculling
- o. bow-rudder
- p. cross-bow-rudder

EXAMPLE:
1. When a gradual turn to port is to be executed, the bow-man will use a __, and the stern-man will use a __.

2. When a gradual turn to starboard is to be executed, the bow-man will use a __, and the stern-man will use a __.

3. When a pivot turn to port is to be executed the bow-man will use a __, and the stern-man will use a __.

4. When a pivot turn to starboard is to be executed the bow-man will use a __, and the stern-man will use a __.

5. When a racing turn to port is to be executed the bow-man will use a __, and the stern-man will use a __.

6. When a racing turn to starboard is to be executed the bow-man will use a __, and the stern-man will use a __.

7. If after the canoe has stopped moving forward, it is necessary to move it broadside across the water to the port, the bow-man will use a __, and the stern-man will use a __.
8. If after the canoe has stopped moving forward, it is necessary to move it broadside across the water to the starboard, the bow-man will use a ____ and the stern-man will use a ____.

9. Another answer to question 4 would be for the bow-man to use a ____ and the stern-man to use a ____.

10. Another answer to question 8 would be for the bow-man to use a ____ and the stern-man to use a ____.

Directions: Decide on the elements contained in each of the strokes given in questions eleven through twenty. Next to each stroke you will find three blank spaces. Fill in the blank spaces with the letter corresponding to the four basic, one-element strokes listed below. You may use one, two, or three blank spaces according to the number of elements contained in the individual stroke.

a. straightaway b. backwater c. draw d. pushaway

For example, the quarter-sweep contains two elements, ____ the pushaway and the straightaway. The answer would be ____

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ANSWER KEY FOR SELF-SCORING TEST ON CANOE STROKES

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The three pages of this guide are devoted to a statement of canoeing requirements in a typical summer camp. Further information may be found in 9:92-102, or 1/
CANOEING REQUIREMENTS

BASIC COURSE (bow paddler)

I. Swimming - intermediate class (Red Cross)

II. Nomenclature
   a. bow
   b. stern
   c. amidships
   d. gunwale
   e. ribs
   f. canvas
   g. thwarts
   h. deck
   i. planking
   j. keel
   k. port
   l. starboard
   m. grip
   n. shaft
   o. blade
   p. throat
   q. tip

III. Strokes
   a. straightaway
   b. backwater
   c. draw
   d. push-away
   e. hold

IV. Care of Equipment
   a. care of canoe
   b. care of paddles
   c. rules of bulletin board

V. Simple Landings and Launchings

VI. Tip Test and Personal Safety
INTERMEDIATE COURSE (stern paddler)

I. Swimming - swimmer class (Red Cross)

II. Nomenclature
   a. sheer line
   b. waterline
   c. freeboard
   d. draft
   e. tumblehome
   f. bilge
   g. beam
   h. stem
   i. stem band
   j. depth

III. Strokes
   a. diagonal draw
   b. quarter sweep
   c. J-sweep
   d. sculling
   e. reverse sculling
   f. back sweep
   g. backing
   h. bow-rudder
   i. cross-bow-rudder

IV. Rescue and Safety Skills
   a. Changing places
   b. Safety of passengers
   c. Canoe over canoe rescue. (tandem)

V. Landings and Launchings
   a. bow and stern (dock)
   b. bow and stern (beach)

VI. Written exam on strokes
CANOEING REQUIREMENTS

ADVANCED COURSE (single paddler)

I. Swimming - swimmer or life saving passed (Red Cross)

II. Strokes
   a. tandem
      All strokes in excellent form that were learned on the basis and intermediate courses.
   b. singles
      1. full sweep
      2. draw-J
      3. backing
      4. bow-rudder
      5. cross-bow-rudder
      6. pivot turn

III. All landings tandem and singles

IV. Safety and Rescue
   a. canoe over canoe rescue (single)
   b. active victim rescue
   c. passive victim rescue
   d. tired swimmer rescue
   e. shake out

V. Canoe trips
   a. transportation
   b. portage
   c. repair (temporary and permanent)
   d. campcraft
      1. shelters
      2. fire building
      3. outdoor cooking
      4. food and supplies
   e. take part in a three day trip

VI. Written Exam
SPECIAL STUDY AND ACTIVITY GUIDE IV
ROWBOAT RESCUE

UNIT II
SPECIAL STUDY AND ACTIVITY GUIDE IV
ROWBOAT RESCUES

Study the pictures in each of the following series and answer the questions to the right of each one.

A. Active victim

1. Picture of a life-boat in position on shore
   1. Why are the oars left in the rowlocks?
   2. Would a boat not used for rescue work be left in this position? Why?

2. Picture of rescuer taking off from shore
   1. Is there any danger in this step?
   2. Do you think that this step would take very much practice?

3. Picture of the rescuer as he rows toward the victim
   1. What are the two main purposes of this step?
   2. Would the rescuer be apt to back a boat toward a victim, thus making it easier to see the victim?

4. Picture just before contact is made— one car slid in behind the rescuer
   What is the main purpose this step?
5. Contact made—victim holds on to ear—near lock in the boat

6. Victim being brought around to the transom

7. Victim holding on to the transom

8. Crew of two on the way to help a victim

9. Crew of three on way to help victim

1. How does the rescuer keep the victim from capsizing the boat?
2. Is the rowlock on the side nearer the victim up or down?
3. Is this point important? Why?

1. Is speed essential in this step?
2. Could the victim be brought in over the side of the boat? Why?

1. Would it be necessary for the victim to be brought into the boat?
2. Give several ways in which he might be secured to the boat.

What is the main advantage of the crew of two over the single man rescue?

What are the main advantages of the crew of three over the single man rescue? Over the tandem crew?
B. Passive victim

1. Contact - step one -
   oar and lock in the
   boat

2. Contact - step two -
   Rescuer grasps the
   victim

3. Rescuer holding the
   victim against the
   transom

1. Why is the far oar still
   in the water?
2. What is the main reason
   for boating the oar and
   lock nearer the victim.

C. Tired swimmer

1. Tired swimmer -
   method of contact -
   rescuer backing the
   boat toward the
   victim

2. Tired swimmer -
   Victim clinging into
   the rowboat

1. As the victim is grasped,
   what is done with the far
   oar?
2. Need the rescuer stand up
   when bringing the victim
   around to the transom?

Under what conditions would
the victim be brought aboard?

1. Why is this method of
   contact acceptable in
   this case?
2. Give several instances
   where even the expert
   swimmer might become a
   potential drowning vic-
   tim.
D. Recovery of a submerged victim

1. Rescuer climbing into the boat and maintaining a hold on the victim.

What is the main difficulty in this rescue?

2. Rescuer bringing the victim into the boat.

If the rescuer is unable to bring the victim aboard, how could he bring the victim ashore?

E. Equipment for a life-boat

A single picture of a well-equipped lifeboat.

1. Name all articles contained in the boat and give use.

2. Which of these articles should be in the boat to insure safety to the oarsman?
SPECIAL STUDY AND ACTIVITY GUIDE V

CANOE OVER CANOE RESCUE

UNIT II
STUDY GUIDE

Canoe Over Canoe Rescue

Study each of the pictures in the following series and answer the questions to the right of each one.

1. 

a. What is the purpose of this step?
   
b. Is there any particular danger to the victim or the rescuer?

2. 

a. What is the purpose of this step?
   
b. Could the victim help with this?

3. 

a. Why is the canoe turned slightly?
   
b. Is there any particular danger here?
   
c. Does it make any difference which end of the canoe is lifted?

4. 

Is the canoe heavy to lift into this position?
What is the main danger to the equipment here?

a. Is there any danger of capsizing at this point?

b. Which way will he turn the canoe?

Would it be safe for the rescuer to stand up during this step? Why?

Is there any water in the victim's canoe at this point? In which step is the water completely emptied?

Watch out for scraping.
Be sure to keep a hold on the canoe as it goes back into the water.

Has the victim changed positions since the first picture?

a. What is the rescuer doing?
b. Where is the victim? Why?

a. What is causing the splash of water behind the victim?
b. What is the rescuer doing?

Don't forget to give back the paddle.
OPTIONAL RELATED

SPECIAL STUDY AND ACTIVITY GUIDE VI

USING PERSONNEL AND EQUIPMENT TO THE BEST ADVANTAGE FOR THE

INSURANCE OF SAFETY ON CAMP WATERFRONTS

UNIT II
A. Location of equipment when waterfront is not in use

1. Using a sheet of paper at least 9 x 11, draw a scale \(\frac{1}{1}\) diagram of the waterfront layout that is described below:
   a. Swimming dock of the "H" type with each runner 40 feet long and with a cross piece of 75 feet.
   b. There are two "T" type docks available — one for boating and one for canoeing. Each of these docks is composed of two sections one twenty-four feet long and the cross piece which is sixteen feet long. One of these docks is located to the right of the main dock, and the other is located to the left of the main dock.
   c. The dock to the right is to be used for canoeing, surfboarding and sailing; while the dock to the left is to be used for rowing only.
   d. Near the boat dock is a small building used for dressing and storage of equipment.

2. Indicate the best placement of each of the following articles of equipment by drawing the symbol given after each item, directly on your waterfront diagram.
   a. Raft 12' x 15' ———R
   b. Float or lemon lines as they are needed ———
   c. Four fifteen-inch ring buoys ————xRB
   d. Two diving boards ———DB (include depth)
   e. One set of grappling irons ———xMx
   f. Two first aid kits ———FA
   g. Tagboard for each activity TB
   h. Fifteen rowboats — RB select the number of lifeboats that you feel are necessary and indicate their placement by ——— LB
   i. Eight canoes
   j. Four surfboards
   k. Three sailboats
   l. One tower twelve-feet high ———GT

1/ If you are currently employed by a camp you might like to draw a diagram of your own waterfront and equipment.
B. Location of campers, personnel and equipment when waterfront is in use.

1. Indicate where each of the following groups should be located in the swimming area:
   a. Thirty novices
   b. Twenty-five beginners (have passed the ARC test)
   c. Twenty-five above the beginner level.

2. Indicate the general position of each of the small craft listed below:
   a. Eight campers go canoeing
   b. Four campers go sailing
   c. Two campers go surfboarding
   d. Six campers go rowing

3. Indicate the position of each lifeboat while the waterfront is in use for general swim and boating period.

4. There follows a brief description of the qualifications of each person who is available for duty on the waterfront. Decide on the most advantageous position for each person to occupy, and place the number given immediately after each description, on your diagram. Add a brief description of the duties of each, or simply draw an arrow to indicate the area of responsibility for each person.
   a. Waterfront director (1)
      an expert all-round aquatic expert
   b. Assistant waterfront director (2)
      primarily trained in swimming but has good ability in all aquatic activities
   c. Head of canoeing (3)
      expert canoeist, swimmer and life saver
   d. Canoeing assistant (4)
      good canoeist and swimmer but little training in swimming rescue
   e. Sailing instructor (5)
      good oarsman and sailor but quite limited in swimming rescue
   f. Boating instructor (6)
      excellent oarsman and swimmer - good life saving ability
   g. Two members of the swimming staff (7) & (8)
   h. Three general counselors not particularly suited to waterfront work (9) (10) & (11)
   i. Two Counselors in Training (12) & (13)
   j. Two junior life savers-age 14 (14) & (15)
      both with good surfboard rescue techniques.
5. Name some devices that the waterfront director can use to keep a watch on every swimmer and small craft user. 2.48-55. There are many techniques that a director has at his disposal other than the ones mentioned in this reference. They are largely a matter of discovering what and where are the potential dangers and devising a method to overcome each hazard.
APPENDIX C

1. "Away With the Wind", (16mm, sound, 1 reel), Atlantic Refining Company, 260 Broad Street, Philadelphia, Pa.

   The story of ships from square-riggers to modern yachts, Hawaiian outrigger canoes, surfboard riding, and motorboat racing.

2. "Birch Bark Canoe", (16mm, sound, color, 10 minutes), Film #687, The Quebec Tourist Bureau, 48 Rockefeller Plaza, New York.

   Tete-de Boucles Indians of the Upper St. Maurice region build a birch bark canoe in the traditional manner.

3. "Oars and Paddles", (16mm, sound, 1 reel, 24 minutes), Area Offices of the American National Red Cross, Eastern Area located in Alexandria, Virginia.

   Self-rescue, handling and rescue techniques with rowboat and canoe.

4. "Paddle Pointers", (16mm, silent, 1 reel, 15 minutes), Dale E. Roe, 906 Fallon Street, Oakland 7, California.

   Safety techniques for the single paddler and tandem paddling techniques.

5. "Paddle Up Front", (16mm, color, sound), G. Roy Terry, Jr., 114 South Forest Avenue, Palatine, Illinois.

   Tandem crew paddling techniques. Done as a thesis at Springfield College.

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I/ A more extensive annotated list will be found in Course in Basic Boating, Canoeing and Sailing, form 1079, The American National Red Cross, Washington, D.C., 1952, pp. 12-13.
6. "Portage", (16mm, color, sound, 1 reel) 21fb7 International Film Bureau, 6 North Michigan Avenue, Chicago 2, Illinois.

Indians building a birch bark canoe— from felling the tree to completion.

7. "Safety Ahoy", (16mm, sound, 1 reel, 15 minutes, color), Aetna Life Insurance Affiliated Companies, Motion Picture Division, Hartford, Connecticut.

Rowboat, sailboat, and motorboat safety. Handling hints, common hazards. Rules of the road shown by animated models.


All types of water sports from yacht races, sailboats, motorboats, aquaplanes, surfboarding, and swimming at the old swim hole to underwater skills by experts.
GENERAL BIBLIOGRAPHY


1/ For annotation of some of these references see the bibliographies contained within the two units.


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