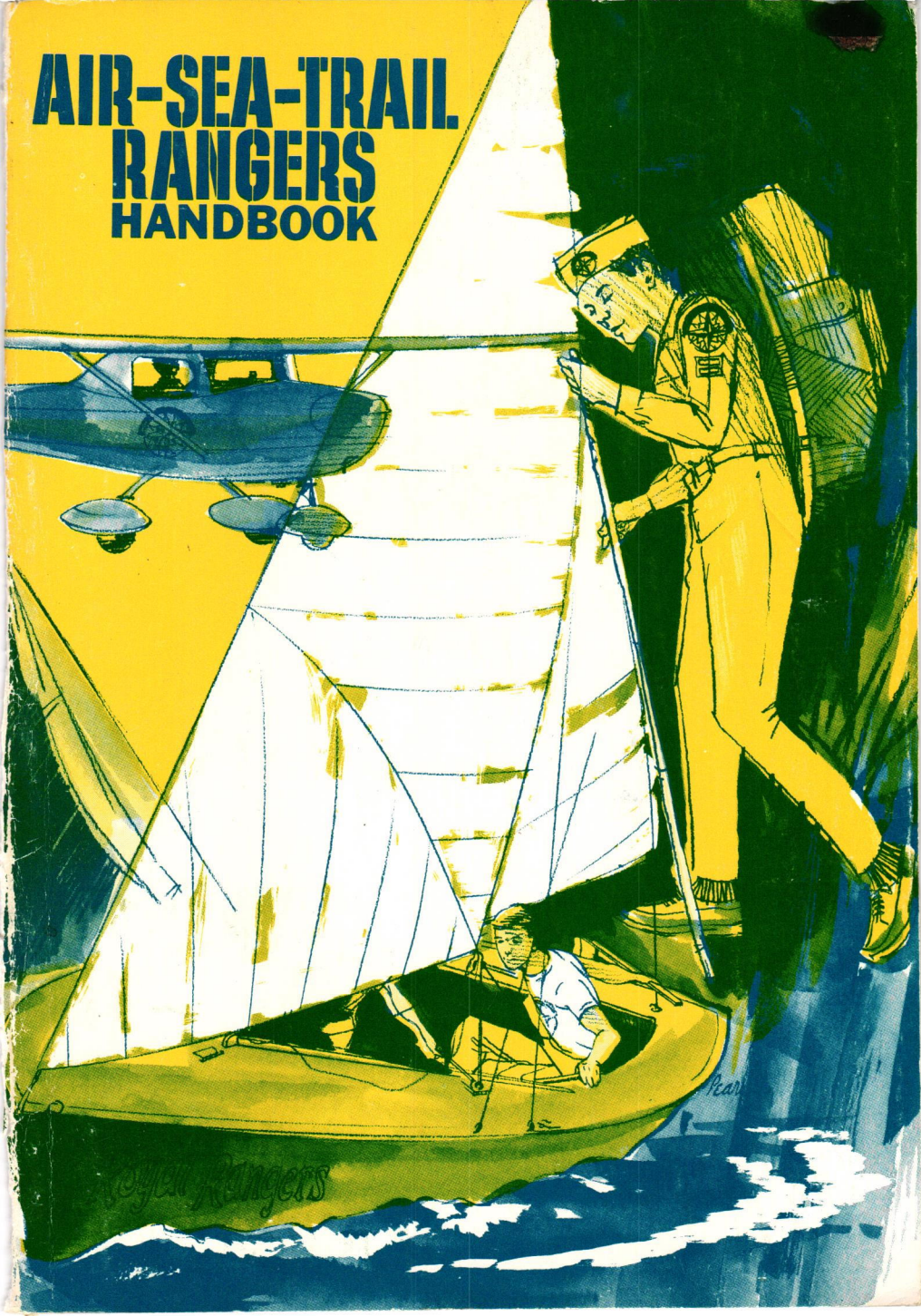


AIR-SEA-TRAIL. RANGERS HANDBOOK



AIR-SEA-TRAIL RANGERS HANDBOOK

**A HANDBOOK FOR ROYAL RANGERS
AGES 15, 16, AND 17**

Prepared by
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Royal Rangers Division
Department of Men's Ministries

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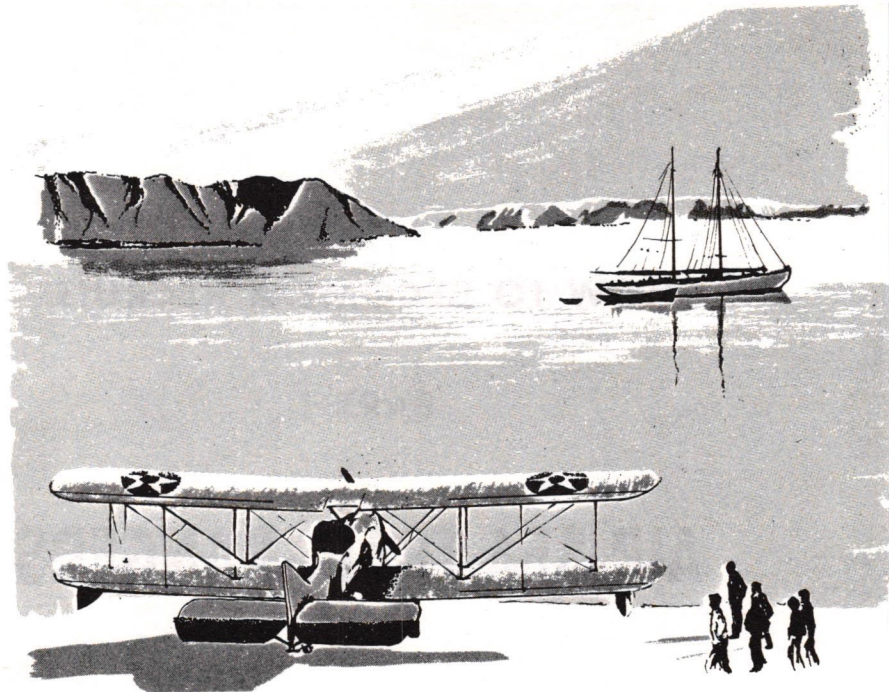
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WELCOME

Welcome to the ROYAL RANGERS Sea Ranger, Air Ranger, and Trail Ranger Program.

Across the centuries courageous spirits have charted new seas, opened new airways, scaled new mountains—quested with telescope, microscope, or test tube, making exciting discoveries.

In the ROYAL RANGER program, you, too, may explore mountains, forests, streams, the air, and the sea, but as young men you will be searching also for trails that will lead you to the most important goal of all—God's will for your life.

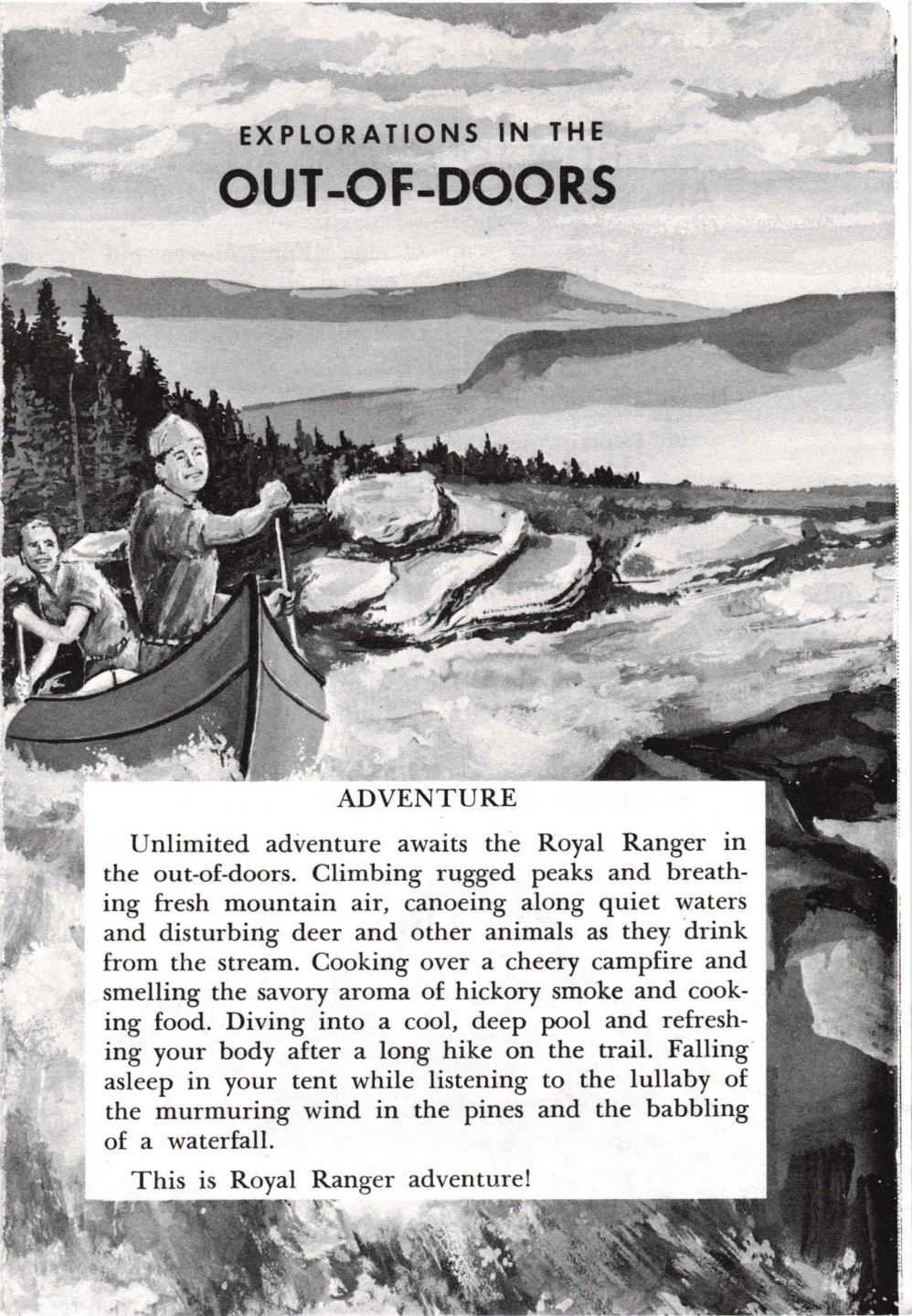
Let's get on board, there are lots of exciting adventures ahead.

JOHNNIE BARNES
National Commander
Royal Rangers

HOW TO BECOME A RECRUIT

PART I

AIR-SEA-TRAIL RANGERS



EXPLORATIONS IN THE **OUT-OF-DOORS**

ADVENTURE

Unlimited adventure awaits the Royal Ranger in the out-of-doors. Climbing rugged peaks and breathing fresh mountain air, canoeing along quiet waters and disturbing deer and other animals as they drink from the stream. Cooking over a cheery campfire and smelling the savory aroma of hickory smoke and cooking food. Diving into a cool, deep pool and refreshing your body after a long hike on the trail. Falling asleep in your tent while listening to the lullaby of the murmuring wind in the pines and the babbling of a waterfall.

This is Royal Ranger adventure!

HOW TO BECOME AN AIR-SEA-TRAIL RANGER RECRUIT

- I. Be at least 15 years of age. (Fourteen-year-old boys who have already earned all ratings in the Trailblazer program may also become Air-Sea-Trail Rangers.)
- II. Do the following:
 - A. Explain the meaning of the points of the Emblem.
 - B. Recite the Royal Ranger Code and explain the meaning of each point.
 - C. Explain the meaning of the Motto.
 - D. Give the Pledge and explain its meaning.
 - E. Explain where the insignia should be worn on the Royal Ranger uniform.
- III. Attend Sunday school regularly. If you are not already attending, enroll in a Sunday school.



ROYAL RANGER EMBLEM



MEANING OF EMBLEM

Four Gold Points—Four ways a boy grows:
Physically, Spiritually, Mentally,
Socially

Four Red Points—Four Main Teachings of the
Church:
Salvation, Holy Spirit, Healing,
Rapture

Eight Blue Points—Eight points of the Ranger Code:
Alert, Clean, Honest, Courageous,
Loyal, Courteous, Obedient, Spir-
itual

ROYAL RANGER CODE

A ROYAL RANGER IS:

ALERT

He is mentally, physically, and spiritually alert.

CLEAN

He is clean in body, mind, and speech.

HONEST

He does not lie, cheat, or steal.

COURAGEOUS

He is brave in spite of danger, criticism, or threats.

LOYAL

He is faithful to his church, family, outpost, and friends.

COURTEOUS

He is polite, kind, and thoughtful.

OBEDIENT

He obeys his parents, leaders, and those in authority.

SPIRITUAL

He prays, reads the Bible, and witnesses.

ROYAL RANGER PLEDGE

WITH GOD'S HELP, I WILL DO MY BEST TO: SERVE GOD, MY CHURCH, AND MY FELLOW MAN. TO LIVE BY THE RANGER CODE. TO MAKE THE GOLDEN RULE MY DAILY RULE.

ROYAL RANGER MOTTO

"READY"

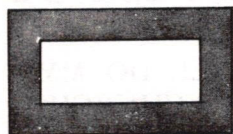
Meaning of Motto: Ready for anything;

Ready to: work, play, serve, obey, worship, live, etc.

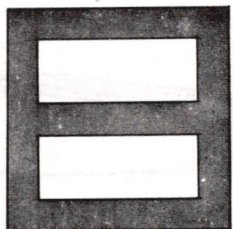
THE GOLDEN RULE

"WHATSOEVER YE WOULD THAT MEN SHOULD DO TO YOU, DO YE EVEN SO TO THEM." Matt. 7:12

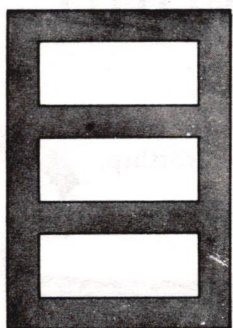
BADGES & AWARDS



ASST. GUIDE



GUIDE



SENIOR GUIDE



JUNIOR COMMANDER

AIR RANGER



TECHMASTER RATING



FLIGHTMASTER RATING



AIRMASTER RATING

BADGES & AWARDS

SEA RANGER



TRAIL RANGER



CREWMASTER RATING

CAMPMASTER RATING



BOATMASTER RATING

WOODMASTER RATING



SEAMASTER RATING

TRAILMASTER RATING

YOUR UNIFORM

When you have completed the requirements for becoming an Air-Sea-Trail Ranger, you are entitled to wear the Royal Rangers Uniform (see illustration). It includes the Royal Rangers beret, tie, belt, and insignia, and is worn with a khaki shirt and khaki trousers.

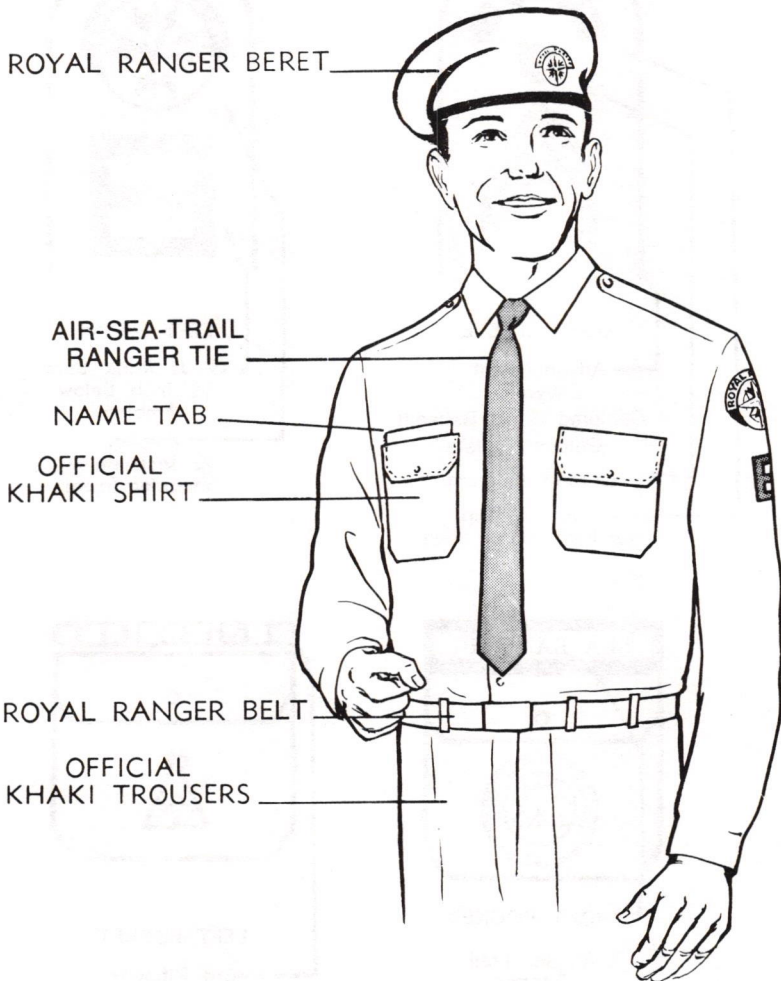
The official uniform including cap, tie, belt, badges, and emblem may be purchased from the Gospel Publishing House, 1445 Boonville Ave., Springfield, Missouri 65802. Royal Rangers T-shirts, sweat shirts, and jackets are also available. Your Commander will have an order blank for all your supplies.

WEARING THE UNIFORM

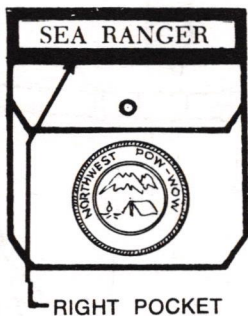
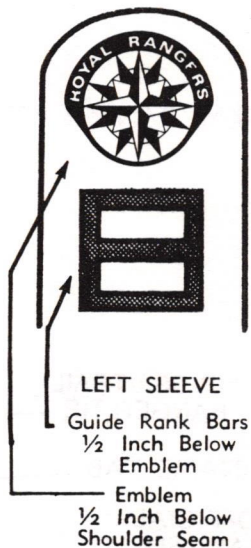
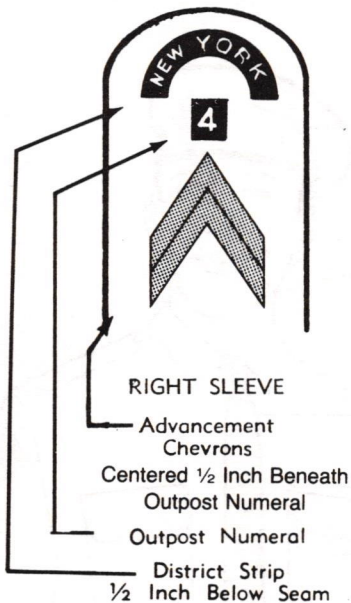
After you have obtained your uniform, wear it correctly. There is only one correct way to wear the uniform and badges. This way is shown in the illustrations in the following pages. Wear your uniform with pride. Take good care of it. Keep it neatly pressed and clean. Keep your shoes neatly shined when wearing your uniform. Hang it up correctly when not in use.

Remember your uniform identifies you with thousands of other Royal Rangers in many places, so wear it with honor.

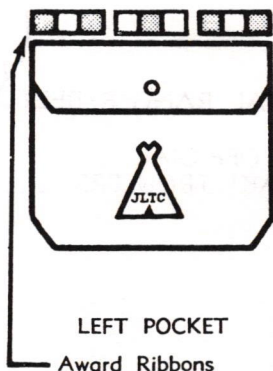
AIR-SEA-TRAIL RANGER UNIFORM



WHERE TO WEAR INSIGNIA

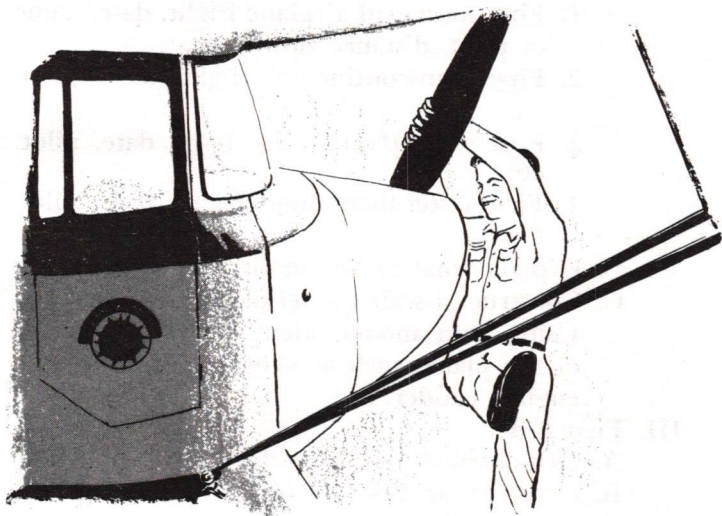


Air-Sea-Trail
Ranger
Name Tab



PART II

AIR RANGERS





TECHMASTER REQUIREMENTS

I. Prerequisite Requirements

You must first complete Second Class through Master Rating Trailblazer requirements. (If you are Air Ranger age, it is not necessary to observe the time limits when earning these Trailblazer ratings.) Your three Air Ranger ratings are then sewn inside your Trailblazer Master Rating chevron (see illustration).

II. Aviation

A. Discuss the history of flight, including the following:

1. First successful airplane flight, date, name of pilot, distance flown, etc.
2. First transcontinental flight, date, pilot, etc.
3. First transatlantic solo flight, date, pilot, etc.
4. First faster-than-sound flight, date, pilot, etc.

B. Explain what makes an airplane fly.

C. Construct a scale model of an airplane.

Using your model, identify the main parts of the plane, such as wings, flaps (aileron), engine, rudder, etc.

III. First Aid

A. Demonstrate how to stop arterial bleeding.

B. Demonstrate first aid for the following:

1. Shock
 2. Fainting
 3. Wounds
 4. Fracture of arm or leg.
 5. Poisoning
- C. Explain under what circumstances a person should or should not be moved.
- D. Explain the technique for mouth-to-mouth resuscitation.
- IV. Outdoors.
- A. Demonstrate your ability to set a course with a compass.
 - B. Identify two edible wild greens or roots.
 - C. Demonstrate your ability to find direction by using the stars.
 - D. Explain what to do when you are lost.
- V. Physical Fitness
- A. Do three physical exercises daily for six weeks, such as push-ups, sit-ups, and running.
 - B. Explain why smoking is harmful to the physical body.
- VI. The Bible
- Quote from memory the Beatitudes and six other Bible verses of your choice.
- VII. Your Church
- Explain in detail the four main teachings of the church, giving a Scripture reference for each.
- VIII. Your Home
- Explain what your attitude toward your parents and your conduct in your home should be, according to the Bible.
- IX. Your Outpost
- Explain the organizational setup of your outpost, giving the name of each officer.



FLIGHTMASTER REQUIREMENTS

- I. Earn the Aviation Award, Weather Award, Pathfinder Award, and Physical Fitness Award. (If any of the above required awards have already been earned, substitute any award of your choice.)
- II. Assist in the leadership of the outpost by serving as a guide, assistant guide, or volunteer to assist other boys in advancement.
- III. Explain how you put your Christian experience into action in your church and community.



AIRMASTER REQUIREMENTS

- I. Earn the Survival Award, Christian Service Award, Astronomy Award, First Aid Award, Citizenship Award, and one other advanced award of your choice.
- II. Give a talk before your outpost council on the subject, "The Royal Ranger Code," explaining the importance of living by the Code.

HISTORY OF THE AIRPLANE

The airplane has made a tremendous impact upon our civilization. There is very little of our way of life that has not been influenced. The development of aviation over the last few years has been nothing less than amazing. The airplane has grown in size from the first elementary craft to a plane whose wing span equals the distance the first plane flew. Its speed had increased from a few miles an hour to a speed faster than sound. The first plane carried one passenger. A large plane today can carry more passengers than a railroad car. The airplane has had such an effect on transportation that it has shrunk the world in size.

In England, about 1869, the word *aeroplane* was first used. Sometime later in the United States, it was changed to *airplane*. However, the first successful flight did not take place until the year 1903. The first airplane was assembled and flown by two bicycle mechanics from Dayton, Ohio, named Orville and Wilbur Wright. The flight was made at Kitty Hawk, North Carolina, on December 17, 1903. The plane flew a distance of 120 feet. Very little publicity was given to this event, and many doubted the reports about it. The world was later to realize that the Wright Brothers had accomplished one of the most important feats of the twentieth century.

FAMOUS AIRPLANE FLIGHTS

The history of aviation reads like an exciting adventure story. Some men became famous overnight because of their historic flights. We shall be unable to tell the story of all these adventures; however, the facts about a few of the most outstanding flights are listed below. Should you want to know more about these events, many excellent books on the subject are available in libraries and bookstores.

- 1908 Lieut. Thomas Selfridge was killed in the first fatal airplane crash.
- 1910 Edouard Nieuport of France built and flew the first plane with enclosed fuselage.
- 1912 Capt. Charles Chandler tested the first machine gun mounted on a plane.
- 1913 Igor Sikorsky built and flew the first four-engine plane.
- 1919 A. C. Read and five other U.S. Navy and Coast-guard Airmen made the first transatlantic flight.
- 1923 O. G. Kelly and J. A. Macready made the first nonstop transcontinental flight from New York to San Diego, California.
- 1924 Lowell Smith and six other U.S. Army fliers made the first around-the-world flight.
- 1926 Richard E. Byrd and Floyd Bennett flew over the North Pole.
- 1927 Charles Lindbergh made the first solo nonstop transatlantic flight from New York to Paris.
- 1929 Richard E. Byrd and three other men flew over the South Pole.
- 1929 Fritz von Opel flew the first rocket-powered plane.

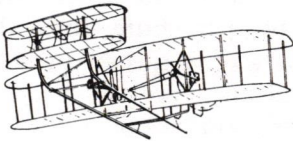
1933 Wiley Post made the first solo around-the-world flight.

1947 Capt. Charles E. Yeager made the first faster-than-sound flight.

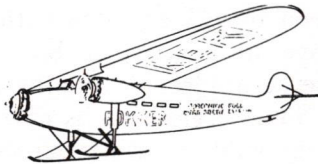
1949 James Gallagher and a crew of 13 Air Force Airmen made the first nonstop around-the-world flight.

1953 Twice the speed of sound was first reached by Scott Crossfield.

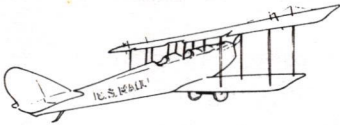
FAMOUS AIRPLANES



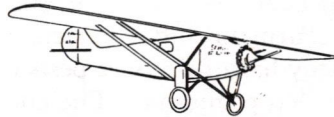
1903 WRIGHT BROTHERS' PLANE
FIRST SUCCESSFUL FLIGHT



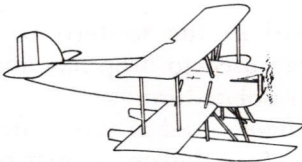
1926 "FOKKER" JOSEPHINE FORD
FIRST NORTH POLE FLIGHT



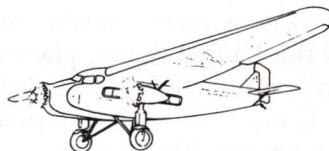
1918 CURTISS (Jenny)
FIRST MAIL SERVICE



1927 RYAN "SPIRIT OF ST. LOUIS"



1924 DOUGLAS (Chicago)
FIRST AROUND THE WORLD FLIGHT



1929 FORD "FLOYD BENNETT"
FIRST SOUTH POLE FLIGHT

AVIATION TODAY

It is fascinating to observe the growth and uses of the airplane in today's world. I am sure we are all familiar with the military and commercial use of aviation. However, there are many other interesting uses of the airplane.

The Forest Service is using the airplane in fire fighting. Sometimes it is used in spotting and pinpointing the location of a forest fire and the size of the fire. In some cases chemicals are dropped to retard the fire. Perhaps the most fascinating use of the plane is to drop "smoke jumpers" (a group of specially trained forest fire fighters) into isolated areas to fight a fire.

In California the Game and Fish Department has been restocking lakes with fish via the airplane. They have also dropped beavers by parachute into the Sierra Madre Mountains as part of a special project.

Some organizations have used airplanes to transport large wild animals from various countries of the world to zoos here in America.

Police departments in some states use planes to clock speeders on the highways.

Farmers and ranchers are using the plane to destroy harmful insect pests by equipping and using them as "crop dusters." The country of Iran used crop dusting planes to destroy a plague of locusts that threatened to destroy their crops.

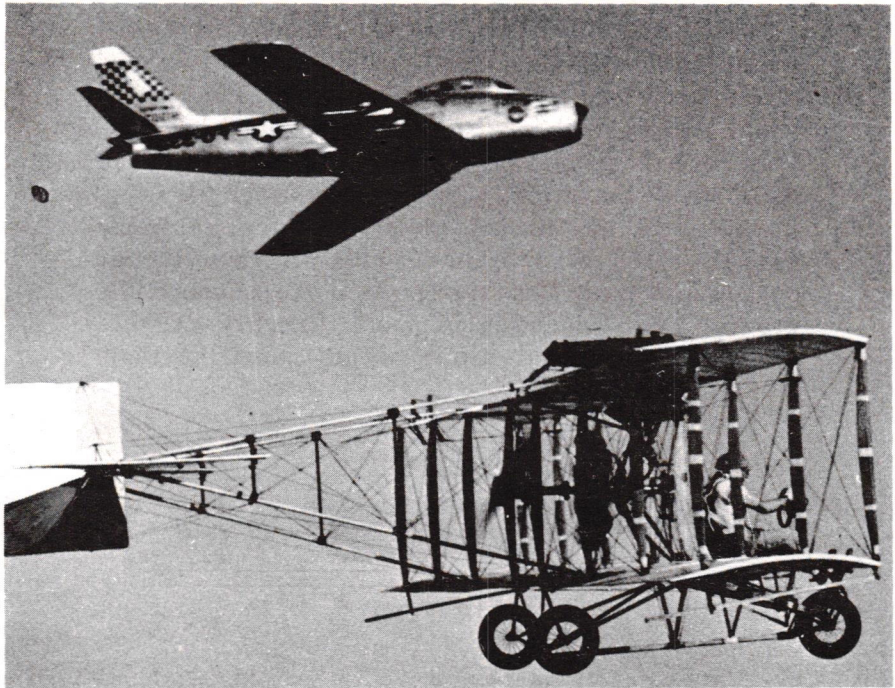
After a recent severe blizzard in the western part of the United States, planes were used to drop hay and feed to snowbound livestock on isolated ranches.

Every year we read of planes being used in search and rescue operations in an effort to find downed planes or someone lost in the wilderness.

Some of our missionaries on the field have written about the heroic efforts of the missionary pilots who fly medical supplies into isolated jungle villages and how they have used their planes as ambulances to fly critically ill people out to hospitals.

The plane is being used by a number of foreign and home missionaries to fly to the various churches and preaching points in their area.

These are only a few of the many beneficial uses of aviation in today's world. In fact, most all of us are affected in some way by some phase of aviation. Because of constant technical development the use of the "flying machine" in the future is almost unlimited.



PRINCIPLES OF FLIGHT

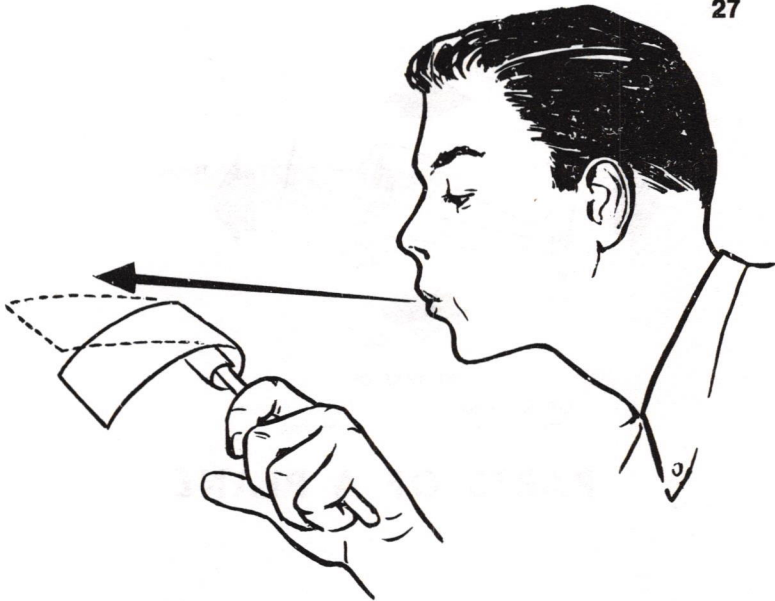
WHY AN AIRPLANE FLIES

To understand why an airplane flies, we must understand four forces that affect an airplane in flight. These forces are: gravity, lift, drag, and thrust.

GRAVITY is the force that pulls or attracts objects to the earth. Gravity must be overcome before a plane can fly.

LIFT is the force that overcomes gravity. It is produced by the flow of air over and under the airplane's wing when the plane is moving. The plane's wings are designed in a special shape called an **AIR-FOIL**. These airfoils aid in producing lift. Because of the shape of the airfoil, when air passes over the wing, the speed of the air on top of the wing is greater than the speed of air below it. This is because the air on top has farther to travel. As a consequence the pressure below the wing is greater than the pressure above and this pressure from beneath causes the plane to rise. This is a lift.



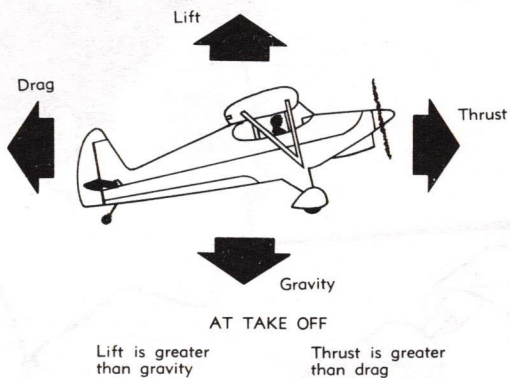


Curve a piece of light cardboard or stiff paper over a pencil. Blow across the top of the card. The papers will rise toward the top air stream. This is "lift" in action.

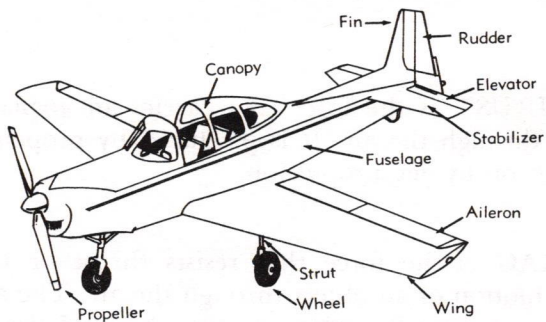
THRUST is the force that carries an airplane forward through the air. It is produced by propeller and engine or by jet propulsion.

DRAG is the force that resists thrust or the forward motion of an object through the air. The amount of drag depends greatly upon the shape of the object. That is why planes are shaped the way they are.

When a plane takes off into the air, lift is greater than gravity, and thrust is greater than drag.



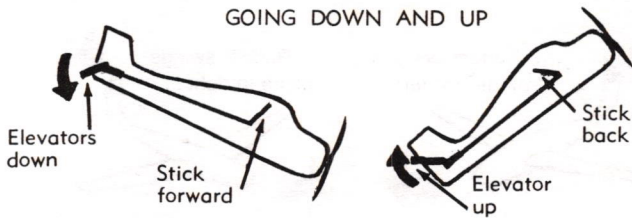
PARTS OF A PLANE



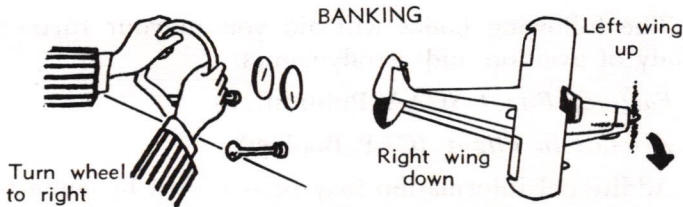
HOW A PLANE FLIES

The stick or wheel is connected to the elevator and the ailerons. The rudder is connected to a right- and left-foot pedal.

When the stick is pushed forward, the elevators point down. This forces the tail up, causing the plane to go down. Pulling the stick back raises the elevators, causing the tail to go down and the nose of the plane to go up.



When the stick is pushed to the right, the right aileron goes up, and the left aileron goes down causing the plane to tilt in that direction. This is called banking. When a plane banks to the right, it will turn in that direction. When it banks left, it turns left.



The rudder also helps in turning a plane. When the right pedal is pushed, the rudder swings to the right making the plane turn right. Pushing the left pedal swings the rudder left making the plane turn left.

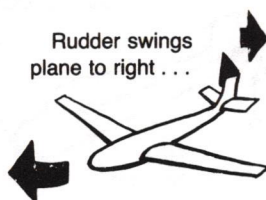
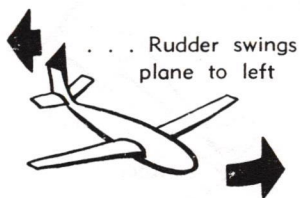
GOING RIGHT OR LEFT



Pilot pushes
left pedal . . .



Pilot pushes
right pedal . . .



BOOKS ON AVIATION

(From the Superintendent of Documents, Washington
25, D.C.)

The following books will aid you in your further study of aviation and aerodynamics:

Facts of Flight (CAA Publication)

Aircraft in Flight (CAP Booklet)

Additional information may be obtained by contacting the civil aeronautics authority (CAA) in your area or by writing the Superintendent of Documents, Government Printing Office, Washington 25, D.C. A free catalog listing 600 books on aviation may also be obtained by writing to Aero Publishers, 2162 Sunset Blvd., Los Angeles 26, California.

THE INSTRUMENT PANEL

The many dials and gauges on the instrument panel of an airplane give vital information to the pilot.

AIRSPPEED INDICATOR: This instrument tells the pilot how fast the plane is traveling. The pitot tube juts out into the wind; it catches the air and compresses it in the tube. This compression registers on the airspeed indicator giving the correct speed.

ALTIMETER: This gauge tells a pilot how high he is flying. This is done by measuring the air density or pressure difference as the plane climbs. (The higher the plane flies, the less dense the air.)

MAGNETIC COMPASS: It tells the pilot what direction he is traveling.

TACHOMETER: This tells the pilot how many revolutions per minute the engine is turning. Usually referred to as "RPM's." This is very important in taking off and landing.

TEMPERATURE GAUGES: Registers the engine and cabin temperatures.

OIL PRESSURE GAUGE: Indicates when an engine is low on oil.

FUEL GAUGES: Measures the fuel supply in various fuel tanks.

TURN AND BANK INDICATOR: This tells the pilot the direction, rate, and steepness of his turn. It helps the pilot to keep the plane level in flight.

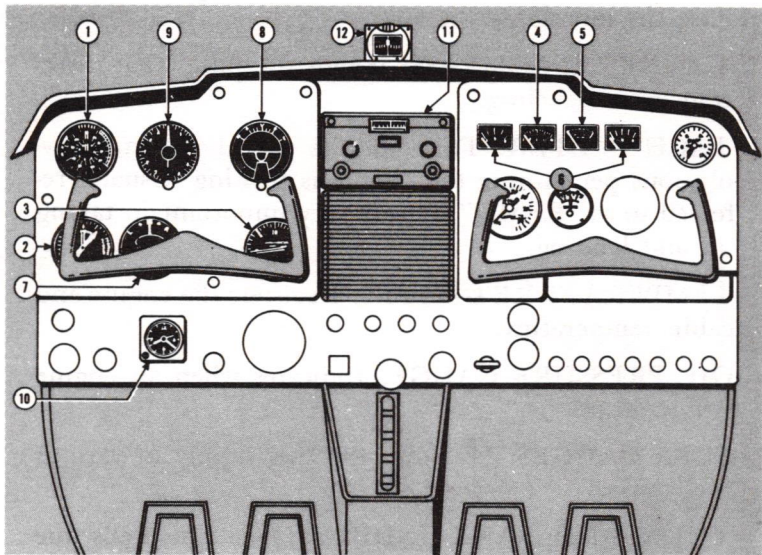
GYRO HORIZON: Helps the pilot keep the plane level and right-side-up when flying blind.

DIRECTIONAL GYRO: Registers change in airplane direction when flying blind.

The last two instruments are much more accurate than a pilot's own senses.

CLOCK: To assist a pilot in navigation, particularly in instrument flying.

RADIO: Used to communicate with air control tower and other types of communication. Also used in radar navigation.



1. AIRSPEED INDICATOR
2. ALTIMETER
3. TACHOMETER
4. TEMPERATURE GAUGE
5. OIL PRESSURE GAUGE
6. FUEL GAUGES

7. TURN AND BANK INDICATOR
8. GYRO HORIZON
9. DIRECTIONAL GYRO
10. CLOCK
11. RADIO
12. MAGNETIC COMPASS

ORIENTATION FLIGHT

"Ground Control, this is Royal Ranger Squadron 23 at the North Hangar parking apron. Request taxi information for 10 aircraft VRF to MKC."

"Roger, Royal Ranger Squadron. Taxi Runway 31; winds 300 at 15; altimeter 2992; time 1000."

"Roger."

At last our flight had begun in the airplane. Our preflight planning for this flight started three months ago at our Air Ranger meeting. It was decided that those who had achieved the Techmaster Rating in 90 days would fly copilot for one of the pilots in our local Businessmen's Aero Club.

We studied the principles of aviation and discovered what makes an airplane fly. We also studied navigation methods, heard several lectures on weather, and made two field trips to our local weather station. With all this study, at last we were ready for our orientation flight.

Saturday at eight o'clock sharp our Air Rangers group met with the Aero Club members in the briefing room at the airport. Our advisor gave the mission requirements for flying to MKC (Kansas City). The weatherman gave us a briefing which included local, en route, and destination weather. The Flight Service Office representative gave us a briefing on en route facilities such as airports, radio navigation aids, and hazards to flight. We had an "oil burner" leg to cross (a SAC low level navigation B-52 Jet Aircraft flying at an altitude of five hundred feet). We were told to stay above this altitude in this area. This could have been a hazard had we not been briefed beforehand.

The first aircraft of our flight was to take off at ten o'clock sharp, and then one of the other planes every three minutes. The FAA had approved this flight

plan, and an airspace block was reserved for flight safety. Cruising speed was to be 130 knots so each aircraft could be in a perfect stream.

A visual inspection of the planes was made by each crew member. The cockpit was checked to see that all switches were off and the parking brake on. A walk around the aircraft was made to visually check baggage doors, fuselage, elevator, rudder controls, cables, wings, flaps, engine, prop, and tires.

We then entered the cockpit of our plane and began the check list which seemed to be endless, but nevertheless, thorough and necessary.

TYPICAL CHECK LIST

1. Lock doors and fasten seat belts
2. All radios and switches off
3. Parking brake set
4. Flight Controls free
5. Master Switch on (check for 3 green lights to indicate safe gear)
6. Generator switch on
7. Heater Fuel switch off
8. Crossfeed off (twin a/c)
9. Fuel Selector valves on proper tank
10. Visually check electric fuel gauge
11. Carburetor air off
12. Mixture rich
13. Prop full forward (low pitch, high r.p.m.)
14. Throttle cracked
15. Prime as required
16. Boost pump on
17. Ignition switch on
18. Clear aircraft and engage starter
19. Check oil pressure after engine starts
20. Idle at 1200 r.p.m.
21. Boost pumps off

22. Turn Radio on and call tower for taxi instructions

We received our ground instructions and taxied to Runway 31 which was northwest, or a heading of 310°.

After completing our warm-up and ground-check we performed a before-takeoff check list.

BEFORE-TAKEOFF CHECK LIST

1. Seats and belts locked
2. Doors secured and locked
3. Visual check on all controls and cycle takeoff
4. Flaps up or set as desired
5. Elevator and rudder trim set for takeoff
6. Autopilot off (if you have one)
7. Fuel selector to fullest tank
8. Crossfeed off (for twin engine)
9. Primer locked
10. Boost pump on (electric) if engine-driven pump fails
11. Generator on
12. Carburetor heat off
13. Mixture full rich
14. Prop low pitch (high r.p.m.) forward
15. All engine temperatures and pressures normal (in green)
16. Radios tuned and checked
17. Gyros set
18. Rotating beacon on
19. Lights as required
20. Call tower for takeoff clearance

Our pilot then called the tower for takeoff clearance. "Tower, this is Royal Ranger Squadron 23 Leader ready to take the active runway for takeoff."

"Roger, Ranger Leader, you are clear for takeoff; wind calm—have a nice flight."

"Roger, this is Royal Ranger Leader taking off."

As the pilot gently moved the throttle forward the aircraft started to roll down the runway automatically. Several things were done at once—checked instruments; cross-checked manifold pressure, r.p.m. fuel pressure, and oil pressure, and kept the aircraft at the center of the runway. When we reached the right airspeed the pilot pulled back on the wheel and we “took off.”

In a few moments we were airborne and everything was okay. The wheels were then raised to streamline the aircraft; this also helped establish the proper rate of climb and good engine performance. We were then ready for our 90° left turn. After clearing ourselves with other aircraft we made a 45° turn to the the right which took us out of the traffic pattern.

We were at 3,000 feet when we started a procedure turn to the left to take us directly over the airport at 3,500 feet en route to the SGF (Springfield) Omni station which is 8.2 nautical miles from Springfield Airport on a heading of 011 degrees.

We crossed the SGF Omni at 4,000 feet, our assigned altitude en route to Kansas City. We noted our Omni “to-from” indicators switched to “from” letting us know that we had crossed the station. This little gadget on the radio does most of the work and navigation for the pilot. As a matter of fact, the pilot may select 360 headings in the sky and fly accurately on any one of these “from” or “to” an Omni station. The next step was to report our position to SGF (Springfield) Radio. “Springfield Radio, this is 5388 Yankee listening 123.6. Over.”

“Roger, 5388 Yankee, this is Springfield Radio, go ahead.”

“Springfield Radio, this is Royal Ranger Squadron Leader, by your Omni station at 08, climbing to assigned altitude. Over.”

"Roger, 5388 Yankee, Springfield altimeter 2992."

The SGF Radio knew our exact position. We were on course at an assigned altitude and had proper clearance from other aircraft for safety. With our radios tuned and checked, we were ready to perform our cruise check. A glance at the outside air temperature gauge indicated it was a crispy 32° fahrenheit, which is 0° centigrade. Our power chart was checked for the normal cruising power setting to give us 140 m.p.h. true airspeed. We checked all the other instruments to see that they were "in the green" and operating in the proper limitations. Then we could relax a little and enjoy the beautiful scenery. The airplane was practically flying itself. The pilot turned the controls over to me. What a thrill! I was flying a plane at last!

Glancing around the horizon we saw the small town of Bolivar, Missouri, and up ahead about our 2:20 o'clock position was a beautiful lake. We became real excited when we spotted a landing strip beside the lake. (In the summer our group plans to go to this same lake for a fishing tournament.)

On the radio we could hear the rest of our flight checking in with SGF Radio. They were crossing the SGF Omni every three minutes and shortly our entire flight was airborne in a long stream, all at the same altitude, same airspeed, and on the same mission.

As we approached the Blue Springs Omni we had a bird's-eye view of MKC (Kansas City). It was then necessary to have radar cover for flying safely, so we called K. C. Approach Control for radar vectoring into the large K. C. Airport. Things really became busy in the next few minutes around this high density area, so everyone in the aircraft kept his neck on a swivel because we didn't want a midair collision with another plane. We were on radar, but everyone was

still alert because the approach control men had their hands full with thousands of approaches a day.

We tuned in to a continuous radio broadcast from the field to get transcribed landing information. This changes with conditions, but the idea is to cut down on chatter over the tower frequency. From this broadcast we received altimeter setting, wind direction and velocity, the active runway, and other information necessary for flying safety. We were told to land on Runway 18 with a heading of 180° to the south. We then called approach control for clearance and vectoring. "K. C. Approach Control, this is 5388 Yankee, Royal Ranger Squadron Leader over Blue Springs Omni at 4,000 feet; landing at K. C. Municipal. We have information Bravo. Over." (Information Bravo was the transcription we had received previously.)

"Roger, 5388 Yankee, we have you in radar contact. Turn to heading 330, descend and maintain 2,500 feet. Over."

"Roger, 88 Yankee, 330 heading, descend to 2,500 feet, leaving 4,000 now." We were then on our way in for a landing.

Suddenly the radio interrupted: "5388 Yankee, a Boeing 808 is at your 11:30 position but is climbing fast and should be out of your way."

"Roger, K. C., we have the 808 in sight. 88 Yankee."

The fellows in the control station do an excellent job. Without their vital assistance many lives would be lost every year in midair collisions. As we crossed the Missouri River to make our final approach for landing at Kansas City, we received final instructions from the approach control.

"5388 Yankee, this is K. C. radar. You are clear to Runway 18. Change frequency now to the K. C. Tower 188.1. Over!"

"Roger, K. C. Approach, 5388 Yankee going to 188.1 now." A few moments later our pilot reported again. "K. C. Tower, this is 5388 Yankee on final approach."

"5388 Yankee, you are number one and clear to land."

"Roger, K. C., 88 Yankee."

Our experienced pilot pulled back on the throttle to reduce the power and the plane automatically descended toward the runway. (The pilot must estimate the rate of speed and descent so his plane will "come in" at the right spot on the runway.) Next, the flaps were lowered to further reduce speed and give better control of the plane.

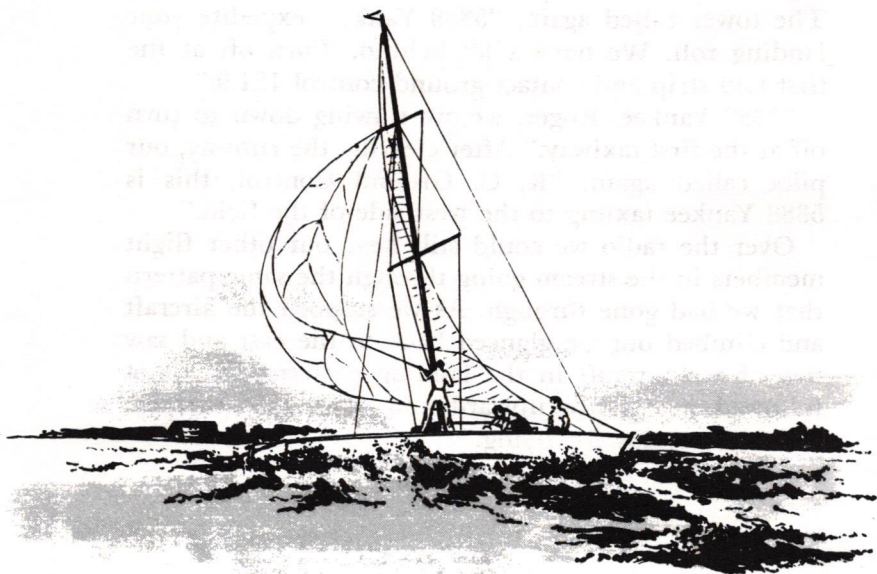
As the concrete runway glided underneath us, the pilot pulled back all the way on the throttle to cut the power, and we settled down to a nice, easy landing. The tower called again, "5388 Yankee, expedite your landing roll. We have a jet behind. Turn off at the first taxi strip and contact ground control 121.9."

"5388 Yankee. Roger, we are slowing down to turn off at the first taxiway." After clearing the runway, our pilot called again. "K. C. Ground Control, this is 5388 Yankee taxiing to the west side of the field."

Over the radio we could still hear our other flight members in the stream going through the same pattern that we had gone through. As we stopped the aircraft and climbed out we glanced back to the east and saw two of our aircraft in the landing pattern. The pilot followed my glance upward and cheerfully chirped, "It's a great day for flying."

PART III

SEA RANGERS





CREWMASTER REQUIREMENTS

I. Prerequisite Requirements

You must first complete Second Class through Master Rating Trailblazer requirements. (If you are Sea Ranger age, it is not necessary to observe the time limits when earning these Trailblazer ratings.) Your three Sea Ranger ratings are then sewn inside your Trailblazer Master Rating chevron (see illustration).

II. Sea Lore

- A. Describe three famous ships and explain their importance.
- B. Tell the story of three famous sea voyages.
- C. Explain the meaning of the following nautical terms: Starboard, port, about, deck, amidships, leeward, rigging, rudder, shipshape, windward.
- D. Explain why a boat can sail against the wind.
- E. List the safety rules to observe while boating or sailing.
- F. Demonstrate your ability to swim.

III. First Aid

- A. Demonstrate how to stop arterial bleeding.
- B. Demonstrate first aid for the following:

1. Shock
 2. Fainting
 3. Wounds
 4. Fracture of arm or leg
 5. Poisoning
- C. Explain under what circumstances a person should or should not be moved.
- D. Explain the technique for mouth-to-mouth resuscitation.
- IV. Outdoors**
- A. Demonstrate your ability to set a course with a compass.
 - B. Identify two edible wild greens or roots.
 - C. Demonstrate your ability to find direction by using the stars.
 - D. Explain what to do when you are lost.
- V. Physical Fitness**
- A. Do three physical exercises daily for six weeks, such as push-ups, sit-ups, pull-ups, and running.
 - B. Explain why smoking is harmful to the physical body.
- VI. The Bible**
- Quote from memory the Beatitudes and six other Bible verses of your choice.
- VII. Your Church**
- Explain the four main teachings of the church, giving a Scripture reference for each.
- VIII. Your Home**
- Explain what your attitude toward your parents and your conduct in your home should be, according to the Bible.
- IX. Your Outpost**
- Explain the organizational setup of your outpost, giving the name of each officer.



BOATMASTER REQUIREMENTS

- I. Earn the Boating Award, Pathfinder Award, Weather Award, and Physical Fitness Award. (If any of the above required awards have already been earned, substitute any award of your choice.)
- II. Assist in the leadership of the outpost by serving as a guide or assistant guide or volunteer to assist other boys in advancement.
- III. Explain how you put your Christian experience into action in your church and community.



SEAMASTER REQUIREMENTS

- I. Earn the Christian Service Award, Survival Award, First Aid Award, Swimming Award, Citizenship Award, and one other advanced award of your choice.
- II. Give a talk before your outpost council on the subject, "The Royal Rangers Code," explaining the importance of living by the Code.

HISTORY OF SEA TRAVEL

MAN AFLOAT

From the time man made his first crude boat from a hollow log to the building of the great ocean liner today the story of sea travel is an exciting one. It is the story of brave men driven by a desire to explore the unknown, to discover strange new lands across the seas. It is the story of wise men developing new types of ships and new ways to navigate them. It is a story about wars at sea, and the men who fought them; about pirates who plundered; about pilgrims who found freedom in new lands; about whalers and fishermen who wrested their living from the sea. This is the story of *Man Afloat*.

BOATS AND SHIPS

Perhaps man first conceived the idea of travel on water by watching a floating log. Later he may have lashed several logs together to form a crude raft. Eventually he built a dugout canoe. As time went by, boats became larger and more seaworthy.

The first evidence of the use of sails was among the ancient Egyptians. For many centuries ships used a combination of oars and sails. The sails were of little value except when the wind was blowing in the direction the ship was going.

The Romans and Greeks developed a ship called a galley. The galley ship was rowed by a number of slaves chained to each side of the ship. The apostle Paul made many of his missionary trips on a vessel of this kind.

In Northern Europe the Vikings used a ship called

a long ship. It was equipped with a large square sail and several oars. With a long ship the Vikings crossed the north Atlantic to America almost 500 years before Columbus made his voyage. The ship used by Columbus was a high-sided ship called a caravel.

It was several years after the discovery of America before any changes were made in the design of these ships. As many new lands were discovered and world trade developed, the need for a larger and faster merchant ship was realized. Because of this need the clipper ship was developed. The speed of the clipper ship did much to bring recognition to the young nation of America. During the War of 1812 the American frigates proved superior to the larger and slower vessels of the British. During the middle 1800's the clipper ships became so famous for their speed that this period of time became known as the golden age of sailing. Perhaps the most famous of all clipper ships was the *Flying Cloud*. The golden age of sailing ended with the Civil War.

When steam engines were first used in ships, their purpose was to supply extra power for the sails. This continued to be true for several years. However, gradually steam engines began to replace sails.

The appearance of ironclad ships without sail during the War Between the States was the beginning of a new era for ships. Also, the propeller began to replace the paddle. By 1890 all sails had been discarded by steam-propelled ships. Around 1900 the basic design for our modern ships was developed. However, even though the sailing ship is no longer used for commercial purposes, the thrill of sailing over blue water under full sail has made the sailboat one of the favorite recreational boats used today.

SEAMEN AND SEA VOYAGES

No less great than the famous ships in sea history were the men who sailed them. The voyages they made and adventures that awaited them have become the favorite stories of many people. Get aboard, mates, and let's take an armchair trip on some of these voyages!

THE BIBLE

The first account in the Bible about sea travel was about Noah and his ark (or ship). This story about Noah and his cargo of animals who rode out the storm when the earth was covered with a flood is exciting reading. (Read Genesis 6, 7, and 8.)

The story of Jonah's trip by ship to Tarshish, which was interrupted by a three-day trip in the belly of a whale, is not only an exciting story, but a real lesson in obedience. (Read Jonah 1 and 2.)

During the ministry of Jesus, much of His traveling was done by boat on the sea of Galilee. One of the most dramatic events of His life was the time he stepped to the bow of his boat, spoke to the wind, and calmed the stormy sea. (Read Matthew 8:23-27.)

The great apostle Paul traveled from place to place on a Roman galley ship, to spread the gospel of Christ. While traveling as a prisoner to Rome, he was shipwrecked off the coast of the Isle Melita. (Read Acts 27.)

COLUMBUS

The courage of Columbus and his crew takes on a new aspect when we realize how little was known about the sea. Many sailors believed huge sea monsters

might swallow the ship; or that the ship might sail off the edge of the earth. Columbus not only discovered America, in 1492, but he also dispelled many superstitions about the sea.

OTHER DISCOVERERS

Soon others followed Columbus in exploring the New World. John and Sebastian Cabot, who discovered the mainland of North America, for instance; Balboa, who became the first European to discover the Pacific Ocean; Magellan, who was the first man to sail around the world; Sir Frances Drake, who was the first Englishman to sail around the world. He made the trip in two years and ten months, returning home with his ship filled with treasure.

THE PILGRIMS

In 1620 a famous voyage was made by a small group of people in a ship called the "Mayflower." The ship landed at Plymouth, Massachusetts. This voyage was one of the most important in American history. It was the beginning of a nation later to be called the United States of America.

JOHN PAUL JONES

On the high seas during the Revolutionary War the name Paul Jones became famous. Sailing a small ship called "Bon Homme Richard," he flew the new flag of the Stars and Stripes. He fought one of the greatest battles in American naval history. Fighting against two larger British ships, his ship became so damaged it was ready to sink. The captain of the British ship

"Serapis" requested Jones to surrender. John Paul Jones gave the historic reply, "I have not yet begun to fight." Jones succeeded in boarding and capturing the "Serapis." He transferred his own flag to the mast of the "Serapis" after his own ship sank.

THE WAR OF 1812

Most of the War of 1812 was fought at sea. Such ships as the "Constitution" and the "United States" and such captains as Isaac Hull and Stephen Decatur helped secure for the United States of America the right to sail the seven seas unmolested.

THE CLIPPER SHIP

In the middle 1800's there appeared on the high seas a ship called the clipper. It was the perfection of sailing vessels. A new generation of ship architects tried to see who could outdo the other in designing the fastest sailing vessel. Great names such as the "Flying Dutchman," "Challenge," "Sovereign of the Seas," "Red Jacket," "Lightning," and others became famous overnight for their speed. Perhaps the greatest of all was Donald McKay's "Flying Cloud." Twice she sailed from New York around Cape Horn to San Francisco in eighty-nine days. On one voyage she averaged nineteen land miles an hour, which was a fabulous speed for sailing ships. These clipper ships revolutionized the shipping industry and earned for the United States the right to the best of the cargo trade around the world.

THE CIVIL WAR

When the ironclad vessels the Confederate "Merimac" and the Union "Monitor" faced each other in battle during the War Between the States, they brought about the change from sailing ships to armored steam ships in sea warfare.

OTHER SEA STORIES

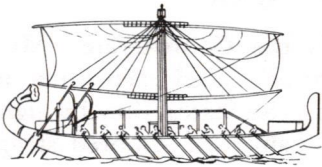
There are many other stories; about pirates such as Henry Morgan and Captain Kidd who robbed and killed and brought terror to honest seamen; stories about whalers who sailed the seas in search of the giant whale; stories about fishermen who followed schools of fish until their ships were laden with their catch; stories about scientific expeditions into the South Pacific, and to the North and South Poles; and others too numerous to list. *Consult your library for books about these exciting stories.*

MODERN SEA STORIES

Exciting sea stories are not confined to ancient days. From World War I and World War II have come many accounts of daring and bravery on the sea. In the Atlantic Ocean and the Pacific Ocean; on battle-ships, aircraft carriers, destroyers, submarines, and P.T. boats, men lived up to the tradition of those who "go down to the sea in ships." There are many sea adventures happening today that will make wonderful stories. Perhaps you will take part in one of these events.

FAMOUS SHIPS

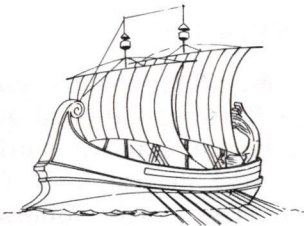
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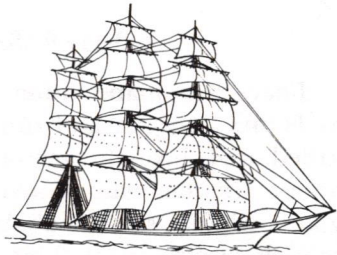
ANCIENT EGYPTIAN SHIP



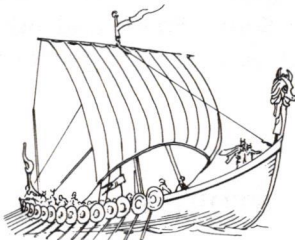
THE MAYFLOWER



ROMAN GALLEY SHIP



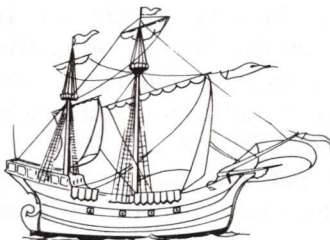
CLIPPER SHIP



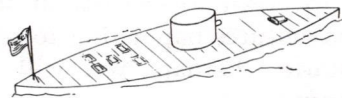
VIKING LONG SHIP



PADDLE WHEEL STEAMER



CARAVEL OF COLUMBUS' TIME



CIVIL WAR MONITOR

NAUTICAL TERMS

ABOUT: The opposite direction to that in which the ship is going

AFT: The back section of a ship

AMIDSHIPS: The middle of a ship

ALOFT: Above the deck of a ship

BELOW: Underneath the deck of a ship

Bow: Front end of a ship

BULKHEAD: A wall inside a ship

COMPANIONWAY: Steps or stairway on a ship

DECK: Floor of a ship

FORWARD: The front section of a ship

GALLEY: A kitchen on a ship

GANGPLANK: A walkway leading from ship to shore

HOLD: Storage space below deck

LEEWARD: The same direction as the wind

MOORING: Tying a ship to the shore or a pier

PORT: The left side of a ship

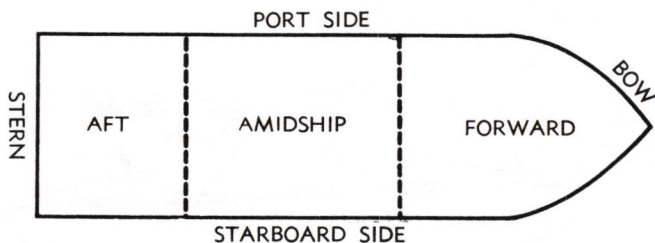
RUDDER: The part of a ship used for steering

SHIPSHAPE: Neat and in order

STARBOARD: The right side of a ship

STERN: The rear end of a ship

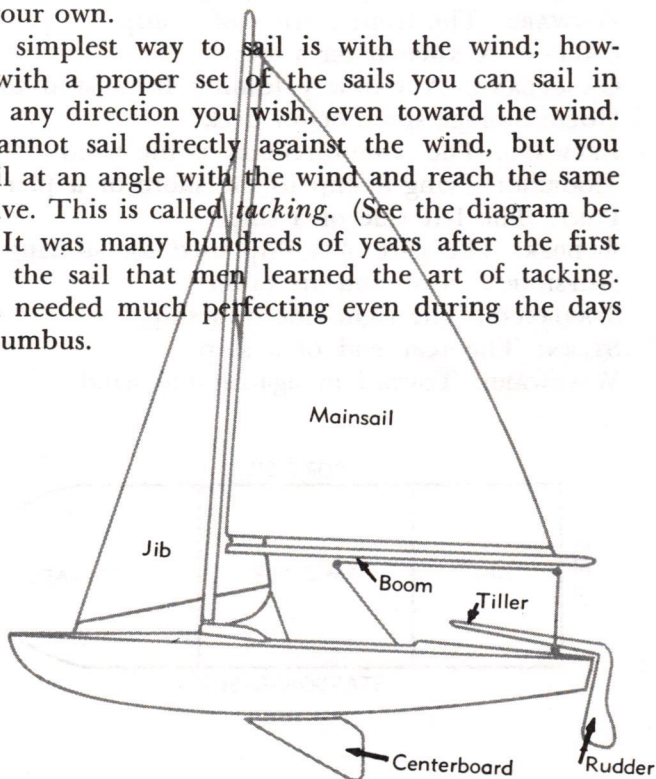
WINDWARD: Toward or against the wind



THE SAIL BOAT

The sport of sailing is exciting. Rolling blue water, white sails flying, cool wind in your face are part of the thrill of sailing. But—it can be a dangerous recreation if you don't know what you're doing. However, when the art of sailing is mastered and safety rules are observed, it can be a safe, enjoyable experience. Sailing, therefore, should not be attempted by a beginner without the supervision of an experienced person. You should have a thorough knowledge of the principles and technique of sailing before attempting it on your own.

The simplest way to sail is with the wind; however, with a proper set of the sails you can sail in almost any direction you wish, even toward the wind. You cannot sail directly against the wind, but you can sail at an angle with the wind and reach the same objective. This is called *tacking*. (See the diagram below.) It was many hundreds of years after the first use of the sail that men learned the art of tacking. It still needed much perfecting even during the days of Columbus.



SAFETY RULES FOR BOATING

Every year boating accidents take their toll of lives. In most cases, the observance of simple safety rules would have prevented these occurrences. The following are some of these rules:

1. Know How to Operate Your Boat.

Regardless of the type of boat, you should never attempt to use it until *you know what you're doing*. Become familiar with the handling of the oars or the tiller, or the motor, before using. It is wise to have some experienced assistance before launching out on your own.

2. Know How to Properly Enter and Leave a Boat.

3. Always Carry Life Preservers.

There should always be a life preserver or life belt in the boat for each occupant. Nonswimmers should wear life preservers at all times while in the boat.

4. Do Not Overload a Boat.

It is very dangerous to carry more persons in a boat than it will safely hold.

5. Do Not Rock a Boat or Engage in Other Horseplay.

6. Balance the Load.

Arrange the occupants in the boat in such a way as to create as perfect a balance as possible.

7. Do Not Change Position in a Small Boat Unless Absolutely Necessary.

8. No standing in a Small Boat at Any Time.

9. Never Leave a Boat Thoughtlessly.

Even if it capsizes, do not leave a boat unless you are in safe swimming distance to shore. Stay with your boat! Even when filled with water a boat will still have enough buoyancy to keep you afloat. Many people have lost their lives because they left a capsized boat in an effort to reach shore.

BOOKS ABOUT BOATS AND BOATING

The following books will aid you in your further study of boats and boating:

Ships of the Seven Seas, Hawthorne, Daniel. (Garden City, New York.)

Sailing, Bill Wallace. (Golden Press, New York.)

Complete Boating Handbook, Robert Scharff. (McGraw-Hill Book Co., New York.)

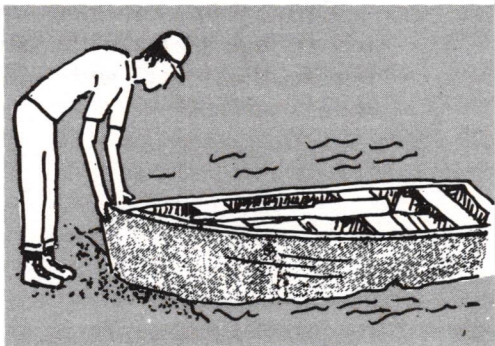
Piloting, Seamanship, and Small Boat Handling, Charles F. Chapman. (Motor Boating, 572 Madison Avenue, New York, N.Y.)

Lifesaving and Water Safety, American Red Cross. (McGraw-Hill Book Co., New York.)

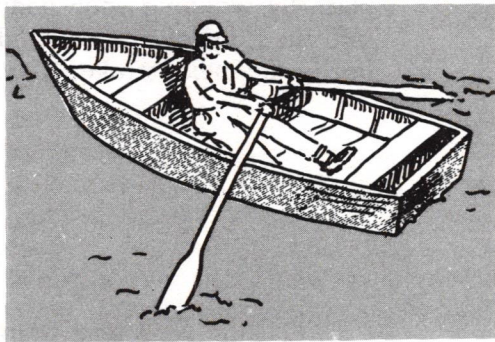
Swimming and Diving, American Red Cross. (McGraw-Hill Book Co., New York.)

HOW TO ROW A BOAT

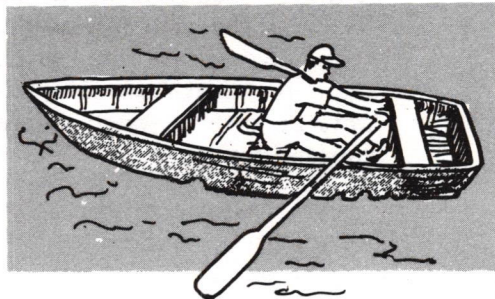
To launch your boat, place the oars in the boat in such a way so they may be easily reached after boarding the boat. Grasp the boat with both hands and shove off. As soon as the boat is afloat, carefully go aboard; then sit down and secure the oars in the locks.



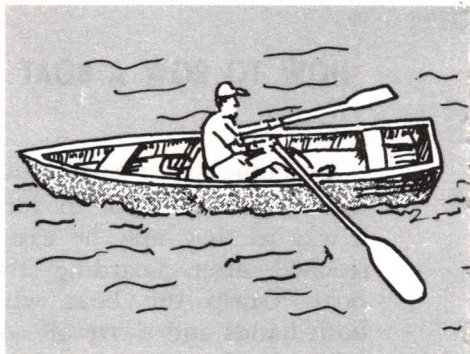
With back straight, bend your body toward the back of the boat, raising the oars slightly. Drop the oar blades edgewise into the water but not too deeply.



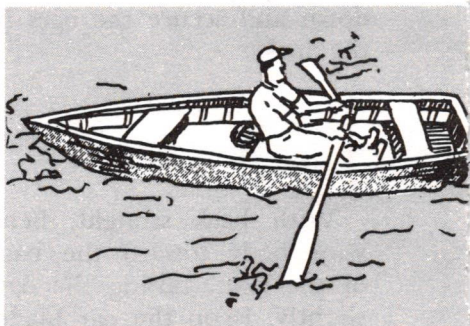
Bend your body backward until it is leaning toward the front of the boat. Bend your arms and pull, bringing your body erect and keeping elbows close to your body.



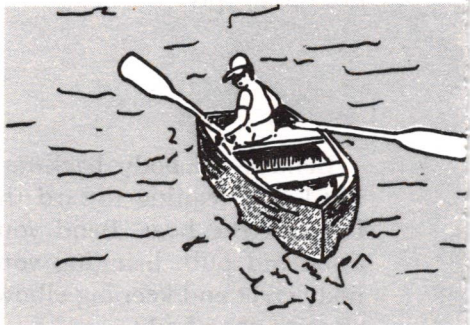
Turn your knuckles up just enough to make the oar blades turn flat with the water's surface.



Move the oar blade into place by swinging your body into the original position and begin the next stroke cycle.



In docking your boat, start landing maneuvers about 20 feet from the pier. If possible, come in against the wind. Dock the boat bow first; always be sure to watch where you are going.

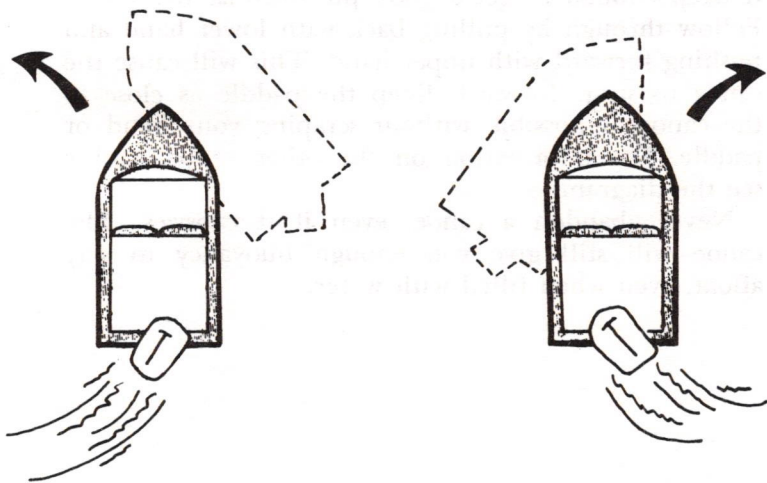


USING A BOAT WITH OUTBOARD MOTOR

Do not stand up when starting an outboard motor. When motor is started, ease away from pier slowly and carefully.

In steering an outboard, remember that the rudder is at the rear of the boat; this means the rear of the boat will turn first. When leaving the pier be sure to give your stern enough room to swing free of obstructions.

When approaching another boat always stay to the right. When passing another boat or when traveling near shore always slow down to avoid creating a large wake. (Some boats tied to piers have been damaged by the wake from other boats.) Always head directly into a large wake to avoid possible capsizing. If the boat capsizes, always stay with the boat.



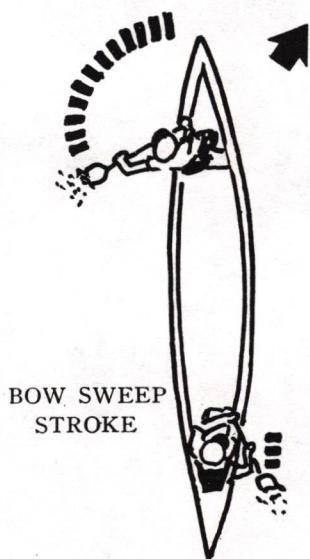
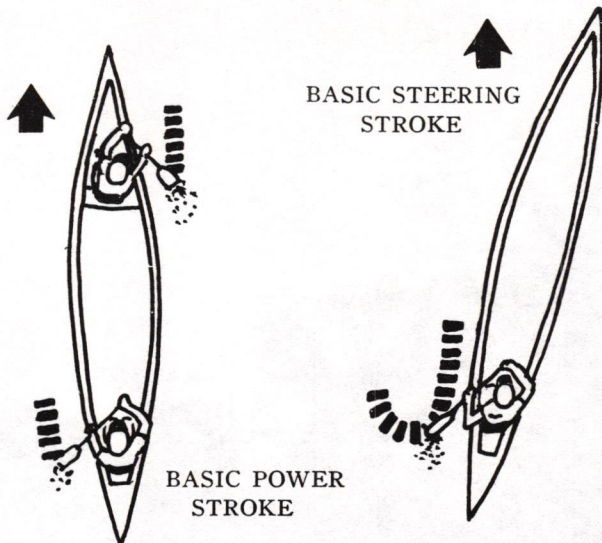
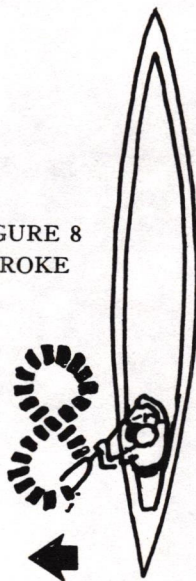
CANOEING

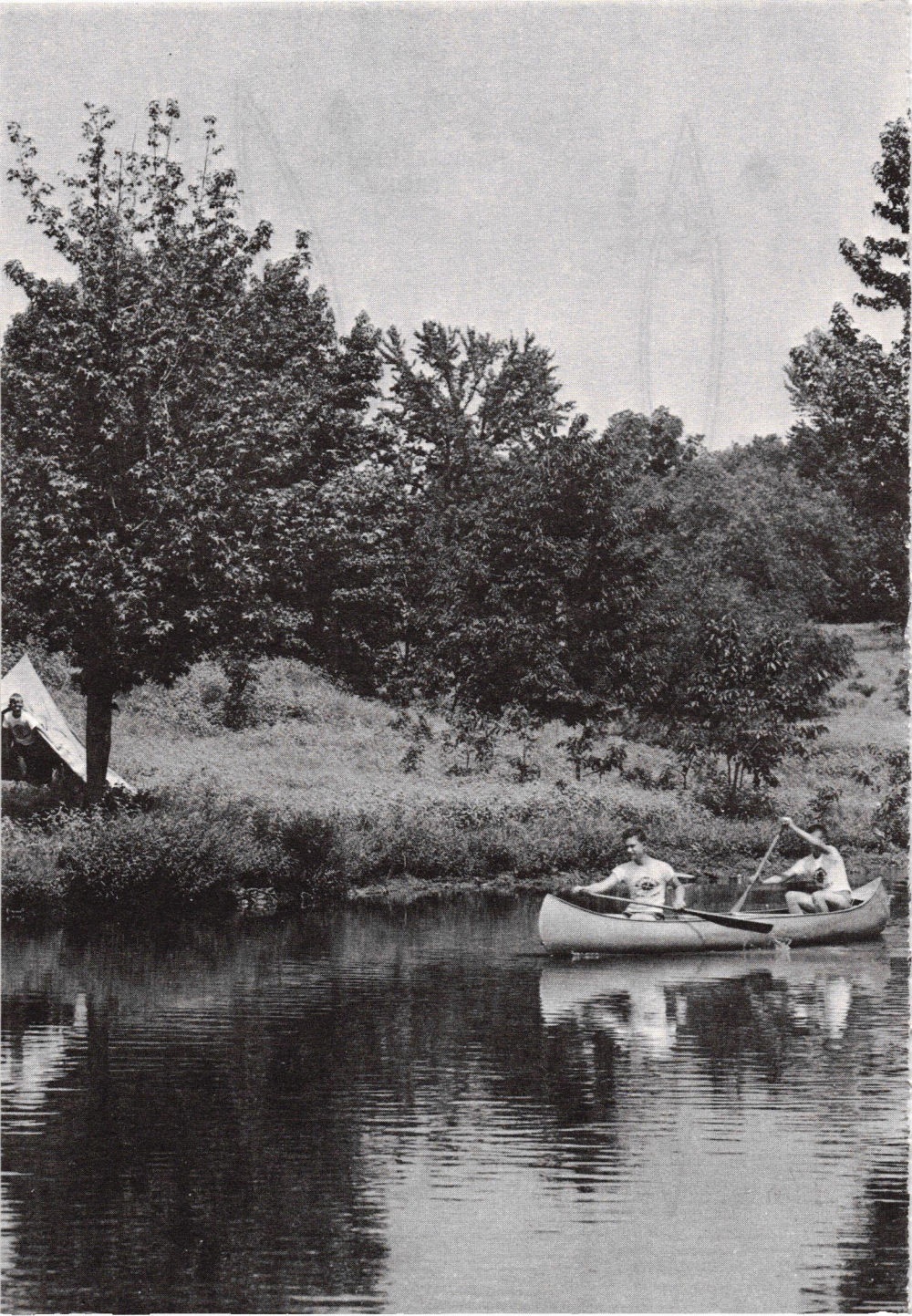
Canoeing has become a very popular and enjoyable experience. Not only is canoeing fun, but with outdoor "know how" a canoe expedition into the wilderness is tops in outdoor adventure. The following tips will be helpful in learning how to handle and paddle a canoe.

In launching a canoe, the bowman (individual at the front of canoe) should get in first while the sternman (individual at the back of canoe) steadies the canoe for him. Then the bowman braces the canoe with a paddle while the sternman gets in and shoves off. Once underway, the sternman is responsible for steering the canoe. The bowman uses a straight power stroke to propel the canoe forward.

The basic paddle stroke is achieved by cupping the top of the paddle with one hand and gripping the handle with the other hand at the point that gives it the best leverage; thrust the paddle forward, dipping it deep enough to get a good pull against the water. Follow through by pulling back with lower hand and pushing forward with upper hand. This will cause the canoe to surge forward. Keep the paddle as close to the canoe as possible without scraping your hand or paddle. For information on the other canoe strokes see the diagrams.

Never abandon a canoe, even if it capsizes. The canoe will still give you enough buoyancy to stay afloat, even when filled with water.

FIGURE 8
STROKE



PART IV

TRAIL RANGERS





CAMPMASTER REQUIREMENTS

I. Prerequisite Requirements

You must first complete Second Class through Master Rating Trailblazer requirements. (If you are Trail Ranger age, it is not necessary to observe the time limits when earning these Trailblazer ratings.) Your three Trail Ranger ratings are then sewn inside your Trailblazer Master Rating chevron (see illustration).

II. Camp Craft

Earn the Advanced Camping Award.

III. First Aid

A. Demonstrate how to stop arterial bleeding.

B. Demonstrate first aid for the following:

1. Shock
2. Fainting
3. Wounds
4. Fracture
5. Poisoning

C. Explain under what circumstances a person should or should not be moved.

D. Explain the technique for mouth-to-mouth resuscitation.

IV. Outdoors

A. Demonstrate your ability to set a course with a compass.

B. Identify two edible wild greens or roots.

- C. Demonstrate your ability to find a certain direction by using the stars.
- D. Explain what to do when you are lost.
- V. Physical Fitness
 - A. Do three physical exercises daily for six weeks, such as push-ups, sit-ups, and running.
 - B. Explain why smoking is harmful to the physical body.
- VI. The Bible

Quote from memory the Beatitudes and six other Bible verses of your choice.
- VII. Your Church

Explain in detail the four main teachings of the church, giving a Scripture reference for each.
- VIII. Your Home

Explain what your attitude toward your parents and your conduct in your home should be, according to the Bible.
- IX. Your Outpost

Explain the organizational setup of your outpost, giving the name of each officer.



WOODMASTER REQUIREMENTS

- I. Earn the Nature Study Award, Weather Award, Pathfinder Award, Physical Fitness Award, Wildlife Award, and First Aid Award.

- II. Assist in the leadership of the outpost by serving as a guide, assistant guide, or volunteer to assist other boys in advancement.
- III. Explain how you put your Christian experience into action in your church and community.



TRAILMASTER REQUIREMENTS

- I. Earn the Survival Award, Christian Service Award, Citizenship Award, and one other award of your choice.
- II. Give a talk before your outpost council on the subject, "The Royal Ranger Code," explaining the importance of living by the Code.



TRAIL CAMPING

For topnotch outdoor adventure, nothing is greater than packing your gear on your back and heading into the wilderness. The turn of each corner and the crest of each hill brings new discoveries. You may study nature untouched by man and observe wildlife in its natural habitats. You will feel a kinship with the vastness, the solitude, and the tranquillity of the wilderness; you meet the challenge of the wilds by providing for your own food, shelter, and other needs. Whether the trail leads you into forest, mountain, or desert, it will be an experience you will long remember. However, before you respond to the call of the wilderness, there is certain knowledge you must have and certain preparations you must make. The following pages will assist you in getting "ready" to meet the challenge of the wilderness trail.

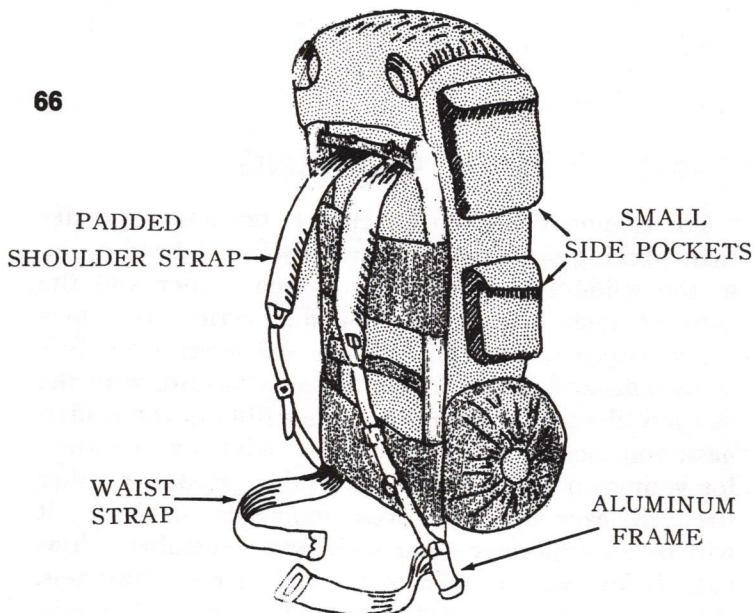
TRAIL EQUIPMENT

FACTS ABOUT PACKS

There are numerous packs, boards, frames, and gadgets designed to carry items on the packer's back. However, the most practical and ideal pack equipment is the basic aluminum frame with a rucksack.

The pack frame is made of light tubular aluminum and is designed to conform to your back and evenly distribute the load.

The rucksack is a pack with one large compartment and several smaller pockets. There are various models, styles, and brands on the market, but the basic design is the same. Pick the pack and frame that suits you best. There are three things we would suggest you consider in selecting your pack and frame.



RUCK SACK WITH FRAME

MATERIAL: Packs are constructed from various fabrics such as canvas duck, nylon, and poplin. The most common of these is canvas and it is usually less expensive. The material should be water repellent to protect your gear from sudden showers along the trail.

PADDED STRAPS: In selecting your pack, pick one with padded shoulder straps. They make your pack much more comfortable and may prevent sore, raw shoulders. If your pack does not have padded straps you can purchase ready-made pads and attach them to the straps or you can make your own with foam rubber.

WAIST STRAP: A recent addition to many pack frames, and in my estimation one of the most valuable, is the waist strap. This strap buckles around the waist like a belt. It is amazing how the strap helps to equalize the load between the shoulder and the lower back.

SELECTING YOUR BEDROLL

One of the most important pieces of equipment you possess is your sleeping bag. A good, warm, comfortable bedroll is essential to good sleep, and adequate sleep is a must for an enjoyable backpacking trip. Therefore, you should give careful thought and attention in selecting your sleeping gear.

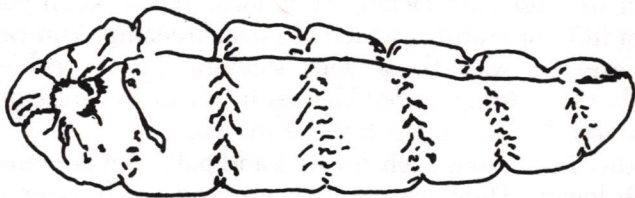
INSULATION: The warmth of your bag depends upon the type of insulation and how many pounds of insulation are in the bag. Among the types of insulation found in bags are: down, Hollofil II, dacron, polyester, and acrylic. The best by far is down insulation. It is lightweight and very warm. Unfortunately it is also the most expensive. Next to down, Hollofil II is best. It makes a fairly lightweight and warm bag, and is much less expensive than down. A good three-pound Hollofil bag will keep you warm in most backpacking situations. It will keep you warm in temperatures which are near freezing. You can increase the warmth of your sleeping bag in colder weather by folding a wool blanket inside or by wrapping it around the top and bottom of the bag.

Other insulations such as kapok and polyester are rated much lower. They are not as warm and are heavier in weight and therefore not ideal for a pack trip sleeping bag.

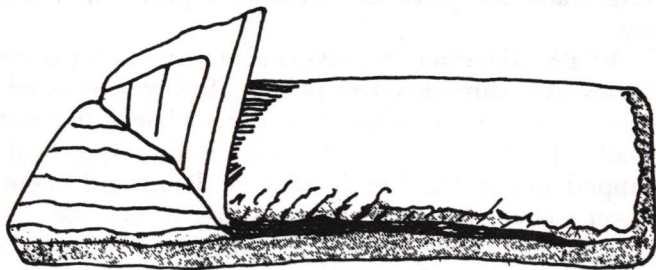
COVERS: Sleeping bag covers also come in a variety of fabrics. Any durable cover is fine. However, if weight is a factor, the best is nylon. Never buy a bag with a waterproof, airtight cover on the top. Body vapor will be trapped inside the bag leaving it damp and clammy. Select a cover that will allow the bag to breathe. Some sleeping bags have waterproof bottoms. These are satisfactory because they will not trap body vapor. However, with a poncho or ground cloth there is no need for this type bottom.

LINERS: It is a good idea to fit your bag with a liner. These liners have two advantages. First, it will keep your bag cleaner. After use, it is a simple matter to remove the liner and launder it. Second, it adds warmth to the bag. If your sleeping bag does not have a removable liner you can make one from an inexpensive cotton flannel sheet. Fold the sheet in half, stitch or pin the bottom and one half of the side of the folded sheet, and then slip liner inside the bag.

SHAPE AND SIZE: Most sleeping bags come in two basic shapes—the oblong shape and the mummy shape. However, because of its light weight, the mummy bag is used by many campers for backpacking. The main disadvantage of the mummy bag is its tight fit which makes some campers feel cramped.



MUMMY-TYPE BAG



OBLONG-TYPE BAG

MATTRESSES

Camping is not a test of endurance, but an enjoyable experience. Therefore, if you can sleep better with a mattress, then by all means use one with your sleeping bag.

There are several types of mattresses for your consideration; there is the air mattress, the foam pad, the tick mattress, and the ground bed.

The tick mattress (which is simply a canvas bag you fill with native insulation at your camp site) would not be suitable in some areas due to a restriction on using native material except in emergencies. You would have the same problem with the ground bed. Taking all into consideration, the most practical choice would be the air mattress or foam pad.

PILLOWS

Some campers find they can sleep much better with a pillow. In fact, some of the most rugged and experienced campers consider a pillow a must for sleeping. I have a favorite pillow I insist on using for camping. Because I am so particular about this pillow, my wife calls it my "teddy bear." There are pillows available that can be inflated in seconds. They also make a good camp seat cushion.

A good substitute for a pillow is to fold a coat or other clothing to place under your head.

GROUND CLOTH

A ground cloth made from waterproof material should be placed beneath your sleeping bag. An inexpensive ground cloth may be made from clear plastic.

SHELTERS

A shelter on the trail has two major purposes: to keep off moisture and to shield from the wind. A shelter may be constructed on the spot from native material or you may carry a shelter with you. Because of the Forest Service recommendation that rustic shelter be used for emergency situations only, you should carry a shelter with you.

TENTS

There are many good tents available that are ideal for backpacking. The best fabrics are lightweight cotton drill, poplin, and nylon. The fabrics should be water-repellent. Tents range from crawl-in varieties to larger, roomier tents. Two things you should consider in selecting your tent is weight and bulk. The tent poles should be lightweight aluminum if possible. Tent stakes can usually be found at the campsite. However, if you carry your own, make sure they are as lightweight as possible.



MOUNTAIN TENT

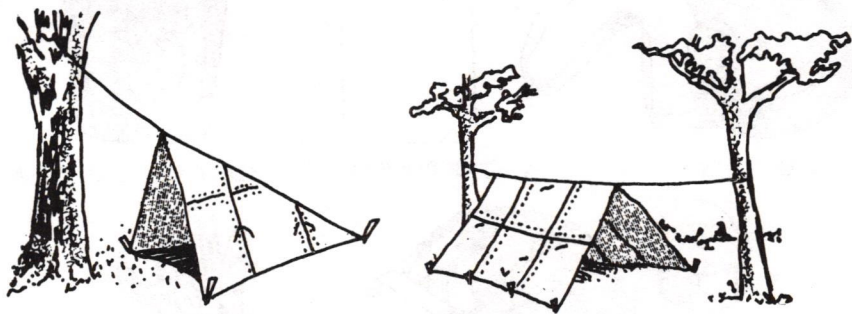
TARPS

When only a simple shelter is required, an ideal shelter is a lightweight tarp. The trail tarp should be at least 7 by 7 feet in size. The most ideal tarp is made of waterproof nylon. Some campers, though, have successfully used a simple plastic tarp. The most commonly used is a close-weave cotton fabric. Tarps should be fitted with grommets for ease in setting up.

The tarp may be used for a variety of shelter types (see illustrations). There are two disadvantages of a tarp shelter: they are difficult to mosquito proof, and they are not very effective in driving rain.

PONCHOS

A poncho is a must for pack trips. It is ideal for foul weather. It is loose enough to provide ventilation (which is essential to prevent excessive perspiration) and is also ideal to slip over you and your pack during sudden showers on the trail. The poncho can also be used for a ground cloth and an emergency shelter.



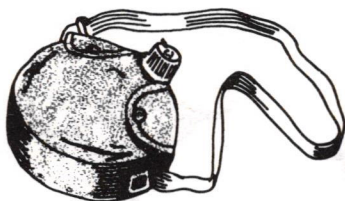
TARP-TYPE SHELTERS

COOKING GEAR

If you plan to cook your own food on the trail, the small compact cook set sold in sporting goods stores is sufficient. They usually contain a small pot with cover, a frying pan, a plate, and a cup. These items are compactly nestled together in a canvas case with a shoulder strap. For silverware there is a stainless steel messware kit available. It contains fork, knife, and spoon in a plastic case. If you plan to cook in a small group or patrol instead of individually, you should use larger cooking utensils and divide them for packing between each individual in the party.

CANTEENS

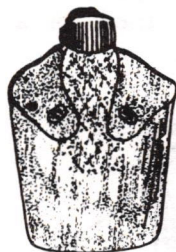
Canteens come in two varieties—plastic and aluminum. Or you may carry a water bottle in your pack. In areas where there is occasional opportunity for refill, a one-quart canteen is probably all you will need. However, in areas where there is little water you should carry a two-quart canteen.



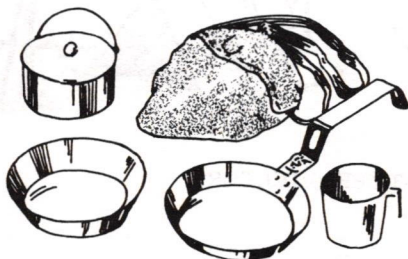
CANTEEN



WATER BOTTLE



MILITARY CANTEEN



COMPACT COOK KIT



SILVERWARE KIT

TOOLS

HAND AX

A hand ax is pretty heavy. However, its usefulness in camp is well worth the additional weight. You will find it more comfortable to carry the ax in your pack instead of on your belt. (Be sure ax is in sheath when not in use.) If you are backpacking with a group it is not necessary for everyone to carry a hand ax. Let someone bring an ax, another a folding camp saw, etc.

KNIFE

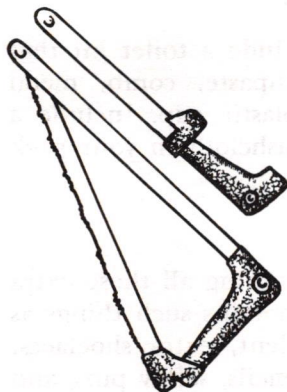
A good camp-type pocketknife is usually all you need for a backpacking trip.

CAMP SAWS

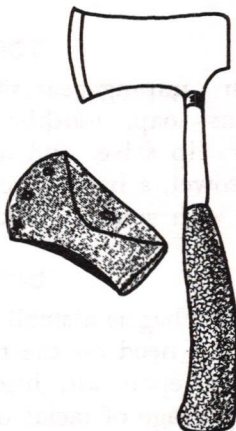
If you are planning an extended trip and you plan to make various gadgets in camp, a folding, portable camp saw is a handy tool to have along.

FILE

A small mill file is good to carry in your pack to keep your hand ax sharp.



FOLDING CAMP SAW



FORGED HANDLE AX
WITH SHEATH

FLASHLIGHT

Be sure you have a reliable flashlight with fresh batteries. If you plan to be gone several days it is wise to carry extra batteries.

COMPASS

You should never leave on a backpacking trip into a wilderness area without a good compass.

FIRST-AID KIT

A small personal first aid kit containing a small bar of soap (soap is not necessary if you have soap in toilet kit), an assortment of different size Band-Aids, and a small tube of burn ointment should be included in your gear.

MATCH CONTAINER

Store a good supply of matches in a waterproof match container and carry them with you at all times.

TOILET KIT

Your camping gear should include a toilet kit that contains soap, toothbrush, toothpaste, comb, metal mirror, lip salve, and a small plastic cup. Include a hand towel, a bath towel, and washcloth in your pack to use with your toilet kit.

DITTY BAG

A ditty bag is a small bag containing all those extra items you need on the trip. It contains such things as clothing repair kit, insect repellent, extra shoelaces, small package of facial tissues, pencils, safety pins, and a small notebook.

TRAIL CLOTHING

SHIRTS

Basically, we recommend sturdy long-sleeved shirts for trail camping. The long sleeves give more protection against insects, the sun, and scratches. The shirt should be roomy for ease in movement. The tail should be long enough so it will stay inside your trousers. Avoid white, black, and bright colors. The white shirts get soiled too easily, the black absorbs heat, and the bright colors frighten wildlife more easily. A soft, solid color such as khaki is a good choice. Breast pockets with flaps and buttons are handy for carrying small items.

TROUSERS

Trousers used for hiking should have the following features: they should be tough and durable; they should be loose and comfortable to allow freedom of action; the legs should be long and without cuffs (cuffs sometimes snag and trip hikers, plus the fact that they collect dirt and debris); the trousers should have roomy pockets for carrying various items.

JACKETS

During the cool of evening around the campfire you should have a lightweight jacket. The Royal Ranger nylon jacket is ideal for this purpose. It is warm and windproof and will add only a few ounces to your pack. If you need additional warmth, a Royal Ranger sweat shirt or a light wool sweater are the things to wear under your jacket. You should estimate what you need in the way of outer garments before you leave on the trip and carry these items in your pack.

CAPS

Baseball-style billed caps are good for backpacking. They are sturdy, economical, and make an excellent shade from the sun. They can be worn with the hooded poncho during rain showers. A special full-color, small, two and one-half inch emblem may be ordered from the Gospel Publishing House. These emblems may be sewn on the front of the caps to give them a special Royal Ranger touch. The caps should be khaki in color (navy blue for leaders).

SOCKS

The best socks for all-around camping in any weather is a good, high-grade wool sock. They dry quickly when wet and absorb moisture from the feet while hiking. If you have a tendency to get "cold feet" at night there is nothing like a pair of dry wool socks to give your feet that extra warmth. Be sure the socks fit well. One of the major causes of blisters is improperly fitted socks or shoes. Socks should reach at least two inches above shoes or boots.

UNDERWEAR

We recommend T-shirts and boxer-type shorts for rugged outdoor activities.

FOOTWEAR

BOOTS

No doubt the best footwear for rugged backpacking is a low-top boot with leather uppers and rubber or composition soles. These boots will support your ankles and protect your feet from the rugged terrain when backpacking. Boots should be large enough to wear heavy wool socks with them. A good choice is a nine-

inch lace-up leather boot with a crepe sole. Higher top boots serve very little additional purpose and are usually more expensive. Some woodmen have used the army surplus infantry boot and have reported good success.

SHOES

The next best choice is a high-top six and one-half inch work or sport shoe. These shoes will take the rugged activities of the trail and will give fair support to the ankle. Low-top shoes should be used only for trips on level and easy-going trails.

MOCCASINS

A pair of moccasins or other type comfortable slip-on shoes are nice to wear around camp at the end of a day's hiking. However, such footwear is not recommended for the actual hiking.



NINE-INCH BOOTS



HIGH-TOP SHOES

PACK FOODS

The ideal pack foods are the new dehydrated and freeze-dried foods. The removal of liquid reduces vegetables and fruit about one sixth of their original weight. This reduction in weight means a lot when you must carry your food on your back for several days on the trail. These products do not require refrigeration, there is no waste, and they are simple to prepare. Some companies have the items for an entire meal all in one package which makes menu planning very simple. Some of the foods are not as tasty as fresh food, but after a long hike on the trail they taste delicious. With all the advantages of these special pack foods there is one major disadvantage: they are rather expensive. One way to cut the cost is to check in your grocery store for pack foods. Some popular brand products carry a good line of dehydrated soups, potato flakes, and powdered milk. Rice, hot cereals, instant chocolate, cold punch, instant pudding, and biscuit and pancake mixes found in the grocery store are very similar to many of those contained in the special packs of camp foods. So shop around!

PACKING YOUR PACK

There are five basic rules to follow in packing your pack.

1. Items needed first should always be at the top of the pack or in an outside pocket where you can easily get to them when needed. Simply anticipate what you will need first, second, third, etc., when you arrive at the campsite, and then pack accordingly. Items that may be needed along the trail, such as poncho, canteen, etc., should be easily accessible.

2. Balance the weight in the pack so it will ride easily.
3. Pack items in separate bags such as extra change of clothing and food for each meal. A good plan is to pack all the food for one meal, such as breakfast, in a separate bag and assign this to one member of the party to carry. Pack the lunch in a separate bag and assign to another hiker, etc. Then when you arrive at the campsite you know that Joe has everything for breakfast on the first day, or that Bill has everything for supper on the second day, and so on. This is much better than arriving at the site and asking, "Who has the soup? Who has the pudding?" etc.
4. Be sure no loose or projecting item is on the outside of the pack to snag or hamper you on a narrow trail.
5. Use a check list to make sure you have included everything you need in the pack.

TYPICAL CHECK LIST

- a. Sleeping bag or bedroll
- b. Ground cloth
- c. Poncho
- d. Pajamas
- e. Extra change of clothing
- f. Extra underwear
- g. Extra socks
- h. Jacket or sweater
- i. Cooking gear
- j. Eating utensils
- k. Food
- l. Toilet kit
- m. Ditty bag
- n. Small first-aid kit

- o. Tent or shelter
- p. Canteen
- q. Ax
- r. Air mattress
- s. Moccasins
- t. Survival kit
- u. Flashlight

That's about it for packing. With a little practice you will find the combination that fits you best.

GETTING "READY"

The success and enjoyment of your pack trip will greatly depend upon the preparation you have made well in advance. Consider the following suggestions in getting ready for your pack trip.

PHYSICALLY "READY"

If you are not accustomed to rugged activities such as trip camping, you should get your body ready for these activities. A good all-around exercise to get you physically fit is jogging. Many doctors believe jogging ranks number one in total benefit to your body. Start out easily, jogging a short distance, then walking, then jogging again. Slowly increase the distance until you can jog a mile without difficulty. To get the maximum benefit from jogging you should keep going until you are very tired or until you are breathing very heavily. Exercises such as push-ups, sit-ups, and chinning are good to strengthen arm, shoulder, and back muscles. Start out slowly and gradually build up to your maximum. Do the following exercises to get your back and shoulders conditioned to your pack: put on a full pack and practice walking and jogging up and down stairs.

Having access to bleachers in a stadium or gym will work even better. A backpack trip should not be a test of endurance but an enjoyable experience. If you are physically ready you will find it even more pleasant.

PLAN YOUR TRIP

Secure a map of the area you plan to hike in and carefully plan your route. Estimate the distance you plan to travel each day and approximately where you plan to spend each night. Familiarize yourself with landmarks in the terrain such as lakes, streams, mountains, etc. Accumulate as much information as you can about the area you are going into. When you have finalized your plans, share them with a responsible person who is not making the trip with you.

GET FOOD AND EQUIPMENT READY

Go over your menu carefully, making sure all food items are ready. Place the basic items for each meal in a separate bag. Staple items for all meals, such as salt, pepper, sugar, etc., should be in a bag together. Double check your cooking utensils to be sure you have everything and place them in a bag for packing. Check all your gear and take care of all repairs; cleaning, sharpening or replacing should be completed well in advance. It is very disappointing when you hurriedly throw your gear together at the last minute and then discover later during the trip that you have forgotten some item or failed to do something essential for the trip.

ON THE TRAIL

On the trail you should maintain a relaxed, comfortable pace. The main object is to enjoy your trip, not to see how far you can travel or how fast you can travel. Remember, you will be on the trail most of the day, so you want to conserve your energy. Rest frequently. Usually a few minutes is all that is necessary. Avoid prolonged rests that may cause your muscles to get stiff. Of course you will take a longer break at lunch. Always stop early enough in the afternoon to set up camp and prepare the evening meal before dark.

HIKING TIPS

If you are not traveling on an established trail, the following tips will be helpful.

1. If possible, always walk around or over obstructions, rather than on them. It takes as much energy to lift the body one foot off the ground as it does to walk thirteen steps.
2. Travel the route of least resistance.
3. Travel in a zigzag pattern when walking up hill. It takes less energy.
4. Travel the ridges whenever possible. You will note that most animal trails follow the ridges, They set a wise example to follow.

FOOT CARE

One of the areas you should give special attention to while hiking is the care of your feet. Make sure your boots are not too tight or too loose. Either one can give you trouble. Be sure socks are fairly new and in good condition. Avoid wearing mended socks or socks with holes. They will multiply your chances of getting

blisters. Be sure socks fit properly. If your feet perspire a lot it is a good idea to carry a pair of dry socks and change them frequently. If your feet are tender, dusting them with foot powder or bathing them in rubbing alcohol at the end of the day is helpful.

SNACK FOODS

Some hikers, including myself, make a practice of carrying snack foods to eat while on the trail. Dried fruits (such as raisins) and candies (such as caramel and chocolate) will give you quick energy. Be sure to take only the candy that will not melt. My favorite snack is a combination of raisins, dry roasted peanuts, and M and M-style chocolates.

FINDING YOUR WAY

You should never venture out into the wilderness without becoming completely familiar with the use of a compass and map. Detailed information on the use of a compass and map may be found in chapter eight of *Adventures in Camping* handbook.

ENJOY NATURE

Prior to your trip you should do some research on the plant, animal, and birdlife in the area you are hiking. This will enable you to enjoy more fully the world of nature while on the trail.



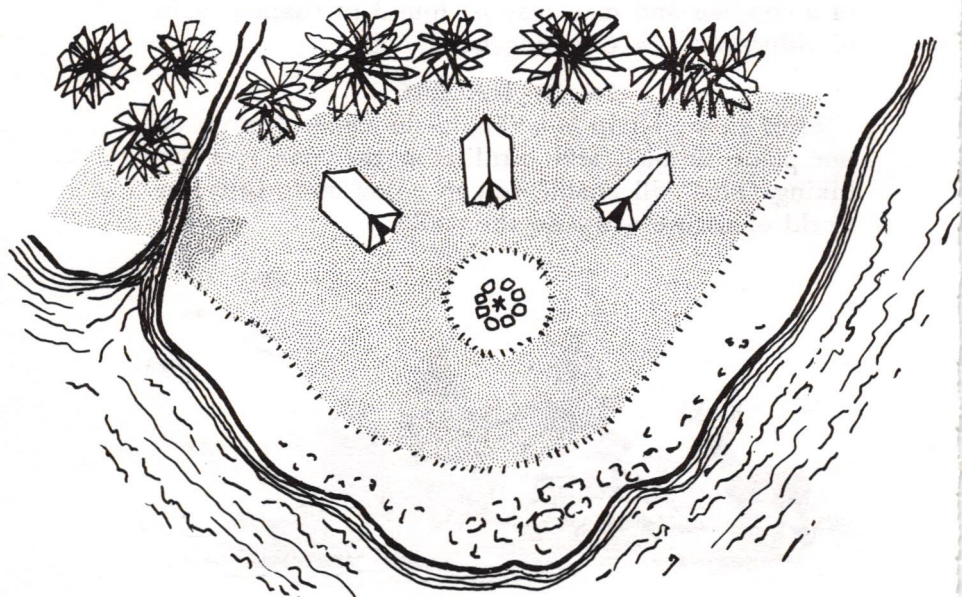
SELECTING THE CAMPSITE

Several factors should determine the location of a trail campsite.

1. Enough level ground for tents or shelters.
2. Good water drainage.
3. Plenty of wood and water nearby.
4. Freedom (as much as possible) from insects.

An ideal spot is a point of land jutting out into a lake or stream. Usually drainage is suitable, water is handy, breezes will drive away insects, and the view is good. Survey the area carefully and plan your site before unpacking your gear. In setting up camp always follow in sequence these basic rules: shelter—fire—food.

Additional Information on the techniques of camping and other outdoor activities may be found in the Royal Rangers camping handbook, *Adventures in Camping*.



TRAIL CAMPFIRES

1. Locate fire so prevailing wind will blow smoke away from tents.
2. Clear large enough space for safety.
3. Collect plenty of fuel and kindling in advance.
4. Build best type of fire to meet your needs.
5. Never leave a fire unattended.
6. Be sure fire is completely out before leaving camp.

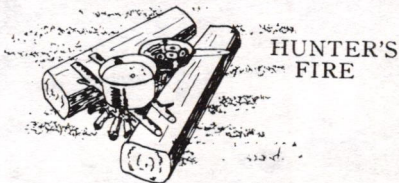
COOKING ON THE TRAIL

Prepare a menu for each meal before leaving on a trip. Keep your meals simple but nutritional. List detailed instructions on how to prepare each meal item. (If you are using special backpack foods, be sure to follow instructions exactly. Do not take shortcuts.)

At the meal site read your menu twice to be sure you know what to do and how to do it. Plan your meal so that all items will be done at approximately the same time.

After the meal, burn all scraps. Liquid waste may be buried in a grease pit. All items such as tin or foil that cannot be burned should be placed in a plastic bag and carried with you to a trash container. (Keep this in mind when buying and packing food stuff.)

One last precaution: always store your food so it will be safe from wild animals. Many inexperienced trail campers have awakened in the morning to discover that some wild pest has destroyed part of their food supply.





PART V

**AIR-SEA-TRAIL RANGERS
EXPLORATIONS**



EXPLORATIONS IN THE OUT-OF-DOORS

ADVENTURE

Unlimited adventure awaits the Royal Ranger in the out-of-doors. Climbing rugged peaks and breathing fresh mountain air, canoeing along quiet waters and disturbing deer and other animals as they drink from the stream. Cooking over a cheery campfire and smelling the savory aroma of hickory smoke and cooking food. Diving into a cool, deep pool and refreshing your body after a long hike on the trail. Falling asleep in your tent while listening to the lullaby of the murmuring wind in the pines and the babbling of a waterfall.

This is Royal Ranger adventure!

NEW DISCOVERIES

The out-of-doors presents a vast new world of things for the Royal Ranger to discover and explore. A hidden lake in the mountains, reached only by packing in. An almost vanished trail used by Indians years ago. An unexplored cave hidden beneath an isolated cliff. A meadow of Alpine flowers viewed by very few eyes. An eagle's nest on a high canyon wall. A quiet pool filled with leaping trout. A furry animal asleep in a hollow tree. Raccoons washing their food in a brook. Beavers felling a tree to build a dam. A flock of geese landing on still, marsh waters. A kingfisher diving for fish. A rare shell on a sun-bleached beach. A prairie dog sitting motionless on a prairie dog mound. A fiery comet flashing across a star-filled sky.

These are discoveries for Royal Rangers to make!



ED QUIGLEY

EXCITING ACTIVITIES

Camping at a favorite campsite, backpacking into the wilderness, fishing trips, boating and canoeing, nature study expeditions, compass hikes, fossil and arrowhead hunting trips, search and survival activities, a night hike to study stars, conservation hikes, mountain climbing, Indian camping.

These are just a few of the exciting activities awaiting Royal Rangers.

CAMPCRAFT

Information on the techniques of camping and other outdoor activities may be found in the Royal Rangers camping handbook, *Adventures in Camping*.

A copy may be purchased from the Gospel Publishing House, 1445 Boonville Ave., Springfield, Missouri.



EXPLORATIONS IN SURVIVAL

Royal Rangers who plan to spend much time in the out-of-doors should train and prepare themselves in the techniques of survival. Even the most experienced woodmen sometimes get lost. Daniel Boone once said, "I was never lost in the woods, but once I was mightily confused for three or four days." Every year men become lost on hunting trips. During vacation season many people become lost while camping or hiking. One boy got lost while picnicking with his family at a state campground. His trouble started when he began chasing a chipmunk. A short time later he realized he was out of sight of the campsite. He started back in what he thought was the direction of the campsite, but he was mistaken. By the time he realized his mistake, he was out of hearing distance of his family and lost.

If we do become lost we can survive any of these experiences with a minimum of discomfort, with the use of a little common sense and a knowledge of woodlore. There are several basic rules to follow:

1. Make a survival kit and carry it on your person at all times while you are in the out-of-doors.
2. Keep your cool—don't lose your head.
3. Look for or make a shelter.
4. Build a fire.
5. Make signals for rescuers.
6. Find water.
7. Search for food.
8. Mark your trail so you can return to your shelter.
9. Conserve your energy.

MAKE A SURVIVAL KIT

Select a waterproof container small enough to fit into your pocket. (Small plastic containers are ideal.) This kit should contain the following items.

1. Emergency food such as boullion cubes, carmel squares, tropical chocolate bar, or malted milk tablets.
2. Waterproof matches.
3. Fire starters such as a candle or a small block of paraffin soaked material.
4. Metal match (found in sporting goods stores).
5. Small knife or razor blade.
6. Small compass.
7. Whistle (for signaling).
8. Nylon fishing line (about 25 feet).
9. Fishhooks, flies or lures (depending on the location).
10. Wire that is light and flexible for making snares (about 10 feet).
11. Water purifying tablets (about six).
12. Assorted Band-Aids (about six).
13. Small bar of soap for first aid.
14. Aluminum foil for making drinking and cooking utensils (two sheets about 12" square).
15. A list of the items and the date to replace them. Some items such as food will become stale.

A suggested plan is to fold one sheet of foil and place it in the bottom of the kit. After arranging the other items, place the second sheet of foil on the top. Place the sheet with the written list of items on top of the foil.

SURVIVAL BLANKET

An ideal companion item to your survival kit is a survival blanket. They are made from a new material that is also used in the astronaut's space suits. They fold small enough to fit in your pocket and they will conserve 90 percent of your body heat. They may also be used as a shelter or signal marker. They may be purchased in sporting goods stores.

KEEP YOUR COOL

The major problem you must cope with when lost is panic. The moment a person realizes, "I'm lost," a strong urge to bolt and run headlong into the forest in search of a trail or familiar landmark will come over him. The forest becomes a menacing enemy. Common sense and reason can be lost if we give in to panic. If you have never had the nerve-shaking experience of realizing you are lost, you may scoff and say, "Not me."

However, specialists in this field inform us that it is a normal reaction to feel panic when lost. The important thing is to know how to handle this feeling when it happens to you. When the sudden realization hits you that you are lost, stop dead in your tracks. If you are standing, sit down. Fight off any urge to run or to keep going. Take out your survival kit and eat a piece of candy. Analyze the contents of the kit and the purpose of each item. If this does not calm you, build a fire. The secret is to do something to overcome the feeling of panic. Bow your head and pray for God's help. Quote aloud your favorite Scripture passage. We suggest that you write down Psalm 121 and place it in your survival kit. Read it aloud. You will soon begin to feel better; you are not alone. Jesus is with you to help you. When you have calmed down, begin to

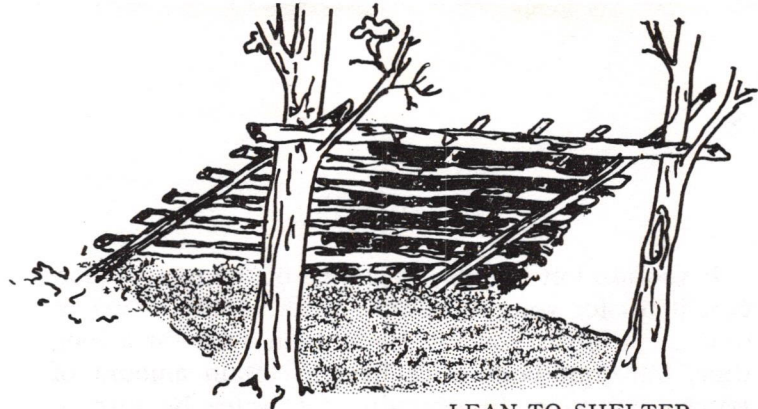
think. Study the area around you. Try to visualize the last place you can remember before you became lost. Try to reason out what you did that caused you to become lost. Sometimes a little sensible reasoning will put you back on the right track. Perhaps you are not lost at all, but like Daniel Boone, you are "just a mite confused." If so, calmly be on your way. However, if there is the slightest doubt, mark the trail so you can come back to the place where you first became lost.

MAKE A SHELTER

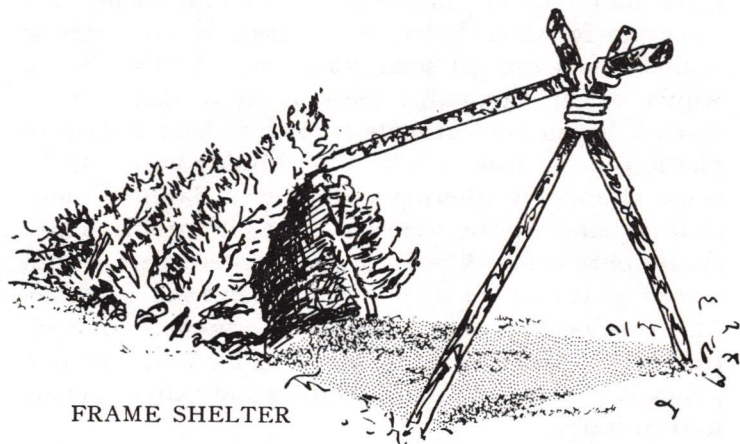
If you cannot find a solution and you know you are really lost, start immediately to build a shelter. Don't wait until too late in the day. By beginning early you can take it easy and conserve your energy. The shelter will not only protect you from the elements, but there is also something reassuring about a shelter and a fire; plus the building of it gives you something to do while waiting to be found. (See the illustration for some suggestions on building an emergency shelter.) After completing the shelter, make a ground bed from leaves or boughs to protect you from the ground cold.

KEEP YOUR FIRE GOING

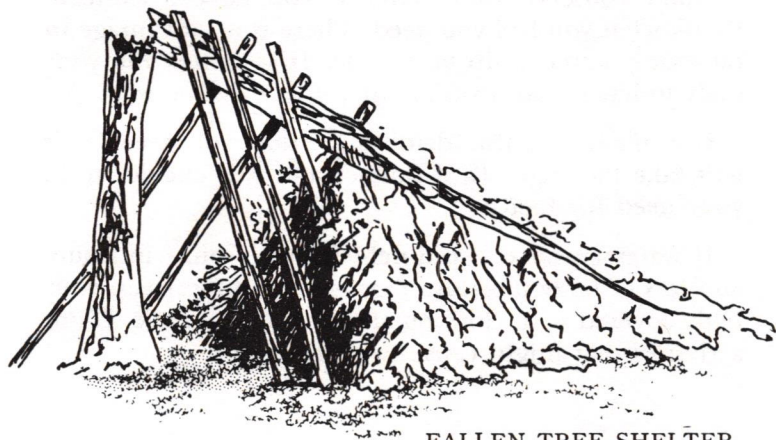
Get a good fire going, and then gather plenty of wood to keep your fire going throughout the night. Don't allow your wood supply to run low. Keep a large supply of fuel and kindling in reserve. Keep kindling and tinder in a dry place. Conserve your matches. You will need a good size fire for warmth during the night; therefore, arrange the wood so it will burn slowly, yet keep you warm. You will probably need to tend the fire about twice during the night. The fire will not only keep you warm, but there is something very comforting and cheery about a blazing campfire when you are alone at night, particularly if you are lost.



LEAN-TO SHELTER



FRAME SHELTER



FALLEN TREE SHELTER

FIND WATER

If you are lost for very long, one of the most important items for your survival is water. Locate water as soon as possible. You can do without food for a long time, but your body must have a certain amount of water to survive. In searching for water be sure to mark your trail so you can return to your shelter. Always purify water before it is used. If no water is available you can get some water from heavy dew. In winter or in mountains there is snow that can be melted. If you are fortunate enough to have a sheet of plastic you can make a solar well. Muddy water can be made cleaner by filtering it through a layer of clean cloth or sand. Spring water in the wilderness is almost always pure if drunk at its source. In desert areas, lush vegetation is a sign of water. In mountains you can sometimes find pools of rain water in rock pockets. (Always treat or boil this water.) In searching for water the best policy is to search downhill. Gullies and valleys usually lead to water.

Don't conserve your water if you have a canteen. Drink what you feel you need. There is no advantage in rationing water a sip at a time. It is better for your body to have a full drink than a dozen sips or swallows.

If water is plentiful, drink more than you need. This will take the edge off of hunger and will cut down on your need for food.

If water is scarce, avoid dehydration from wind, sun, and loss of body moisture through sweating. Keep your body covered with clothing and stay in the shade. Limit activities that might cause sweating.

MAKE RESCUE SIGNALS

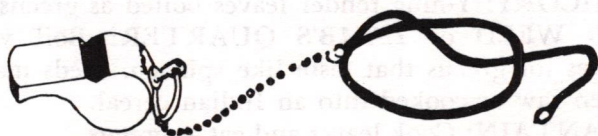
The standard distress signal is a series of three: three shots, three blasts on a whistle, three fires, etc.

Using the whistle in your survival kit, give three blasts about five seconds apart from time to time. A whistle blast carries much farther than the human voice and takes much less energy.

Lay out three signal fires in a clearing. After you light the fires and they are going real good lay on green boughs to make a good smoke signal. A good smoke signal can be spotted several miles away. (Usually it is a good idea to wait long enough to be sure someone knows you are lost before lighting signal fires. Perhaps the next morning after you become lost.) However, anyone seeing the three smoke signals will know someone needs help.

By using the orange side of your emergency blanket you can make a marker that is easily spotted from the air. Using a mirror, a piece of foil, metal, or glass you can make a flash signal that will attract the attention of a plane. If lost in the snow, you can tramp out the signal SOS in the snow. Rocks or logs spelling SOS on a sandy beach also make a good marker.

Avoid leaving your temporary camp. However, if it is necessary to leave in search of water or food, leave a note on paper, bark, a tree blaze, or on the ground, and mark the trail in the direction you are going.



SEARCH FOR FOOD

If it appears you are going to be lost for awhile you should look for food. In most parts of the country it is totally unnecessary for a person who is lost to perish from want of emergency food. However, if you do not find food immediately, don't worry; you can go for days without food and even weeks and still not harm your body. Of course you will feel hungry, but that is because you are accustomed to three meals a day. Chances are if you conserve your energy you will probably be found long before you will need food for survival. However, if you have time on your hands, try one of the following sources of food to satisfy your hunger.

EDIBLE PLANTS

If water is scarce, plant food which is high in carbohydrates and vitamins is better than high protein food such as meat.

The list of edible plants is so long we will list only the most common ones. Their availability depends upon the section of the country and the season of the year. These edible plants are in the following categories: greens, roots and tubers, fruits and buds, and nuts.

WILD GREENS

DANDELIONS: Young tender leaves may be eaten raw.

CLOVER: Young leaves and blossoms may be eaten raw.

CHICORY: Young tender leaves boiled as greens.

PIG WEED or LAMB'S QUARTER: Boil young leaves for greens that taste like spinach. Seeds may be eaten raw or cooked into an Indian cereal.

PLANTAIN: Cook leaves and eat as greens.

PURSLANE or PUSLEY: Boiled as greens.

SCURRY GRASS: High in vitamin C; it was used by explorers and frontiersmen to prevent scurvy. Eat leaves raw.

ROSEROOT or **STONECROP:** Also high in vitamin C. Eat young stem and leaves raw for salad or cooked for greens. Roots may also be cooked as a vegetable. Plant may be identified by its rose-perfumed aroma.

GLASSWORT or **BEACH ASPARAGUS** (sometimes called salt worts) : Eat raw as salad.

MUSTARD: Boil and use as greens.

WATER CRESS: May be eaten either raw or cooked.

SHEPHERD'S PURSE or **PICKPOCKET:** Eat raw as salad.

MINER'S LETTUCE or **SPANISH LETTUCE:** Eat young leaves raw; older leaves may be cooked like spinach.

SHEEP SORREL: Leaves may be eaten raw.

PASTURE BRAKE or **BRACKEN** (sometimes called Eagle Fern and Croziers) : Use only when very young. May be eaten either raw or cooked.

DOCK (sometimes called wild spinach) : Leaves eaten raw as a salad or cooked as greens.

COMMON CHICKWEED: Boil as a green.

MILKWEED: Boiled and eaten as a green.

WINTER CRESS (or Yellow Rocket) : Eat young leaves raw; cook older leaves as a green.

GOLDENROD: Young tender leaves are used as salad; dried leaves and dried blossoms may be brewed into a tea.

FIRE WEED: Boil young tender stems. (They are similar to asparagus.)

WILLOW: Young tender leaves may be eaten raw. (They are ten times richer in vitamin C than oranges.) Also, you may peel the outer bark from young willow shoots and eat the inside raw.

CAUTION

A good rule to follow is: If you cannot identify the plant, leave it alone. It is better to be hungry than sick.

ROOTS AND TUBERS

CATTAILS: One of the best survival foods available. The root is used as a tuber vegetable. New shoots may be eaten raw as salad. The white inner stalk may be eaten raw or cooked as a vegetable. The yellow pollen can be made into a flour. The dried stalk and leaves can be used to stuff pillows and comforters.

ARROWHEAD (or tule potato): Use the tuber like potatoes.

INDIAN CUCUMBER: Roots may be eaten raw.

GROUNDNUT (also called Bog potato or Indian potato): May be eaten raw, but are better cooked. They taste more like turnips than potatoes.

SEGO LILY (or Mariposa): Bulb is boiled as a vegetable.

JERUSALEM ARTICHOKE (a native sunflower): Scrub and eat tuber raw like carrots or boil and eat like potatoes.

REEDS: Roots are boiled or cooked like potatoes.

WILD ONION: Bulbs and plants can be cooked by boiling or bulbs can be roasted over low heat.

BURDOCK: The roots should be boiled to eat. Use only first year's roots (The stalk becomes prickly and grows a flower the second year.)

BULRUSH: Roots may be eaten raw. The white base of the stem may also be eaten raw.

TOOTHWORTH: Scrape the roots and eat raw.

SPRING BEAUTY (or Fairy Spuds): High in vitamins A and C. Clean roots and boil with jacket on.

POND LILY (white or yellow): Roots may be used as a cooked vegetable.

FRUITS AND BUDS

Most of the wild fruits listed may be eaten raw or cooked into pies or cobblers. However, for survival foods the best method is to eat them raw.

BERRIES: Wild—blueberries, cranberries, raspberries, blackberries, serviceberries (also called June berries), strawberries, gooseberries, and mulberries all make good survival food eaten raw. However, serviceberries and gooseberries taste better when cooked.

MAY APPLE: Ripe fruit may be eaten raw. However, they are much better when cooked.

WILD GRAPES: Eat as they are.

MANZANITA: Berries may be eaten raw or cooked.

GROUND CHERRY (sometimes called strawberry tomatoes): Fruit eaten raw.

HAWTHORN (sometimes called haws): Eat fruit raw or cooked.

WILD CHERRIES: Rum cherries, choke cherries, and pin cherries.

WINTERGREEN: Fruit eaten raw.

CURRANTS: Raw or cooked.

PAW PAWS: Eat ripe fruit raw.

WILD ROSES: Eat the rose hips (green or dried); they are rich in vitamin C. In fact, dried rose hips are sold in health food stores at a premium price.

MUSTANG GRAPES: Eat ripe fruit.

WILD PLUMS: Should be ripe.

PERSIMMONS: If not completely ripe, leave them alone.

PRICKLY PEARS: Be very careful in gathering the fruit of prickly pears. Slice off the ends, split lengthwise and eat the pulp. They are well worth the effort if you don't get stuck by the spines and bristles.

OTHER CACTI

BARREL CACTUS: Plant should be carefully broken open to avoid spine; then the moist pulp is eaten for food and moisture content.

CENTURY PLANT: Spines are chopped away from pulpy base. This is boiled or roasted.

NUTS

PECANS, BLACK WALNUTS, HICKORY NUTS, HAZELNUTS, and BEECH NUTS are all good survival foods. Break the shell and eat the inside meat.

BARKS

The inner bark of evergreen pine tree family and also the willow may be boiled or eaten raw as an emergency food if nothing else is available.

EMERGENCY DRINKS

SASSAFRAS: A good tea may be made by brewing the roots of sassafras. This drink was used by many pioneer families. It is also the flavor base for old-fashioned sarsaparilla, now called root beer.

SWEET BIRCH: The dried leaves of a sweet birch tree may be brewed into a tea.

CHICORY: An emergency coffee may be made by roasting and then pounding chicory roots into powder.

WILD COFFEE (or tinker's weed): Roast dried seed and grind into a coffee.

SWEET FERN: The dried leaves are brewed into a tea.

SUMAC: The red berries may be brewed fresh or dried to make a punchlike drink.

HEMLOCK: The young green needles are brewed into a tea rich in vitamin C. (The needles of other trees in the pine tree family may also be used.)

EMERGENCY MEAT

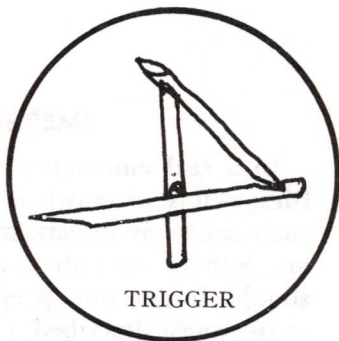
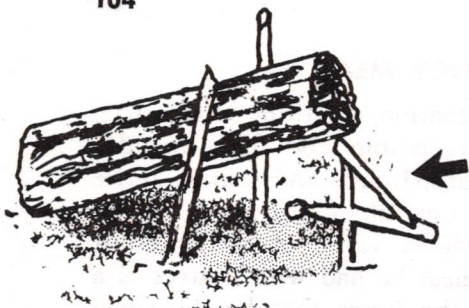
In a real emergency situation, anything that walks, flies, swims, or crawls is acceptable food. This includes such things as insects, grubs, lizards and snakes. If we are hungry enough and our life depends on it, we should forget our prejudiced value of the food. A visitor once described a meal he had with natives of a certain country. Among the items that he described were the cooked unborn embryo of an animal, strips of meat from the stomach muscles of another animal, and a paste made from the secretion of the mammary glands of an animal. The paste was spread over burned bread made from the seeds of a plant. Doesn't sound very appetizing does it? In reality, what has just been described is a breakfast of eggs, bacon, and buttered toast. So you see, some of our ideas about food are psychological. However, there are usually many other meats available more to your liking. The following are some methods you may use to secure these foods.

BY HAND: Some items such as shellfish and crawfish, and sometimes frogs may be had by picking up or grabbing them with your hands.

CLUBBING: Some slower animals such as the porcupine can be killed with a club.

SNARES: One of the best methods for the more evasive small animals is to snare them. The snare may be made from the small flexible wire or line in your survival kit. See illustrations for several possibilities. Snares will work for you while you are resting or sleeping. Check snares each morning. Also be sure to remove all snares when you are rescued or you permanently leave the area.

SPEARING: Such game as frogs and some fish may be



TRIGGER

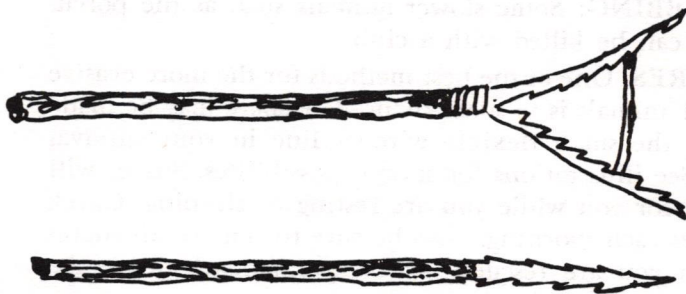
DEAD FALL SNARE



SLIP NOOSE SNARE



BENT TWIG SNARE



FISHING SPEARS

gigged with a spear. (See illustration on how to make a spear.)

FISHING: If you are near a stream or lake, use your emergency fish gear to catch fish. Try your fly or plug. If this doesn't work, use live bait on a fishhook. Try various places and methods until you are successful.

SLINGSHOT or BOW AND ARROWS: Some woodmen have suggested making emergency slingshots and bow and arrows. However, unless you are real good with the use of these items, it is a waste of time.

COOKING GAME: Most of the meat may be broiled on a spit or over coals, or thinly sliced meat can be fried on a hot rock. Or, meat may be boiled; by adding some of the roots from plants listed you can make an acceptable stew. Fish may also be smoked.

MARK YOUR TRAIL

It is usually better to stay put; however, if you do leave your temporary site, always leave a marked trail that can easily be followed.

CONSERVE YOUR ENERGY

Conserve your energy by resting as much as possible. Avoid unnecessary exertion. Limit your activities to doing only those things necessary. If you feel you must do something to pass the time, engage in activities that will use only a minimum of energy.

USE YOUR HEAD

Sometimes survival and comfort depend upon simple, sound thinking. Some people call this "horse sense."

Two young men were stranded in a remote desert when their pickup truck broke down. They almost died of thirst, yet the pickup had a radiator full of water untreated with antifreeze. It may have tasted a little

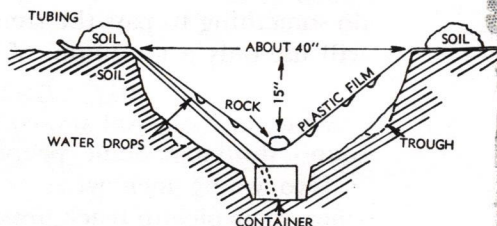
rusty, but it was still usable water. This never occurred to the boys.

A hunter was lost in a blizzard. He found shelter under an overhanging rock. Even though plenty of wood was available he spent several miserable hours in freezing temperature and suffered minor frostbite because he had no matches to start a fire. Yet he could have removed the lead from a cartridge, stuffed a piece of cloth in the end of the gun barrel, and then fired the gun in the air. The cloth would have caught fire and he could have started a fire with it.

A pilot with engine trouble crash-landed his plane on an isolated, snowbound mountain. He almost froze waiting to be rescued because he too had no matches to start a fire. Yet he could have soaked a cloth in the gas tank and then crossed a spark wire in the motor and caught the rag afire. (This can also be done with any type motor vehicle.)

By using your head you may find many logical solutions to your needs when you are trying to survive.

SOLAR STILL. Dig a pit 4 feet wide by 3 feet deep. Put a shallow container in the center. If possible, rig a tube from this up to the edge of pit. Stretch clear plastic over pit, with a rock in the center to form a cone directly over container.

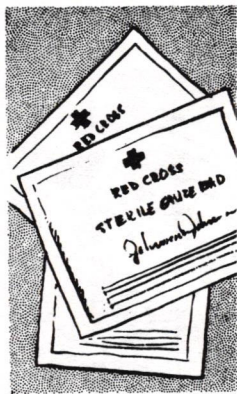
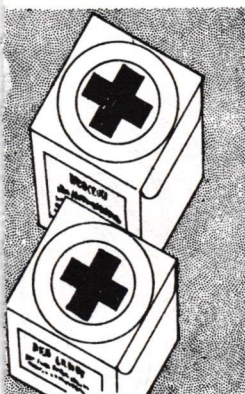




EXPLORATIONS IN FIRST AID



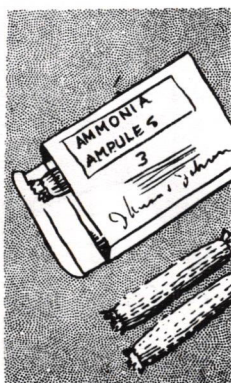
"... And went to him and bound up his wounds" (Luke 10:34).



FIRST-AID KITS

The following items should be included in an outpost first-aid kit. First, a roll or two of 1-inch or wider gauze bandage. Place a gauze pad on wound and spiral wind the bandage around it.

Two- to four-inch gauze pads are handy for larger wounds. Place on wound and wind bandage around it.

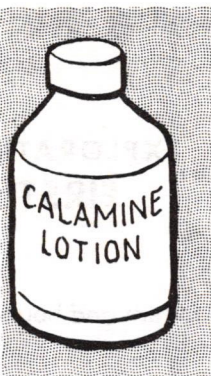


Triangular bandages are useful as an emergency cover, arm sling, dressing, and for other purposes.

Ammonia ampules will revive a person who has fainted.

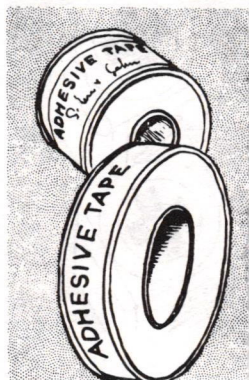
Calamine lotion is good for insect bites or stings.

Rubbing alcohol is good for sponging skin exposed to poison ivy.



If your drinking water is not guaranteed to be pure, boil it. Treat it with a purifier or iodine or use halazone tablets.

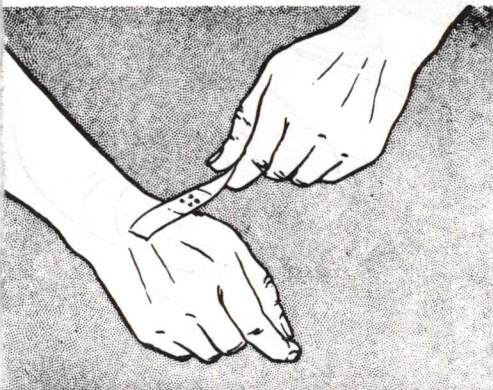
One- or two-inch adhesive tape has many uses in first-aid work.



A bar of soap should be used to wash wounds.

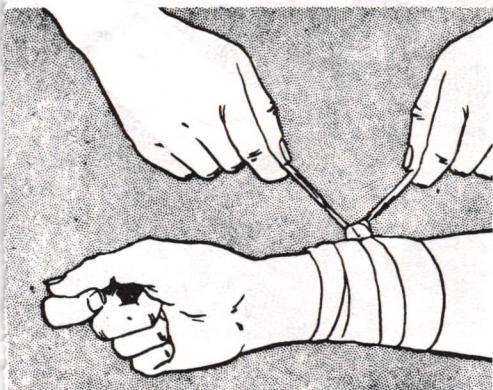
Band-aids are good to use on small cuts or wounds.





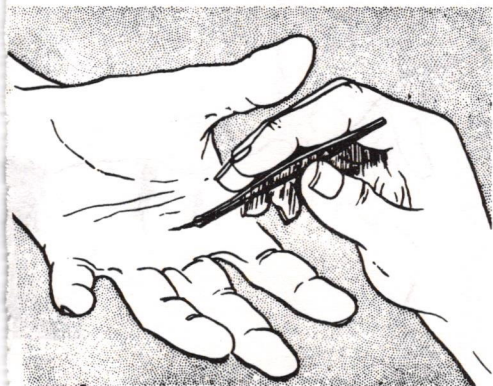
SIMPLE WOUNDS

Wash a small wound with soap and water. Dry the skin and cover the wound with a Band-aid.



LARGE WOUNDS

Cover a large wound with a sterile compress and wrap with bandage. Use a square knot to tie end of bandage.

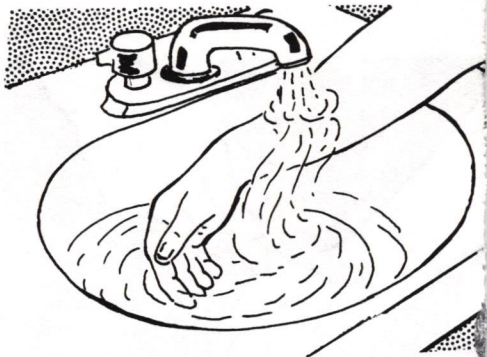


SPLINTERS

Use a pair of tweezers to pull a splinter from under the skin. Then work antiseptic well into the wound.

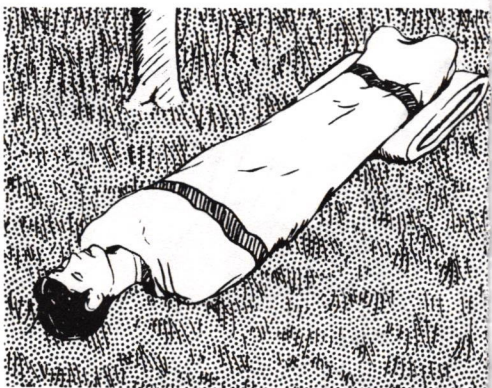
BURNS

Flush or submerge the injured part in cold water. Apply a dry dressing if it is necessary.



SHOCK

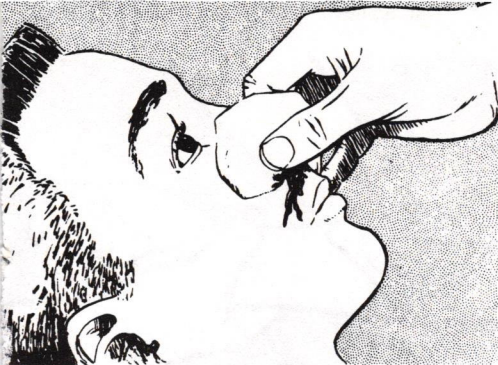
Where there is an accident, there may be shock! Lay the person down. Keep him warm. Place something under the feet. If the person is having breathing difficulty, lower the feet and elevate the head and shoulders.



FAINING

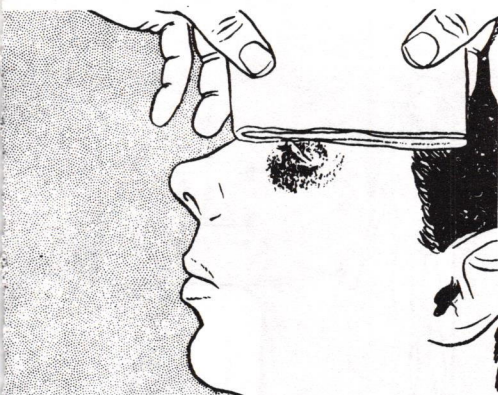
When a person faints, lay him down with the feet raised higher than the head. Pour a few drops of aromatic spirits of ammonia on cotton cloth and place it near the nose.





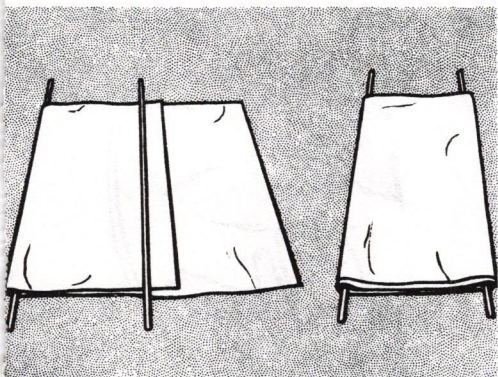
NOSEBLEED

For nosebleed, bend the head back. Place a cold compress over the nose. Press the nostrils together.



BLACK EYE

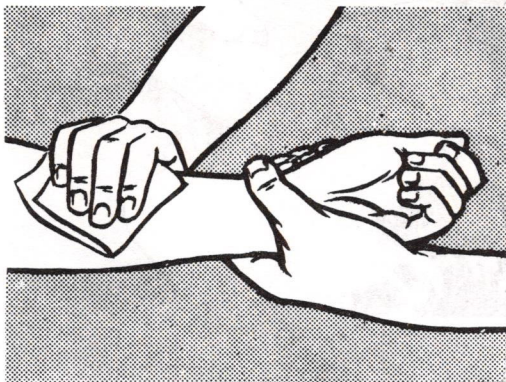
A black eye is a bruise. A cold compress will relieve pain and prevent swelling.



Improved Blanket Stretcher

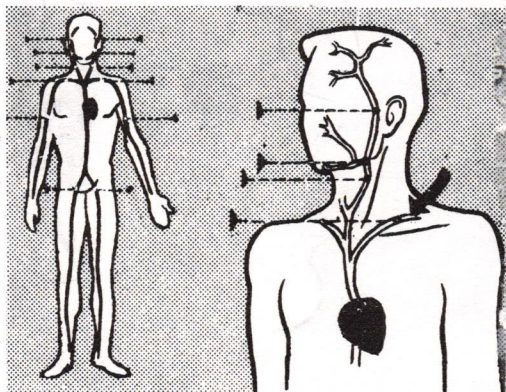
BLEEDING

Apply direct pressure to wound and elevate the injured part. You can do this best by placing the cleanest material available against the bleeding point. Apply pressure with your hand until a bandage can be applied. Most wounds can be cared for in this manner.



ARTERIAL BLEEDING

When a deep gash spurts blood from a cut artery or larger veins, it is like a break in a water pipe. We shut off the flow by pressure nearest the pump—the heart. Know the pressure points shown in the diagram.



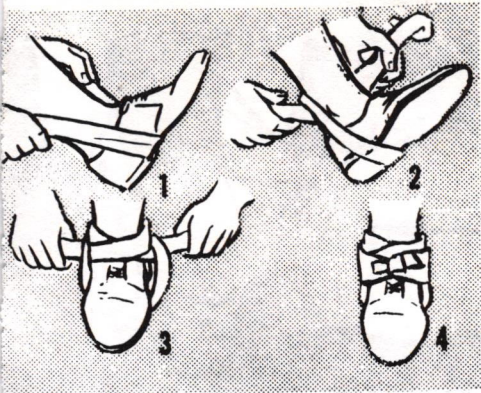
APPLYING PRESSURE

At each point the artery passes over a bone. When you press your hand against the bone, you flatten out the artery just like pinching a rubber tube to stop the flow of water. When the blood stops, it means you have the right spot.



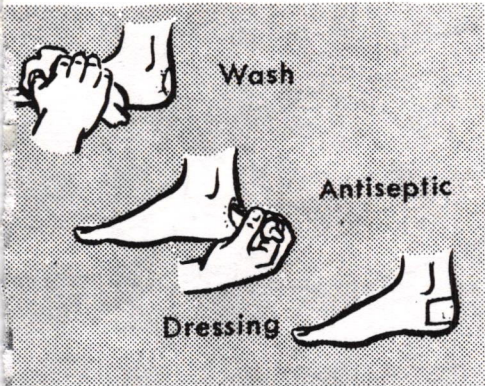
SPRAINS

Sprains are injuries to the soft tissues surrounding joints. The ankles, fingers, wrists, and knees are most often affected. Ankle sprains commonly result when weight is thrown forcefully upon a turned ankle. Apply cold wet application or ice bag during the first half-hour to retard swelling. Keep the joint elevated. Do not walk on sprain until it has protective support.



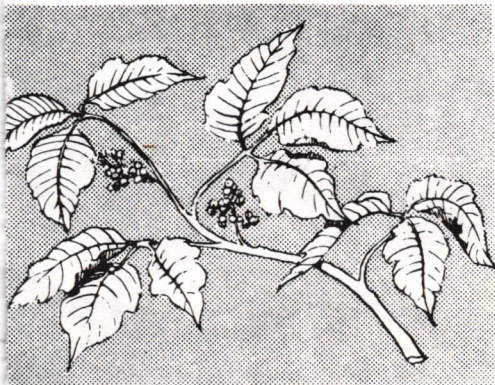
BLISTERS ON HEEL

Do your best to prevent blisters. If you do get one, wash it with soap and water or clear water. Cover it with sterile dressing and adhesive tape. If the blister has been broken, treat it like any other wound. A blister should not be opened except by a doctor. Foot injuries are dangerous and should not be neglected.



POISON PLANTS

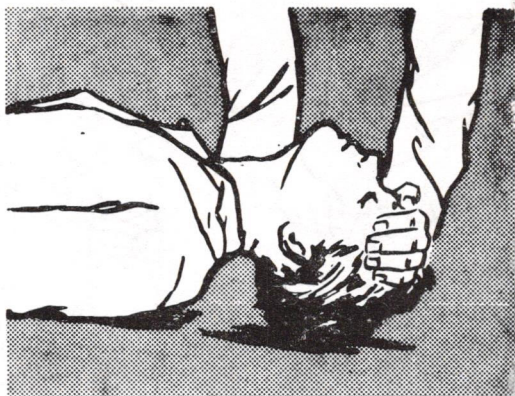
If you have been in contact with poison ivy, poison oak, or poison sumac, wash the exposed area with strong soap and water; then sponge it with rubbing alcohol. Apply calamine lotion to relieve itching, or you may make a solution of baking soda or Epsom salts and apply to the infected area.



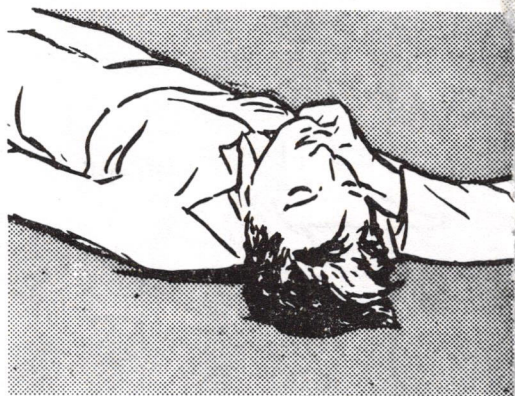
ARTIFICIAL RESPIRATION

Mouth-to-Mouth Method

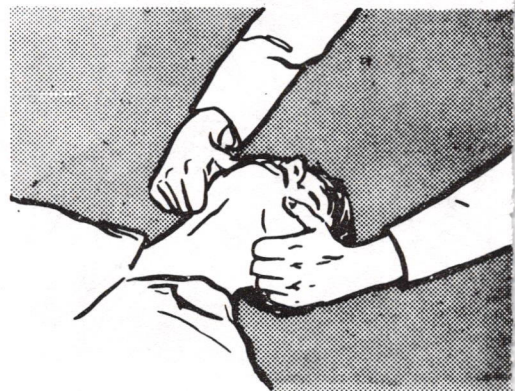
1. If there is foreign matter visible in the mouth, wipe it out quickly with your fingers or a cloth wrapped around your fingers.

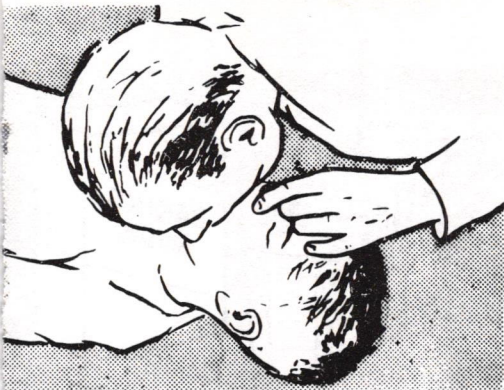


2. Tilt the head back so the chin is pointing upward.



3. Pull or push the jaw into a jutting-out position.





4. Open your mouth wide and place it tightly over victim's mouth. At same time pinch victim's nostrils shut.



5. Or close the nostrils with your cheek. Or close the victim's mouth and place your mouth over the nose.



6. Blow into the victim's mouth or nose. If you are not getting air exchange, recheck the head and jaw position.

7. If you still do not get air exchange, quickly turn the victim on his side and administer several sharp blows between the shoulder blades in the hope of dislodging foreign matter.

POISONING

Dilute the poison with large amounts of water and baking soda (four or more glasses) or milk, which gives more protection to the stomach. One or both may be given. Dilute until vomiting occurs. Keep the patient vomiting until poison is removed from stomach. You may need to induce vomiting with a finger or spoon.

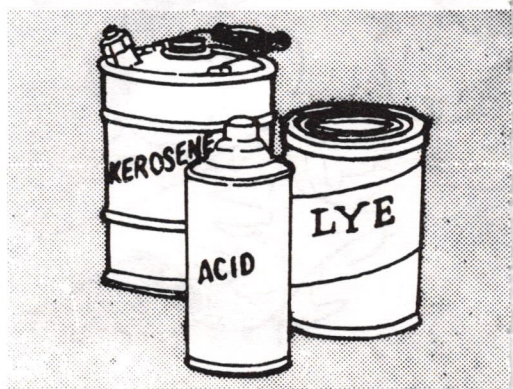
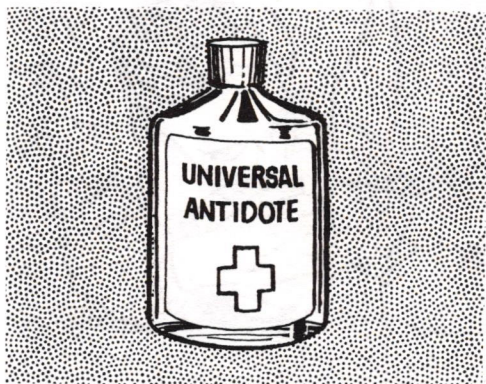
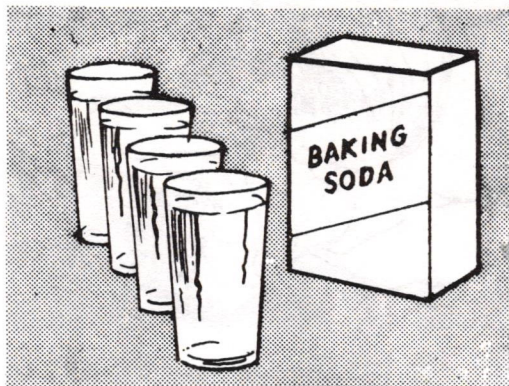
If an antidote is indicated on the label, give as directed. If antidote is not known, give a commercial preparation called "universal antidote" which contains medicinal charcoal.

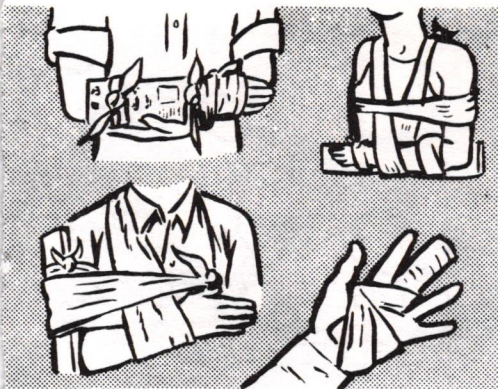
EXCEPTIONS TO THE RULE

For *strong acids* give water and milk of magnesia to neutralize the acid. (Baking soda may be used if there is no milk of magnesia). *Do not* induce vomiting. Then follow with milk, olive oil, or egg white to protect stomach lining.

For alkalis, such as lye, give a glass of water with vinegar or lemon juice to neutralize the alkali. Follow with milk, olive oil, or egg white. *Do not* cause vomiting.

In kerosene poisoning, vomiting should not be induced.





FRACTURES

Fracture—a broken bone.

Simple fracture—the bone is broken but skin is not.

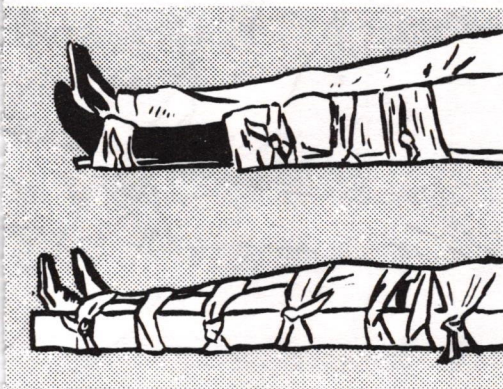
Compound Fracture—both bone and skin are broken.

Splint—an object made of wood or metal to keep in place a broken bone.

CARE OF FRACTURES

If fracture is suspected, handle limb with care. Large nerves and blood vessels run close to bones. If these should be cut by the sharp edges of the broken bone, paralysis or bleeding will follow.

It is important to keep persons with fractures motionless until the limb has been splinted. "Splint them where they lie." If you don't know how, get someone who does.



SPLINTS

The most common form of splint is a thin piece of board which should be well padded before it is applied to the limb. The splint must be long enough to immobilize the joints above and below the fracture. In the absence of a piece of wood, a newspaper may be used as a splint for the forearm.

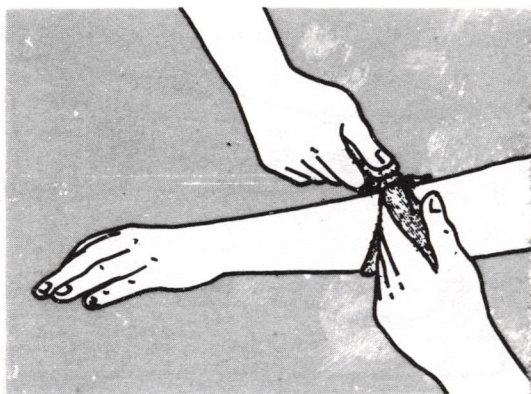


SNAKE BITE

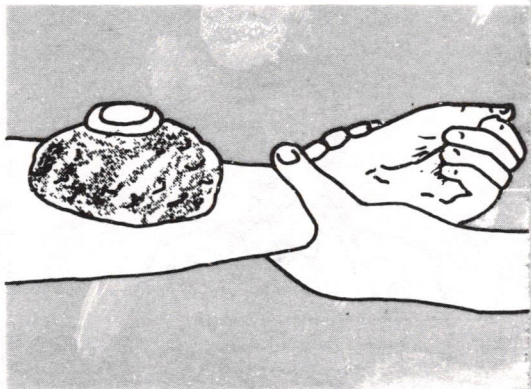
Have the victim lie down at once and remain absolutely quiet; try to control his excitement. The affected part of the body should be higher than the rest of the body. Give first aid for shock.

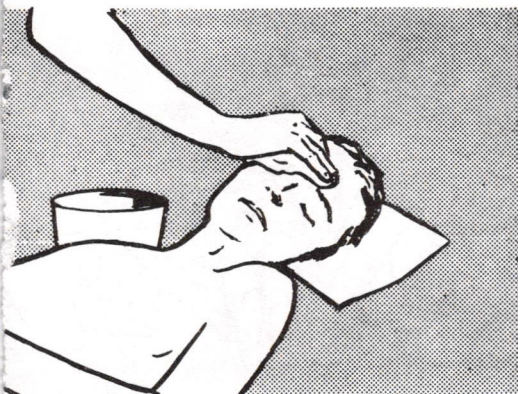


Apply a Constriction bandage or use a handkerchief. This band should be tight but not tight enough to stop the flow of blood.



Apply cold packs to the affected part of the body to relieve pain and possibly delay the union of snake venom with body tissues. Transport the patient in a lying-down position to a doctor immediately.

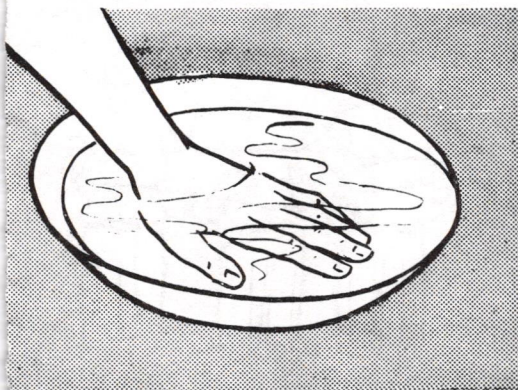




COOL OFF



EXTRA HEAT



LUKEWARM WATER

SUNSTROKE

Symptoms—skin is red, dry, and hot, and pulse is strong.

First aid—cool off the victim by placing him in the shade and sponging his skin with water or alcohol. The patient's head and body should be slightly elevated.

Caution: Sunstroke is the opposite of heat exhaustion and first aid is completely different.

HEAT EXHAUSTION

Symptoms—skin is pale, cold, and clammy, and pulse is weak.

First Aid—the same as for shock. Place the patient's feet high and his head low. Cover him with a blanket to keep him warm.

FROSTBITE

Symptoms—skin becomes grayish white and feels numb.

First Aid—cover the frozen area with woolen material. If possible bring the person into a warm room and place the frozen part in lukewarm water for a short period. Give the patient a warm drink. Do not rub with snow—this could injure the skin.

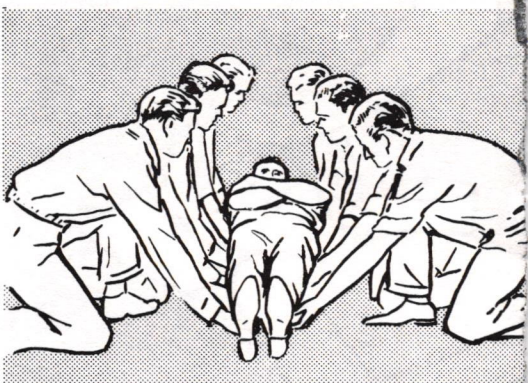
MOVING INJURED PERSONS

Do not move an injured person unless necessary! If the patient is moved be sure the following has been done before he is moved.

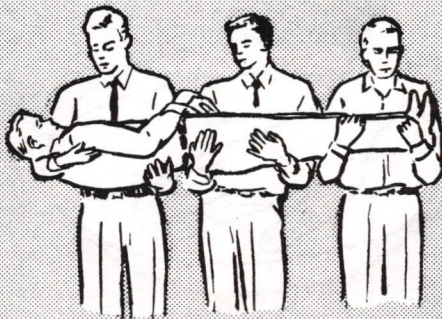
1. All bleeding has been stopped.
2. All fractures have been splinted.
3. Patient has been made warm.

Be very careful when moving an injured person. Careless or rough handling may cause greater shock.

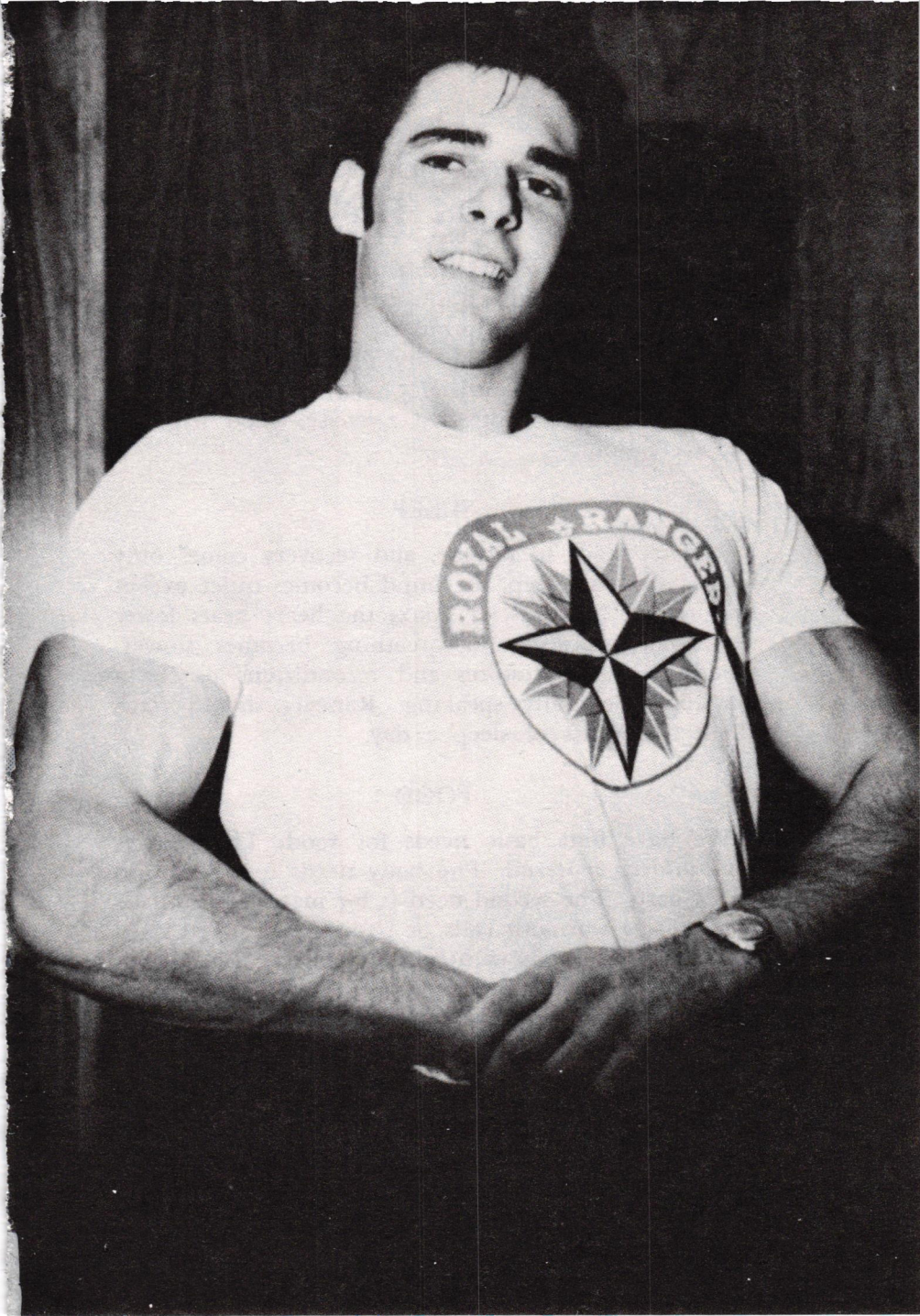
Persons suspected of having head or back injuries should be moved only under a doctor's directions.



Lift for six or more persons.



Three-man lift and carry.



EXPLORATIONS IN PHYSICAL FITNESS

The person who is physically fit has a great deal of what sports writers call "bounce." His body has the power to recover promptly from minor bruises to his tissues or his personality. Physical fitness should be practiced throughout life. This means enough sleep, proper nutrition, controlled exercise, good hygiene, and recreation.

SLEEP

Activity leads to fatigue, and recovery comes only by rest. During sleep, the mind becomes quiet except for dreams, the muscles relax, the heart beats fewer times per minute, and breathing becomes slower. Therefore, sleep restores and reconditions us for a new day. Generally speaking, Rangers should have about ten hours of sleep a day.

FOOD

We have four basic needs for food. The first is for *building material*. The body needs food to build all its parts. The second need is for material to *repair and replace* worn-out cells or tissues. The third need is to supply the body with *heat and energy*. The fourth need is to help the different parts of the body *work properly*. Many different kinds of foods are necessary to accomplish all this.

Something to Do: Use the chart to keep a record of different kinds of foods you eat during a week. Check it for the right kinds and right amounts of food.

Kinds of Foods	Daily Amount M T W T F S S
Milk & milk products ¹	1 quart
Eggs	1
Potatoes ²	1 serving
Meat	1 serving (at least)
Cereals ³	1 serving
Butter or Margarine ⁴	2 servings (at least)
Fruits ⁵	2 or more servings
Vegetables ⁶	1 serving

1. Some of it may be in the form of ice cream, cream soup, or cheese.
2. Either Irish or sweet potato.
3. At least two slices of whole-grain or enriched bread in addition to cereal.
4. Margarine should be fortified (vitamin A added).
5. One should be a citrus fruit or tomato.
6. At least two different kinds beside potato. One should be raw. One should be green or yellow.

EXERCISE

Every young man needs plenty of exercise. It is important to have a "warm up" period before heavy exercise so that muscles will gradually get used to hard work.

The use of body-building exercises such as weight-lifting, bar bell exercises, etc., will vary with individuals owing to the differences in the physiques of boys. The exercises should be under the supervision of a qualified instructor. It should be remembered that among the main objectives of recreational exercise are the benefits of sunshine and air. Walking, swimming, and tennis are some of the excellent forms of outdoor exercise.

Something to Do: Talk with a doctor or an athletic coach about the importance of exercise. Then answer the test below. If the statement is true, circle "T"; if it is false, circle "F."

1. T F Exercise helps make muscles strong.
2. T F It is good to take as much as possible of your exercise indoors.
3. T F Exercise helps develop good posture.
4. T F The digestion of food is aided by proper exercise.
5. T F Exercise makes the heart beat faster and harder, which helps the blood do its work better.

PERSONAL CARE

Cleanliness is essential. The average boy should take a cleansing bath with mild soap and warm water daily. The face and hands should be washed more often than the rest of the body. Oily skins will need more frequent cleansing than dry skins. The hair should be brushed thoroughly twice a day; this not only helps to remove dirt, but it also serves to stimulate the scalp. Oily hair should be washed once a week or oftener; dry hair may not have to be washed more than once every two weeks. The teeth should be brushed by brushing from the gums to the teeth within thirty minutes after every meal. If a brush is not convenient, rinse the mouth well with water to neutralize the sugar around the teeth. Cutting down on candy, pastries, sweet drinks, and sugarcoated gum will help to check dental decay. A clean mouth adds to personal attractiveness and contributes to good health.

POISON—BEWARE!

Wise people don't take something they know to be poisonous, do they? Yet millions of people take poison into their bodies every day by smoking. It is known that tobacco contains several poisons. One is nicotine, which is used as a spray to kill harmful insects. Most athletic coaches have strict rules against smoking by players. They know their players will not have the endurance and strength to do their best if they smoke. Many doctors believe that smoking is the major cause of lung cancer and is injurious to our general health. Because tobacco is harmful to our bodies, it should not be used in any form.

Something to Do: Arrange an interview with a high school coach. Discuss with him the training rules for his team members. Is smoking permitted? Why?

Answer the test below. If the statement is true, circle "T"; if it is false, circle "F."

1. T F Some famous athletes endorse certain brands of cigarettes, so smoking cannot be harmful.
2. T F Smoking has no effect on one's appetite for proper foods.
3. T F It is all right to smoke once in a while because it is easy to stop.
4. T F To make friends and be grown-up, you must smoke.
5. T F Smoking is an expensive habit.
6. T F Smoking causes lung cancer.



EXPLORATIONS IN WATER

HOW TO SWIM

Learning how to swim can be a lot of fun as well as beneficial. Swimming helps breathing and circulation and gives a release from tension.

You will have no difficulty in learning how to swim if you have a real purpose and desire. If you are a self-taught swimmer, chances are you are limited in distance, progress, and comfort. Knowing how to swim correctly will help you to get the most out of your arm and leg movements. (Be sure to read carefully the section on Personal Swimming Safety.)

One of the first things to realize before attempting to learn any swimming skills is that the human body is buoyant. It is not necessary to waste a lot of energy and time splashing with the arms and legs, trying to keep the body afloat. Your motion and energy should be used in propelling the body through the water. Try picking a rock off the bottom in about chest-deep water and you will find it takes a lot of effort to get your body down to the bottom.

Learn to relax. Fear and overeagerness cause tension, and tension will tire your muscles and cause your body to sink.

Always adjust your body to the temperature of the water. Splash a little water over your face, neck, and arms until you are wet all over.

Now we are ready for our swimming skills.

BREATH HOLDING

In waist-deep water, with legs apart, bend over, take a deep breath and put your face flat in the water. Practice until you can hold your breath for about 15 seconds. You may practice this in the basin or bathtub at home.

BOBBING

In chest-deep water in an upright position take a deep breath and stoop until your whole head is submerged. Exhale under the water. Lift your head above water and inhale with your mouth about two-thirds open. Submerge your head again and begin exhaling immediately rather forcibly with your mouth about one-third open. Do not force the air through your nose. any water that may be in your mouth will be pushed into your sinuses and head. Bobbing helps to control your breathing, aids relaxation, and increases body warmth. This is a good warm-up exercise to do each time before swimming. Practice until you can do this 25 to 50 times without stopping.

RHYTHMIC BREATHING

Stand in chest-deep water, bend forward, and turn your head with your ear and side of head in the water (it doesn't matter which side). In this position, inhale through your mouth. Roll your head in a face-down position in the water, exhaling slowly and continually. Stop at a point directly in the middle. Roll your head back to the same side. Repeat. Be sure you are blowing bubbles continually and slowly from one inhalation of air to the next. Do not hold your breath at any time, as it causes exhaustion. Repeat until you can do this at least 15 times comfortably.

FLOATING ON STOMACH

If water is shallow enough, place your hands on the bottom and let your feet float up. Get a breath, put your face in the water, and slowly lift your hands from the bottom, extending your hands in front of you. Always face toward the shallow end or shore. If the water is too deep to place your hands on the bottom, let someone support your hands as you extend your body in the water.

Now that you have the feeling of buoyancy and balance, try it alone in chest-deep water. Take a deep breath, put your face in the water, slide your hands down your legs to your ankles. Straighten your hands out in front of you and your feet backward. To regain your footing, bring your hands back down to your feet, slide your hands back up your legs, and raise your head.

GLIDING ON STOMACH

Lean forward, extend hands in front of you. Give a shove off the bottom, take a deep breath, and put your face in the water. Let your body glide through the water until you stop. To get back on your feet, bring your knees up under your body, press your hands downward and raise your head.

FLOATING ON BACK

Relaxation, breath control, and balance are very important in learning to float, especially on your back. Do not be discouraged if you are unable to float in a horizontal position with your whole body near the surface. The bone and body structure of the individual does have an influence. Most women, stout people, and some slender men can float in this position. Others float with the head and face out of the water and feet

downward. As you learn to control your balance, to relax, and to regulate your breathing, your floating will improve. Breathe a little deeper than normal. A small number of people cannot float without moving their arms and legs a little. If you do have difficulty, try pausing a little after inhaling. This will cause the lungs to be filled with air the greater part of the time and help the chest to stay above water.

Skill in floating is very important. If you become exhausted while swimming and are a distance from shore, you can simply turn on your back and rest until your strength is regained.

To test your floating ability, get a deep breath of air, bring your knees under your chest, and put your arms around the lower part of your legs. If any part of your head or back stays above the surface, you are a floater. If not, you are a sinker.

If the water is shallow enough, lay on your back with your body stretched out in the water, put your hands on the bottom. Be sure the back of your head and ears are in the water. Raise your hips slowly to the surface, take your hands off the bottom, and extend them to the sides with the palms up.

Now that you have the feeling of buoyancy, let's try it in chest-deep water. Stoop down until your shoulders are just below the surface. Be sure your head and body are in the same position as above. Find your best floating position by moving your hands from the side to a position over your head. To get back on your feet from this position, bring your knees up to your chest, scoop your hands behind you as though you were scooping out a place in the sand to sit down, and lift your head forward. If you have difficulty, have a partner support your shoulders or back of head until you can learn to control your balance and breathing.

FLUTTER KICK

The flutter kick is an alternate up and down kick which starts from the hip, then to the knee, ankle, and foot. Practice in shallow water by holding on to the edge of the pool or dock with the back straight and body stretched out in the water. Only the heel should break the surface of the water. Press downward with the foot to about 12 to 18 inches below the surface. The leg should be lifted in a backward and upward extension of the foot. Turn the toes slightly inward. Legs should be as flexible as in walking. Should you keep your legs rigid in walking you would soon tire and cause aching muscles. The same is true in swimming. Keep knees and ankles flexible. Practice first in slow motion and then speed it up.

Practice your glide on your stomach once again and add your flutter kick.

ARM STROKE

Fingers should be close together and the hand slightly cupped. Stretch the hand forward with the fingers entering the water first. Allow the hand to drift down about four inches below the surface. (The right hand should be in line with the right eye and the left hand with the left eye.) Pull firmly downward and backward in a straight line. Do not allow the hand to waver back and forth under the water. At the end of the pull, the hand should drift back to the thigh. The elbow is then in a bent position and should come out of the water first and be carried high. This is an alternate stroke.

Practice arm stroke on land first, in a standing position. With legs apart, bend body slightly forward. Next, try it in chest-deep water, bend forward, and walk with your stroke.

RHYTHMIC BREATHING WITH ARM STROKE

If you have difficulty maintaining balance and buoyancy, keep your arms under the water as in the dog paddle and add your rhythmic breathing. When you have mastered this, bring your arms out of the water in the stroke.

Breathe on the side that is easiest for you. If you breathe on the left side, the face is rotated to the left, taking a breath as the right hand is brought forward. As the left hand is brought forward, the face is turned back into the water and the air exhaled.

FLUTTER KICK AND ARM STROKE COMBINED

Start off with your glide on the stomach, add your kick, then your arm stroke with your head in the water. There should be three kicks to each arm stroke in the American crawl. However, in the learning process as you stroke with the right arm, kick with the left foot. Try it again and add your rhythmic breathing.

For further help, enroll in a Red Cross swimming course. The Red Cross manual, *Swimming and Diving*, may be purchased at your local Red Cross chapter.

PERSONAL SWIMMING SAFETY

"And He shall spread forth His hands in the midst of them as he that swimmeth spreadeth forth his hands to swim" (Isaiah 25:11).

The ever increasing popularity of water sports—boating, fishing, swimming, etc.—is creating an alarming need for greater safety measures. At one time drownings reached 10,000 a year. Because of the concerted efforts of the American Red Cross water safety program, in 1956 this number was reduced to about 5,600.

If you love the out of doors and plan to spend much time in and around the water, acquaint yourself with the causes and preventions of water accidents, learn to swim correctly, and learn safe rescue measures equal to your swimming ability.

SAFETY RULES

Never swim alone. Swim with a buddy. It is more fun that way and safer, too.

Be sure a lifeguard, swimming instructor, or good swimmer is watching.

Never swim in impure water. Sometimes the "old swimming hole," though inviting, is not the healthiest place to swim. Beware of old quarries where the water is not free-flowing and of streams that have grown quiet in the month of August.

Be cautious of strong currents, sudden step-offs, sharp rocks, glass, and old tin cans.

Should you become entangled in grass while swimming or diving, ease out of it gently, being careful not to thrash or you will become more firmly entangled.

Know your limitations and do not overestimate your ability, especially during the first plunge of the season. Cooler temperatures at the beginning of the season will bring about a quick loss of body heat and energy causing exhaustion. Distance over the water is also farther than it appears.

Always adjust your body to the water temperature gradually. A sudden change can cause shock. Splash the water over your arms, neck, face, etc., before submerging your whole body.

Know when to get out. Danger signs are shivering,

blue tinge to lips, exhaustion, a feeling of discomfort. Obey these warnings.

Wait at least an hour to an hour and a half after eating before going in the water, and do not go in after drinking large quantities of liquids. Any physical education director will state that strenuous exercise and the process of digestion just do not go together. The process of food changing to gases and the combined pressure of the water on the stomach can cause severe stomach cramps and can prove fatal to the swimmer. Dry off after getting out.

A few stretching exercises before entering the water will help to eliminate cramps in the arms, legs, or feet. Should you get a cramp in deep water, get a deep breath of air, bend over, grasp the cramped area, and firmly massage the cramp out with your fingers or between your hands. If it is located in the lower leg, it sometimes helps to massage the foot.

If you cannot swim, do not go in deep water supported by an inner tube, water wings, or swim board.

Beware of sunburn. The best hours for swimming are those when the possibility of sunburn is greatest.

Do not be rough or careless in play around the water. Obey the rules in a swimming area. They are made for your safety.

Should you be tossed out of a boat, get your heavy clothing off as soon as possible. Remove your shoes first by getting a deep breath and bending over in a turtle float. (Strings may be tied together and shoes placed around your neck.) Trousers should be removed next, and last of all your shirt.

Learn to swim correctly and to breath properly. Incorrect breathing can contribute to sinus and ear infections.

ELEMENTARY LIFESAVING

Drownings are connected with many water sports—boating, fishing, water-skiing, and swimming. Non-swimmers may step into a hole or be caught in a current. Even fairly good swimmers drown because of stomach cramps, diving accidents, heart failure, fainting, and exhaustion in overestimating their ability.

Even if you can't swim or if you are just a fair swimmer, there are ways you can rescue a drowning person. Some difficulties occur within reaching distance from a dock or pool edge. Lie flat and extend either your arm or leg to the victim. Be sure to get a good grip, but don't overbalance. Always grasp your victim by the back of his wrist, strap of suit, collar, chin, or hair. Never allow the victim to grab you.

If the person should step into a hole just off the beach, you may wade out and extend your arm, being careful to brace your body and lean in the opposite direction toward the shore. Grasp your victim and pull slowly to shore. Exercise caution to avoid being pulled into the stream. If a plank, pole, towel, or shirt is available, by all means extend it to the victim.

Victims may also be reached by throwing some object such as a hand line, ring buoy, or inner tube.

If you are a fair swimmer and the drowning person is farther from shore, you may push a plank, pole, oar, swim board, inner tube, etc., in front of you as you swim out to the victim. Let him get a firm hold of the object and tow him to safety. Do not let the victim grab you.

If a boat is available and you know how to handle one, it is best to take someone with you, so that one can keep a constant eye on the victim while the other handles the boat.

After you have exhausted all other possibilities, the

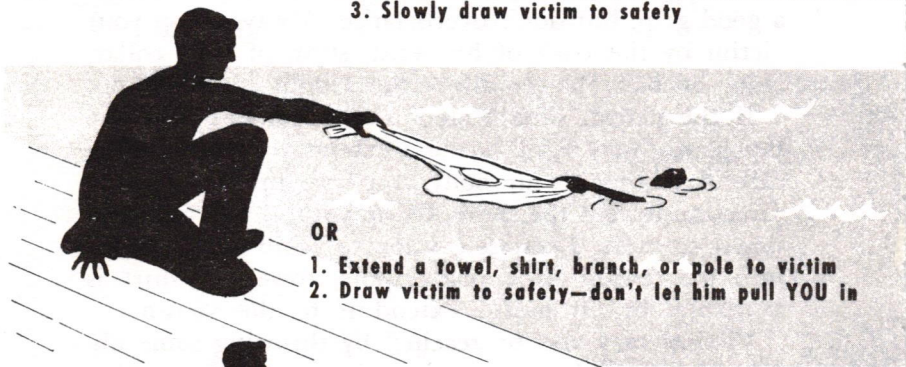
YOU CAN HELP

even if you can't swim



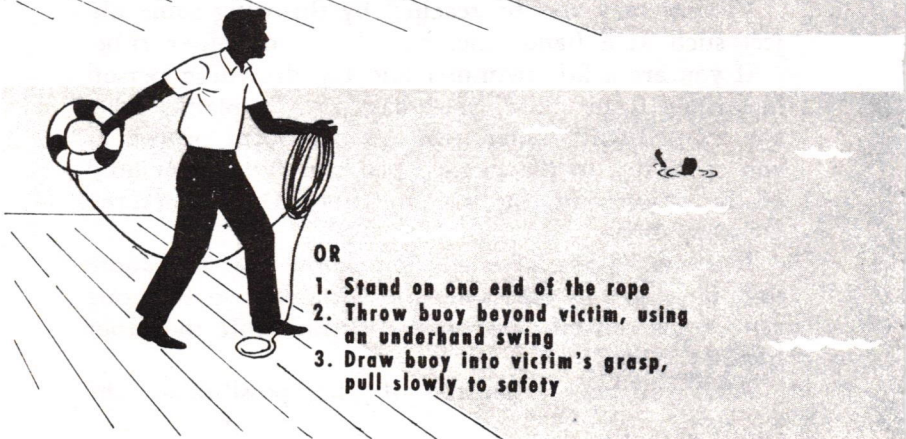
When a bather is in trouble near a dock, float, or side of pool

1. Extend upper part of body over water
2. Grasp wrist of victim
3. Slowly draw victim to safety



OR

1. Extend a towel, shirt, branch, or pole to victim
2. Draw victim to safety—don't let him pull YOU in



OR

1. Stand on one end of the rope
2. Throw buoy beyond victim, using an underhand swing
3. Draw buoy into victim's grasp, pull slowly to safety

swimming rescue may be used. A swimming rescue, where the lifesaver will come in actual bodily contact with the struggling, drowning person, should be used only if you are skilled in the various technical defense and release methods peculiar to good lifesaving. Never allow a strong desire to be heroic overcome good judgment.

Remember, a drowning victim is struggling for his very life. He is usually in an upright position with his arms thrashing madly and his head up and back. If he can grab your arm, he will climb to the highest point in order to maintain his head above water. This will force your head under the water. Should a lifesaver become gripped in a headlock, submerge your victim and chances are he will let go. This is where knowledge of technical lifesaving is needed so that you will know how to defend yourself, how to break any hold, and how to put the victim under control and tow him to safety.

For distances, even an experienced lifeguard should use a boat, if available. Much energy is expended in swimming to the victim, and the rescuer will have to sacrifice the use of one or both arms in towing the victim to safety.

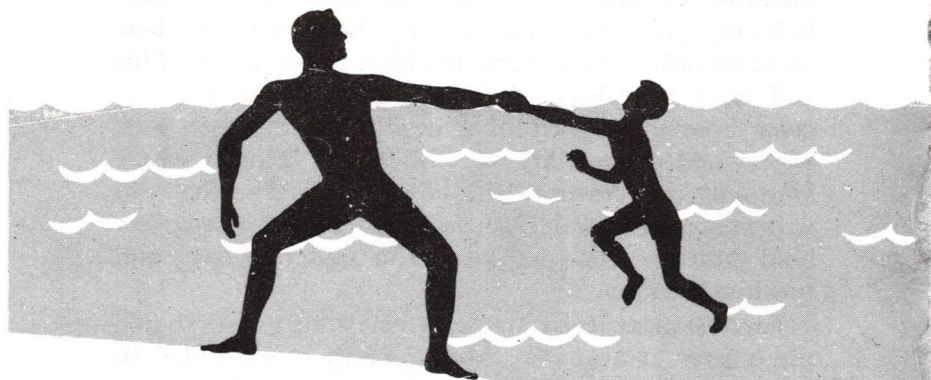
If the victim is semiconscious or unconscious he may be towed to safety by the hair or strap of suit. Keep your arm rigid to eliminate thrashing around.

1. Act quickly and intelligently.
2. Use safest method.
3. Cover victim with blankets under and above to eliminate shock. Apply artificial respiration. Send for a doctor, if necessary.
4. As you gain more swimming ability, couple it with further lifesaving knowledge.

An important motto to remember before making a rescue is: Should I "reach, throw, boat, or go"?

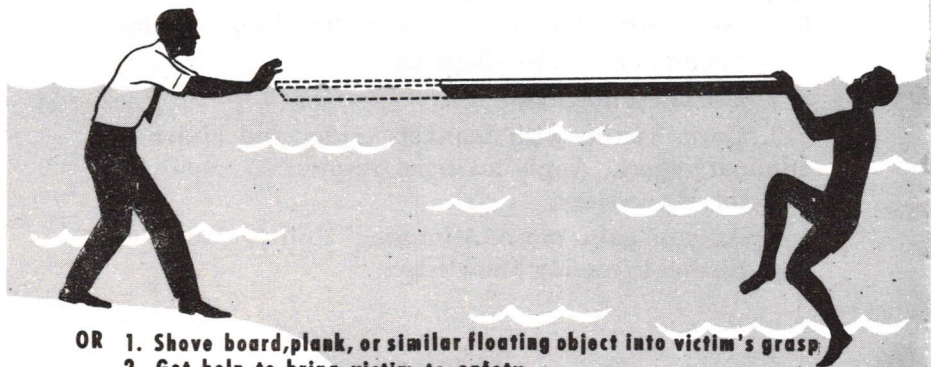
For further information, enroll in a Red Cross life-saving and water safety course.

YOU CAN HELP even if you can't swim



If a bather steps into deep water off shore

1. Wade to chest depth
2. Incline body toward shore
3. Grasp back of wrist
4. Backing slowly, draw victim to safety



- OR
1. Shove board, plank, or similar floating object into victim's grasp
 2. Get help to bring victim to safety



EXPLORATIONS IN YOUR OUTPOST

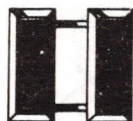
The activities of your outpost will open to you new doors to fun, adventure, and friendship. To better enjoy the great time you will be having with a swell bunch of fellows, you should understand the way your outpost is set up. Also, you should become acquainted with each officer of the outpost and his duties.



YOUR OUTPOST COUNCIL

The Outpost Council is a group of from three to five men who direct the Royal Ranger program in the church. They are responsible for the appointing of the Outpost Commander and Assistant Commander. Also, they arrange a meeting place for each outpost and obtain needed equipment for activities and projects.

When the fellows have passed the requirements for an advancement in rank, the Outpost Council will set up a special presentation service and present them with their awards.



YOUR OUTPOST COMMANDER



The Outpost Commander directs the activities of the outpost such as outpost meetings, camping trips, hikes, etc. He is trained to assist the Royal Rangers in their advancement in rank and will determine when they pass each requirement.



LIEUTENANT COMMANDER



The Lieutenant Commander has the responsibility of assisting the Outpost Commander in the activities of the outpost. At each meeting he directs certain activities—such as games, crafts, etc. Should the Commander be absent, he assumes charge of the meeting or outing.



SENIOR GUIDE



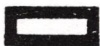
The Senior Guide is a Royal Ranger appointed by the Commander and Outpost Council to assist in the outpost activities. He calls the roll and keeps records of the meetings. He may also assist in games, ceremonies, and drills. He should carry at least a First-Class rating. (If the outpost is new, a Senior Guide may be temporarily appointed without this rank.) His term of office shall be six months, and he should serve no longer than one year at any one time.



PATROL GUIDE



The Patrol Guide is elected by his patrol. He arrives early and helps set the meeting room in order. He directs each patrol meeting and represents his patrol at each outpost staff meeting. He also leads his patrol in projects, ceremonies, and drills during the outpost meeting. He should carry at least a Second Class rating. (If the outpost is new, a Guide may be temporarily elected without this rank.) His term of office shall be six months, and he should serve no longer than one year at any one time.



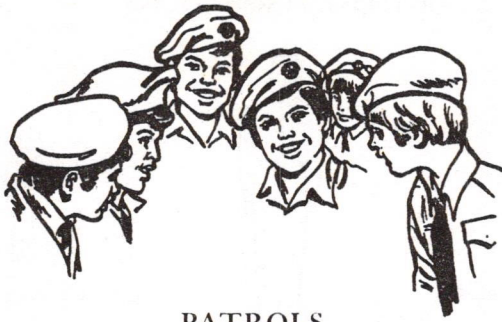
ASSISTANT PATROL GUIDE



The Assistant Patrol Guide should assist the Guide in the activities of the patrol. In the absence of the Guide he will assume the duties of a Guide.

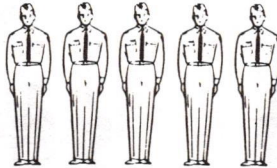
OUTPOST STAFF

The Outpost Staff is composed of the Commander, Assistant Commanders, Senior Guide, and Patrol Guides. The staff meets at different times to discuss plans for outpost meetings, projects, and other activities.



PATROLS

The patrol is a special gang of fellows that do things together within the Royal Rangers program. Each outpost is divided into two or more patrols. The boys of each patrol will select a name in keeping with the ideals of Royal Rangers and elect its own Guide and Assistant Guide. Each week, during the outpost meeting, time is set aside for patrols to meet. Games will be played between patrols during game periods, and each patrol will sit or stand together during ceremonies.



OUTPOST FORMATIONS

The Commander stands facing the outpost with his Lieutenants beside him. The Senior Guide is in front of the Commander. When in charge or calling the roll, the Senior Guide faces the outpost; he faces the Commander when he is reporting or when the Commander is in charge.

The Guide stands one pace in front of the center of his patrol. The Assistant Guide stands at the end of each patrol line.

This formation is for the purpose of opening ceremonies, roll call, closing ceremonies, etc.

OUTPOST FORMATIONS



LT. COMMANDER



COMMANDER



LT. COMMANDER



PATROL GUIDE



SENIOR GUIDE

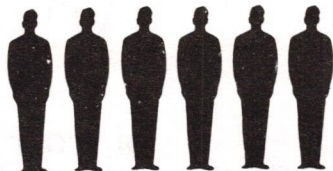


PATROL GUIDE



PATROL

ASST. GUIDE



PATROL

ASST. GUIDE



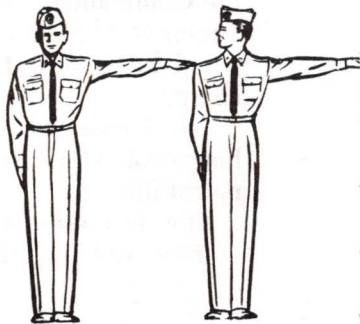
ATTENTION



AT EASE



PARADE REST



DRESS RIGHT DRESS

“COMMANDS” DURING OUTPOST FORMATIONS

At the command “Attention” the Royal Ranger brings his heels together and stands with shoulders back, eyes front, chin up, arms at the sides, each thumb at the trousers’ seam. Toes are pointed outward at an angle of 45 degrees.

At the command “At Ease” the Royal Ranger can relax but is not to talk. “At Rest” permits him to talk. In either case one foot is to be kept in place.

At the command “Parade Rest” the left foot is to be moved 12 inches to the left and the right hand clasped with the left behind the back.

On “Fall Out” Rangers may leave their position in formation, but must stay nearby to resume their places at the command “Fall In.”

In forming the unit after “Fall In,” the command “Dress Right Dress” is usually given. Each boy except at the left end of the line extends his arm and touches the shoulder of the boy next to him. Each boy except on the right end turns his head half right and looks down the line.

When the line is straight and each boy at proper interval, the Commander orders “Ready Front”; whereupon, the boys drop their arms to their sides and face front.

To dismiss a formation the command “Dismissed” is given.

THE PATROL SYSTEM

Your Royal Rangers outpost is built on the patrol system. You probably were already introduced to the members of your patrol and your patrol guide when you joined the group. In fact, you were probably invited to the meeting by a member of the patrol—one of your friends. And now you are a patrol member.

It's a big, exciting responsibility to be a patrol member. And you probably have a million questions—like "What is a patrol anyway?" And, "What does a patrol do?" "What's a patrol guide?" And, "How do I fit in?" Well, let's see if we can answer some of these.

YOUR PATROL

A patrol is a special gang of friends that do things together in the outpost. A patrol may have as many as eight Rangers, or as few as four. They have a special name like the Screaming Eagles or the Snarling Panthers, and a patrol call or yell that goes along with it. They have a patrol standard or flag that carries their emblem on it, along with the names of their members. In most outposts, they meet every week during regular outpost meetings. These little meetings are called "Patrol Corners." During this time, you and the other patrol members will work on different things—advancements, patrol equipment, upcoming outpost and patrol events, and other exciting projects.

In some outposts, your patrol will also get the opportunity to meet outside of the regular patrol meetings at one of the members' homes. During these meetings you will do more of the things that you do during the Patrol Corners time. You will learn more about Royal Rangers

and the skills that you need to become the best Ranger in the outpost.

On outpost camp-outs, you will camp with the other members of your patrol. Your patrol will set up its own tents, cook its own food, and sometimes even work on important patrol projects. You will build lasting friendships in your patrol—ones that will never be forgotten. You will take pride in the things that you and your friends accomplish by working together.

And that really captures the essence of what a patrol is: you and your friends, other patrol members, working together to make your patrol and outpost number one. Everybody pulling together—that's what a patrol is!

YOUR PATROL AT WORK

In order for your patrol to do all these terrific things, you need some sort of method to follow, some way to organize that will let each of you contribute his "fair share." This method is called the patrol system, and using it will help each of you do your best to become the best patrol in the outpost.

The patrol system starts with your patrol guide. He's one of the patrol members that you elect to lead the patrol. Your guide, along with the other guides in your outpost, and the senior guide, will make up the Gold Bar Staff. This group will help run the outpost. They will make recommendations for camp-outs, activities—in short, they will help decide what the outpost will do.

Your guide should hold at least a second-class rating. He should show that he is willing to not only lead, but also represent you and the other members of your patrol at the Gold Bar Staff Meetings. Take care in selecting him. In most outposts, you and your friends will get to elect your own patrol guide. Don't make the election a popularity contest, but elect a guide that you feel will

do a good job. A good guide will represent your views whether or not he agrees with them, and whether or not they are the majority's views. That's the kind of guide you want for your patrol. Choose him carefully.

The patrol will choose an assistant guide to help the guide with his duties and to fill in for him in his absence. Like your guide, he will work hard for your patrol and your interests. Be sure to give him your help and respect.

As we said before, your patrol guide and the other patrol guides in your outpost will make up the Gold Bar Staff. At the Gold Bar Staff meetings, the senior guide, with some help from the outpost commander, will work with the guides to suggest plans for the entire outpost program. They will take your ideas, and the ideas of others in the patrol and outpost, and put together the kind of activities that will make your outpost grow. Your guide will know what you want done by talking to you during the Patrol Corners and patrol meetings. Be sure to be present at each meeting—you never know what you might miss!

YOUR PATROL SPIRIT

Patrol spirit is a mysterious kind of thing—sort of like oxygen. You can't see oxygen, but you can sure tell when it's missing—everything dies! It's the same with patrol spirit. You really can't tell what it is, but you can tell when it isn't there. The patrol without it has no spark, no enthusiasm, no drive.

Patrol spirit is the "something" that makes every patrol member want to give his best—no matter what the goal is, no matter where the patrol is headed or what they are doing. Patrol spirit turns patrol members from being "sunshine Rangers" into all-weather Rangers who turn out no matter what. It gives you pride in your patrol: pride to wear your uniform correctly to every meeting,

pride to carry the patrol standard, pride to give the patrol call.

Patrol spirit might be defined as patrol pride. Not the swell-headed, bragging kind, but the confident kind. The kind that says we can do it!

To a large extent, patrol spirit depends on you. You can either feed it and watch it grow, or you can starve it and watch it die.

It's like a flame. Once a match is lit, that flame will keep burning as long as it has fuel. Keep feeding it and it will burn forever. If you put everything into all that your patrol does, if you show up for every meeting early and fully uniformed, if you work hard on every project, if you advance as quickly as you can, patrol spirit will grow.

On the other hand, if you fight every suggestion that comes up, if you stay home when your guide calls a patrol meeting, if you show up late and out of uniform and goof off on patrol outings and projects, you will pour cold water on the flame of patrol spirit. It will die—and die quickly.

So determine now that you are going to do everything you can to build patrol spirit. Invite new members to join your patrol. Learn your patrol's call and song. Work hard on patrol projects. Respect and help your guide and assistants. You will be proud of the results.

YOU, PATROL MEMBER

There you have it—a patrol. You and your friends working together, hiking and camping together, learning together, and heading toward one common goal: becoming the best Royal Rangers that you can be. It's a big responsibility; the other boys in your patrol are counting on you to do your share to build the patrol. It's hard. But then, everything that's important takes work. You can do it!

EXPLORATIONS IN GOD'S WORD

When the captain of a ship heads toward the open sea, he must *know* where he is going. To avoid the shoals and reefs along the shore, it is necessary to watch the charts and the depth soundings. Following these guides the captain safely reaches the open sea and then charts his course by his compass and sextant.

When a pilot heads into the wide blue yonder, he must check with flight control to receive his flight pattern and report his flight plans. One deviation from the authorized course could bring a midair tragedy that would snuff out countless lives.

So it is with Air and Sea Rangers. You must know where you are going in life and the safest way to get there. You must avoid obstacles that could scuttle you; you must follow the pattern of God's will in your explorations in life. Your chart, compass, map, and pattern of life are contained under one cover: your Bible. The more closely you follow the Bible's directions, the more surely you will reach your desired destination in life.

HOW OUR BIBLE CAME TO US

You will remember that God the Holy Spirit is the Author of the Bible (2 Timothy 3:16, 17; 2 Peter 1:21) and that at least 35 different men were used to record God's words for us. They, of course, wrote in the languages of their people. Most of the Old Testament was written in Hebrew. The exceptions are Ezra 4:8-6:12 and 7:12-26; Daniel 2:4-7, 28; Jeremiah

10:11, and two words in Genesis 31:47. These passages were written in Aramaic. The entire New Testament was written in Greek, the language of the Roman Empire.

In order for us to have the Bible in the English language, it had to go through a series of translations. These translations of the Bible are called versions. The first English versions of the Bible came from the Latin, which means that the Bible was translated from the original languages into Latin and then into English.

As scholars have improved their knowledge of the original languages, they have continued to revise the English versions of the Bible in the light of new facts discovered by archaeology and word study. This accounts for the many English versions in use today. The King James Version is called the "Authorized Version" and is used in most of our churches. It was prepared in 1611—more than 300 years ago. That is why there are many words in our Bible which are Old English and sometimes difficult to interpret. Newer versions are prepared in modern English to give us the meaning of the original in the everyday language we use today.

Something to Do: Borrow all the English versions of the Bible you can find—from your library, your pastor, and friends. Draw vertical columns on a sheet of notebook paper, making each column three inches wide. Write some of your favorite verses as they are translated in the various versions. For instance, the first column could be headed "King James Version"; the next column, "The New English Bible"; another column, "Weymouth's Translation"; and another, the "Amplified New Testament." Then write John 3:16 as it appears in each version.

When you have completed writing the verse as it appears in each version, compare the verses and see why modern terms are substituted to explain Old English expressions. Try other favorite passages: Romans 3:23; Romans 6:23; Matthew 5:4-12; Acts 2:1-4; James 5:13-16; Hebrews 11:1-3; 1 Corinthians 13. You will notice that the verses are much easier to understand when compared side by side, but no one newer version has all the interpretations you like best. This is studying Scripture in "harmony" and is an excellent way to analyze the Bible when preparing to witness for the Lord or to speak in a youth service.

HOW THE BIBLE WAS COMPILED

Bill and Jim were preparing their Sunday school lesson together.

"How did all of the Books of the Bible get put under one cover," Jim asked as he put down his Bible.

"I never gave it any thought," Bill replied. "I know that much of the New Testament was written as letters to friends and churches, but I don't know about the Old Testament. Let's ask Pastor Crandall."

At a prearranged time, Bill and Jim met their pastor in his study. Bill, since he had been a Christian longer than Jim, posed the question: "How did these sixty-six books—of all those written during Bible times—get collected into one volume?"

Pastor Crandall picked up a foot ruler on his desk. "What is this, boys?" the pastor asked.

"A ruler," Jim replied without hesitation.

Walking to the corner of his study, Pastor Crandall picked up a yard stick. "And what is this?"

"A yard stick," Bill answered.

"A ruler or yard stick was needed to measure all of the writings circulating in Bible days," the pastor explained. "The measuring rod against which books were measured by early scholars was called a 'canon,' taken from the Greek word meaning 'a measuring rod, a rule.' The word itself is used in the Bible in Galatians 6:16; Philippians 3:16, and 2 Corinthians 10:13-16.

"When applied to Scripture," Pastor Crandall continued, "the word 'canon' means 'the measuring rod, the straightedge, the testing rule, or critical standard by which each book of the Bible must be tested before it may be admitted as part of the Sacred Scriptures.' Fine tests were applied to the ancient manuscripts. The sixty-six books found in your King James Version of the Bible passed this test."

The tests, Pastor Crandall explained to the boys, were simple.

1. *Divine authorship.* Was the book given by the Holy Spirit through men, or did it come from man alone?

2. *Human authorship.* Was the author a prophet or a spokesman for God endorsed by the evidence of the Holy Spirit in his life?

3. *Genuineness.* Is it possible to trace evidence back to the time and writer who is believed to have received the book from God?

4. *Authenticity?* Is it a record of actual facts? A new test has been added to assure accuracy in evaluating Biblical manuscripts.

5. *Testimony.* Is there the testimony of the Jewish Church, the early and later Christian Church, Church

councils, and ancient versions to support the authorship, genuineness, and authenticity of the book?

The sixty-six books that passed these tests are included in our King James Version of the Bible. A group of books that did not meet all the qualifications but are included in the Catholic versions of the Bible are called the Apocrypha. These books are considered by some to have historical value, but do not meet the qualifications of the canon and therefore are not included in the "canon of Scripture" we accept as the Word of God.

HOW THE BOOKS WERE DIVIDED

The books of the Bible were not divided into chapters and verses in the original manuscripts. These divisions were made later to aid in locating Scriptures and separating thoughts.

Chapter divisions of the Bible were made in the 13th century, probably by Stephen Langston, Archbishop of Canterbury, in England. They appear in the early English version by John Wycliffe and continue to the present day.

Verse divisions were made in the 16th century when Robert Stephens printed the Greek New Testament in Paris. The first Bible to have both chapter and verse divisions was the Latin Vulgate Version printed in 1555; the first English version to have both chapter and verse divisions was the Geneva Bible printed in 1560.

Since these divisions are man-made for convenience only, they are not inspired as are the words of the Bible and in some cases they break up the thought of the passage. That is why it is always wise to study

a verse by comparing it with the verses before and after it. This is called studying by "context"—seeing the relationship between the verse and its surrounding verses.

Take the story of Jesus and Nicodemus, for example. You immediately look to John 3 for this story, but it actually begins at John 2:23. When you see that Jesus was thronged by multitudes through the day, it is easier to see why Nicodemus waited until night to have a private conversation with Jesus.

In newer versions of the Bible, beginning with the English Revised Version (1881-85) and the American Revised Version (1901), paragraph divisions were introduced to unite verses into topics. In many cases the story of the Scripture reads more smoothly when it is not broken so frequently by the verse divisions.

One other man-made convenience in the English Bible is the use of *italics*. When a word appears in *italics* it indicates that the word is not found in the original, but is supplied by the translators to explain what the scholars believe the passage means.

Things to Do: Study the story behind the preparation of the English versions of the Bible and be prepared to give an oral report at your next outpost meeting.

John Wycliffe's Version (New Testament, 1380; Old Testament, 1382).

William Tyndale's Version (New Testament, 1525; Pentateuch, 1530; Jonah, 1531).

Myles Coverdale's Version (1535).

The Matthew's Bible (1537).

The Great Bible (1539).

The Geneva Bible (New Testament, 1557; whole Bible, 1560).

The Bishops' Bible (1568).

The Rheims-Douai Bible (1609-1611).

The King James' Version (1611).

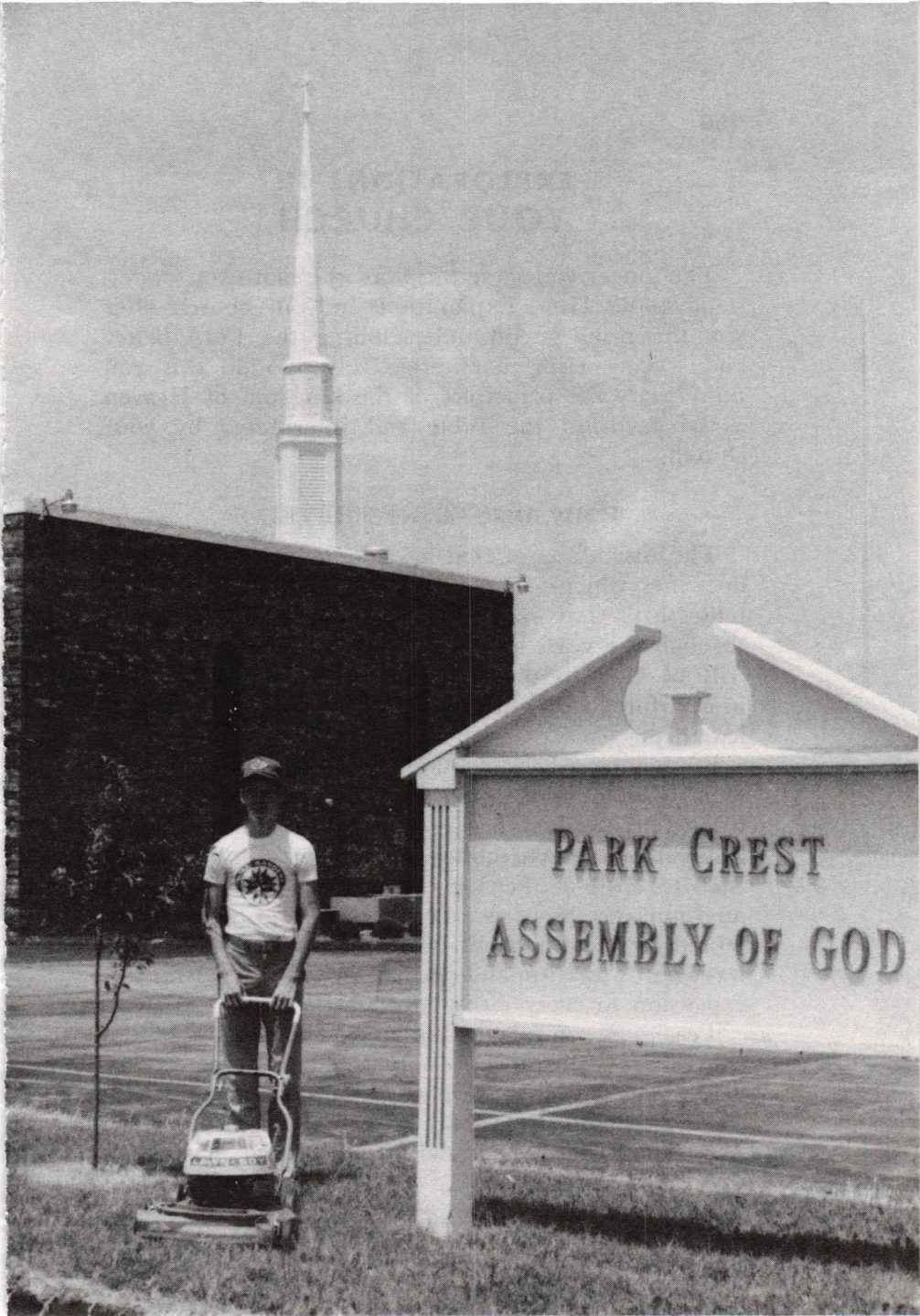
The English Revised Version (New Testament, 1881; Old Testament, 1885).

The American Standard Revised Version (1901).

The Revised Standard Version (1952).

The New English Bible (New Testament, 1961).

Continue your explorations in God's Word. It is the light you need in the pathway of life. Air, Sea, and Trail Rangers who follow God's Word do not get lost!



PARK CREST
ASSEMBLY OF GOD

EXPLORATIONS IN YOUR CHURCH

The longer you serve the Lord the more you understand about Him. Explorations in your church offer you the privilege of understanding the Lord better and serving Him more effectively. To do this you must study the principles of the kingdom of Heaven as set forth in the Bible and interpreted by your church.

HOW DOCTRINES DEVELOP

The Assemblies of God has adopted 16 fundamental doctrines which are the basis of our denominational fellowship. This doctrinal statement has developed through the years as the Holy Spirit has revealed the will of God to those who have studied the Bible, prayed for divine guidance, and lived as the Lord has led them.

Even during New Testament times there were differences of opinion as to the interpretation of God's will. The Council of Jerusalem, the first "General Council of the Assemblies of God," was called in 50 A.D. to settle a question of doctrine (Acts 15). The question was holiness: should Gentile Christians be bound by the traditions of Jewish law? The decision was against legalism and opened the way for missionary expansion to every race and country.

Teachings contrary to the accepted doctrines of the church are called heresies. Instruction to beware of heresy was given by several New Testament writers (Acts 20:29, 30; Colossians 2:18-23; 1 John 2:18, 19). As heresies developed, definite doctrinal statements were adopted.

Sunday, the first day of the week, was accepted as the "Lord's Day" and set aside for worship in preference to the Jewish Sabbath, Saturday, (1 Corinthians 16:2; Acts 20:7; Revelation 1:10).

Communion, the "Lord's Supper" was accepted in preference to the Jewish Passover as a sacrament of the church (Acts 2:46; 1 Corinthians 11:20, 30).

Water baptism was also defined as a sacrament of the church (Matthew 28:19; Acts 2:38).

As Christianity spread to pagan countries, idol worship became a serious question. Second Thessalonians 2:3, 4 and Acts 17:7 warned against letting idolatry creep into the church.

With the death of the apostles arose a demand for a system of doctrine. The "Apostles' Creed" was developed and taught at schools of theology established in Egypt, Asia Minor, and North Africa. When new heresies arose, the scholars devised doctrinal statements to interpret the attitude the church should take toward doctrinal questions. The purpose was to keep pure the teachings of the church and to perpetuate the Word of God. Varieties in doctrinal statements led to the forming of the various denominations.

The doctrines of the Assemblies of God are a result of decisions made by early church councils and later investigations of the Word of God. In each case the doctrines are established upon meaning of the whole Bible, not isolated Scriptures selected to prove a point in controversy.

As a Royal Ranger you want to know what your church believes and why each doctrine is accepted. To do this you should study the 16 fundamental doctrines of the Assemblies of God and know the scriptural references that support each doctrine as Biblical truth.

Something to Do: Make a list of the fundamental doctrines of the Assemblies of God and references that support each doctrine. Have your Outpost Commander check your list. Then write the list of doctrines on the flyleaf of your Bible. Mark each of the Scripture references in your Bible so you can point to them when explaining to others what your church believes and why your doctrine is scriptural.

WHAT YOUR CHURCH BELIEVES

Following are the sixteen doctrines accepted as the fundamental beliefs of the Assemblies of God. These doctrines are the basis for fellowship among the more than 8,000 Assemblies of God churches in the United States and 12,000 Assemblies in foreign countries.

1. *The Bible.* The Bible is the inspired Word of God, the recorded revelation of God which tells us how to live for Him. As we study the Bible we find His will for our lives (2 Timothy 3:15, 16; 1 Peter 2:2).

2. *God.* There is one true God who has revealed himself eternally as Father, Son, and Holy Spirit (Deuteronomy 6:4; Matthew 28:19; Luke 3:22).

3. *The Lord Jesus Christ.* The Lord Jesus Christ is the eternal son of God. The Scriptures declare:

- (a) His virgin birth (Matthew 1:23; Luke 1:31, 35).
- (b) His sinless life (Hebrews 7:26; 1 Peter 2:22).
- (c) His miracles (Acts 2:22; 10:38).
- (d) His substitutionary work on the cross (1 Corinthians 15:3; 2 Corinthians 5:21).
- (e) His bodily resurrection from the dead (Matthew 28:6; Luke 24:39; 1 Corinthians 15:4).

(f) His exaltation to the right hand of God (Acts 1: 9, 11; 2:33; Philippians 2:9-11; Hebrews 1-3).

4. *Man*. Man was created good and upright but voluntarily fell into sin. Man's only hope is redemption through the blood of Jesus Christ (Genesis 1:26, 31; 3:1-7; Romans 5:12-21).

5. *Salvation*. Salvation from sin comes through faith in Jesus Christ. The witness of salvation comes to the believer by the Holy Spirit. The evidence of salvation is seen by others in the life of righteousness and true holiness lived by the born again Christian (Titus 2:11; John 3:3; Romans 10:13-15; Luke 24:47; Romans 8:16; 12:1, 2).

6. *Ordinances of the Church*

(a) *Water Baptism*. Every believer should be baptized in water as a declaration to the world that he is dedicated to the Christian way of life. Water baptism is *not* salvation but is a profession of faith (Matthew 28:19; Acts 10:47, 48; Romans 6:4).

(b) *Communion*. Every believer should participate in the communion service (the Lord's Supper) as an expression of his continuing faith in Christ (2 Peter 1:4; 1 Corinthians 11:26).

7. *Baptism in the Holy Spirit*. The baptism in the Holy Spirit is an experience following salvation and brings power for Christian witnessing (Luke 24:49; Acts 1:4, 8; Acts 10:44-46; 11:14-16).

8. *Initial Evidence of the Baptism in the Holy Spirit*. The initial evidence of the baptism in the Holy Spirit is speaking in other tongues under the power of the Holy Spirit. The Gifts of the Spirit follow the initial experience in the life of the Spirit-filled Christian (Acts 2:4; 1 Corinthians 12:1-10, 28).

9. *Sanctification*. Every Christian should live a life of holiness (sanctification) by walking in strict obedience to God's Word (Hebrews 12:14; 1 Peter 1:15, 16; 1 John 2:6).

10. *The Church*. The Church is the body of Christ on earth. This includes all who are born again Christians (John 3:3) no matter what their denominational affiliation (Ephesians 1:22, 23; 2:22; Hebrews 12:23). The Assemblies of God as a denomination is part of this church universal.

11. *The Ministry*. Certain believers are specifically called by God into full-time ministry as pastors, evangelists, teachers, and missionaries. All Christians are called to be witnesses for Christ and should be active in Christian service even though they have not been specifically called into full-time ministry (Mark 16:15, 20; Ephesians 4:11-13).

12. *Divine Healing*. Divine healing is deliverance from sickness through the atoning work of Jesus Christ and is the privilege of all believers (Isaiah 53:4, 5; Matthew 8:16, 17; James 5:14).

13. *The Blessed Hope*. Believers have the right to look forward to resurrection from death or translation from life at the second coming of Jesus Christ. This event will precede the tribulation and final judgment (1 Thessalonians 4:16, 17; Titus 2:13; 1 Corinthians 15:41, 52).

14. *The Millennium*. At a future time ordained by God, Jesus Christ will come back to rule for a thousand years (Millennium) on the earth. This event follows the tribulation period (2 Thessalonians 1:7; Revelation 19:11-14; Romans 11:26, 27).

15. *The Lake of Fire*. After the Millennium the

devil, his angels, and people who have followed him and not accepted Jesus Christ as Lord and Saviour will be cast into the Lake of Fire. This is the second death and is eternal—without end (Revelation 19:20; 20:10-15).

16. *The New Heavens and the New Earth.* After the final judgment of sin God will bring into existence a new heaven and new earth as the eternal home of the righteous who have been saved by the blood of Christ and judged eligible for the eternal rest of the saints (1 Peter 3:13; Revelation 21:22).

Something to Do: As you study these doctrines in your private devotions, learn how to explain them to your friends. One of the privileges of the Christian is being able to witness to others. Since your church offers you a place to bring friends who are interested in spiritual things, invite the ones to whom you witness to attend teaching and preaching services of your church.

Something to Do: For additional study in the doctrines and history of the Assemblies of God read *Bible Doctrines* by P. C. Nelson, and *The Promise Fulfilled* by Klaude Kendrick¹.

¹ Available from the Gospel Publishing House, 1445 Boonville Avenue, Springfield, Mo.

EXPLORATIONS IN CHRISTIAN SERVICE

Life is a continuous process of exploration. Your vocational choice is no exception. No matter what vocation you choose for your life's work, you should look for opportunities for Christian service. Being a Christian is a full-time job and must not be relegated to occasional service.

AREAS OF CHRISTIAN SERVICE

Some Royal Rangers will find the Holy Spirit dealing with them for full-time Christian service. Others will feel that they should enter one of the professions and work for the Lord there. The vocation you choose is your personal choice and should be made a matter of sincere investigation and prayerful decision.

Something to Do: Interview your high school counselor or principal, asking for information concerning the types of occupations available for you. He will use your school records and tests to help you consider vocations in which you have a fair chance of success. The interests and abilities you have shown in school should help you in considering your vocational choice.

Taking into consideration the advice of your counselor or principal you must choose from among the 40,000 different jobs open to American young people. This is not an easy choice. You must choose a vocation in which you have an interest, in which you have the ability to meet the standards required for success in the job. As a Royal Ranger you also want to investigate the opportunities for Christian service in the vocation you are considering.

Something to Do: Interview your pastor. Present to him the suggestions of your school counselor or principal. Let your pastor advise you concerning the opportunities for Christian service in the areas of your vocational interest. You want God's will in making your vocational choice, so let your pastor advise you and pray with you in this matter.

PART-TIME CHRISTIAN SERVICE

Consider some of the opportunities to unite an interesting vocation with part-time Christian service.

1. *At home.* There are many services you can perform for the Lord in the United States. Begin now by making yourself available to your pastor for spiritual service. As you grow older there are more activities you can enjoy for the Lord. Especially be open for opportunities for personal witnessing and for teaching in Sunday school. Being a Christian boy, you have great influence on younger boys in the church. Use your influence to encourage these boys to accept Christ as their Saviour and to live for Him.

As you complete your education and are ready to set up a business or enter a profession, choose a location in the light of the opportunities for Christian service. You may start your vocational career in your home town. If you do, get to work for the Lord in your home church. You may find that you want to start your vocational career in a town where there is no assembly or where there is a struggling work that needs your time, talents, and tithe. Let the Lord lead you in this matter and solicit the advice of your pastor in selecting a place where you have vocational opportunities and can at the same time engage in Christian service.

2. *Abroad.* There are many opportunities for Christian service abroad. With Assemblies of God missionaries in 72 nations of the world, your opportunities for vocational missions are almost unlimited.

Civil service and commercial assignment are avenues to foreign part-time Christian service. However, you must be careful in choosing one of these jobs. Read the contract carefully, for many firms and government positions prohibit your "proselytizing" or trying to introduce Christianity to nationals of the country in which you are working. It is possible, however, to be an influence for Christ among the other Americans assigned to your job and to have a limited contact with nationals of the foreign country in which you reside. Vocational missions is a unique way of enjoying travel, vocational success, and part-time Christian service.

3. *Military service.* Since every American boy is faced with his military obligation, you must consider the opportunities for Christian service in one of the armed forces. Although the opportunities for sin are great in the armed forces, the opportunities for Christian service are greater. Determine that you will be a consistent Christian from the hour you arrive at camp and continue to live for the Lord. You will be respected for your stand if your testimony is consistent. Your life in the barracks and on the drill field will prepare the way for witnessing for the Lord and leading your buddies to Christ.

Since most military careers involve foreign service, you may also have the chance of assisting a missionary or national church on the foreign mission field. Your time, talents, and tithe can be a tremendous help in

foreign missions if you use your military service as an opportunity for part-time Christian service.

4. *Peace Corps*. Some young people have thought of the Peace Corps as an opportunity for Christian service. If you are interested in this type of service, be sure you understand the restrictions placed on Christian witnessing while you are with the Corps.

The one great advantage of the vocational volunteer, whether he serves the Lord at home or abroad, is that he is supported completely by his vocation and is not dependent on churches or individuals for financial support. His work hours on the job, however, make him a part-time worker in Christian service.

If the Lord has called you into full-time Christian service, none of the activities above will be completely satisfying to you. When the Lord has called you, you should attend the Assemblies of God college of your choice and prepare yourself for the service that is God's will for your life. Then you can prayerfully seek His specific direction in your lifetime of service.

FULL-TIME CHRISTIAN SERVICE

There are many Christian service activities that require full-time ministry. The best way to find out about them is to interview those who have found happiness in the various ministries.

1. *Pastor.* A pastor is called to a church as a spiritual guide and leader. He also serves as business manager and in many other capacities. Without pastoral leadership the local church is limited in its effectiveness. We need Spirit-filled young men to dedicate themselves to the ministry and to fill the pulpits of our churches across the nation. We also need pioneer pastors to go to cities where there are no Assemblies to open places of worship.

2. *Evangelist.* The evangelist is constantly on the move. For a short time he is in one town, giving spiritual ministry to a church and endeavoring to bring Christ to the lost of the community. When he moves on to his next revival in another town, the pastor picks up where the evangelist leaves off, trying to keep new converts in the church and integrating them into the activities of Christian fellowship.

3. *Missionaries.* The missionary is pastor, evangelist, and vocational volunteer all in one and may be assigned to a pioneer area at home or abroad.

Home missionaries find places of ministry on Indian reservations, in Alaska, among the handicapped, and with foreign language groups.

In addition to their spiritual ministries of preaching and teaching, foreign missionaries frequently serve as counselors, business agents, nurses, printers, translators, or in other specialized areas. Their activities vary with the country in which they serve and with the special need of the area to which they have been assigned.

Missionaries are full-time workers supported by Christians in the United States. Their main objective in becoming missionaries is to introduce Christ to those who are lost and would not otherwise have an opportunity to hear the gospel.

4. *Specialized ministries.* Other full ministries are developing in our churches. Some young men, after they have had successful ministries as pastors, evangelists, or missionaries, find that the Lord is calling them to be Bible school teachers. This requires additional college work but opens a new area of Christian service among young people preparing themselves to live and work for the Lord.

Ministers of music and ministers of education are more and more in demand by our churches. These ministries require specialized training. Their work is especially important in our larger churches where the pastor must have specialized help in maintaining the various ministries of a growing church.

Something to Do: Interview men in various types of part-time and full-time Christian service. List the things they do and estimate how much of their time is dedicated to the work of the Lord. As you interview these men, keep your heart open to the leading of the Lord for your own life. Yours *must* be a life dedicated to the Lord. You are at the age of giving serious thought to your vocational choice and its relation to Christian service. As you find the Lord's will in this matter you are assured of success as you continue your explorations in Christian service.

EXPLORATIONS IN YOUR HOME

"It takes a heap of living to make a house a home," says the poet. This heap of living includes your attitudes toward yourself, your parents, your brothers and sisters, and other members of the family. It also includes your attitudes toward Christ in your home. Whether yours is a happy home or only a house where you hang out depends more on *you* than anyone else.

YOU IN YOUR HOME

If your home is to be a successful corporation with dad as president and mom as vice-president, you must accept your share of responsibilities. If you sit around and wait to be told what to do, you are a piker. Open your eyes and see what needs to be done and then volunteer your services to make your home pleasant for the whole family.

There are some duties that must be done every day; other tasks are to be done every week or at other regular intervals. Since you are the newest man in the house—for Air, Sea, and Trail Rangers are becoming adults—take on some of the masculine jobs around your home. Washing the car, mowing the lawn, putting up and taking down storm doors, and other manual activities are in your area of responsibility. There are also duties *in* the house that you should learn to carry out with efficiency. Housekeeping is not "women's work," as you will find out only too well when you are married and start your own family. The better qualified you are as assistant to your mother in her many

domestic duties the more easily you will be able to adjust to the responsibilities of living alone in college, avoiding frustration in military service, and sharing happiness in your honeymoon home.

Something to Do: Make a list of the things you see your father doing around the home. Make another list of the things you see your mother doing around the home. Select jobs you can do that would relieve your mother and father of some of their many responsibilities. Then sit down with them and offer your services in the home. Ask the Lord to help you do your best for His glory. Memorize Ecclesiastes 9:10 and 1 Corinthians 10:31.

YOU AND YOUR PARENTS

To live in a Christian home is a privilege. If your parents are Christians, thank the Lord for this special privilege and do everything in your power to make Christ the center of your home and life. If either or both of your parents are not Christians, pray for them regularly and live before them so they can see Christ in your life.

As long as you put your feet under your parents' table and sleep under their roof, they are boss. If you do not wish to obey them, don't expect to enjoy the privileges of their home. Conflicts between teen-agers and their parents arise chiefly from misunderstandings. If you remember a few basic things it will help you be more tolerant as you mature.

1. Your parents are new at the business of having a teen-ager in the home. In many cases you are the first one they have had. Even in a large family there are so many differences between the children that having an older brother or sister does not make your

situation much easier. Be tolerant—your parents are learning to be parents of a teen-age boy while you are learning to be a teen-ager yourself.

2. Your parents have gone through the stresses of teen-age living and remember the pitfalls that were prevalent in their day. Although the expressions and activities may be different, the temptations and pitfalls are the same. Knowing the dangers of the world, your parents want to help you avoid as many frustrations as possible. When they limit some of the privileges you desire, remember they are trying to protect you, not restrict your freedom.

3. Your parents know what is going on in your community and nation. They know the tendencies toward delinquency in your particular area and are hoping that you can reach adulthood without physical, emotional, or spiritual injury.

There is one thing you can do to ease tensions that may arise from misunderstandings with your parents. Live a positive, consistent life so that they know you can be trusted. Confidence breeds confidence. So, the more you prove to your parents that they can trust you, the more trust they will be willing to place in you. If you win their confidence while you are a Royal Ranger you will find that it will continue during your college years. This mutual understanding with your parents makes for increasing fellowship into your adult years.

Something to Do: Make a note of the incidents during one week that could lead to misunderstanding or frustration between you and your parents. Instead of having an argument or disagreement, accept your parents' decisions and write an analysis of what happened. Be fair and include both sides of the question. A week

later, take this note out and look at it. Try to discover the cause of the problem from your parents' point of view. When you view frustrations or disagreements after the emotional tension has eased you can more clearly evaluate the situation. Many times you see that the incident was not nearly as important as you thought it was at the time. You will no doubt see, also, that your parents have your best interests in view even though it may not appear so at the time. Memorize Ephesians 6:1-3.

YOU AND OTHER MEMBERS OF THE FAMILY

When there are other members in your family besides you and your parents, you have another set of relationships to consider. Older or younger brothers or sisters, aunts and uncles and grandparents must be included in your planning if they are members of your household. Your attitude toward them is important.

To older members of the household you are a follower. There are many times their will is exerted over yours and you must learn the self-discipline of accepting authority whether you agree with it or not. The way you learn to submit to family authority and the spirit in which you perform the tasks assigned to you will influence the atmosphere of your home. You cannot change the oldsters, but you can accept your situation in Christian love and bring happiness where there would otherwise be frustration.

To younger members of the household you are a leader. Knowing how you react to inconsistent or unreasonable authority, makes it easier for younger members of the family. Put yourself in their place, for you have recently come through that situation in life. If

you remember what it was like when you were their age you will find it easier to help them adjust. You will also win their respect and cooperation.

Something to Do: Make a list of the other members of your household. Then make a list of the ways you can help each one be happier. Be sure to pray for each member of your family each day, especially for the salvation of any of your family who are not Christians. As you become aware of their needs and pray for them, you will find that your own problems become less important. You will also find the comfort that comes through Christ to those who help bear the burdens of others and make life easier for them. Memorize Matthew 5:4 and Galatians 6:2.

LOOKING AHEAD

Some day, if you commit your life completely to the Lord, you can look forward to a happy home of your own. Then *you* will be the man of the house. Keeping this in mind, you should start now to develop the attitudes of mind and qualities of judgment that will make you capable of the responsibilities that will be yours. As a teen-ager you are sowing the seeds that you will reap in your adult years.

Courtesy and kindness are two attitudes you want to cultivate now. Courtesy includes those thoughtful things you do because you are a cultured American citizen. These include etiquette and ethics. As a Royal Ranger you will want to allow others their rights without exerting your own rights over others.

Kindness is more than courtesy. Courtesy you do because it is right; kindness is more than is expected of you. Kindness restricts your privileges in order that

you might bring happiness to others. As Jesus phrased it, this is going the second mile. Kindness will help you find happiness now and give you the privilege of bringing happiness into the lives of others.

The Royal Ranger is courteous; the Royal Ranger is kind. These qualities displayed in your home bring happiness now and prepare you to do your part in making your home-of-the-future a pleasant place in which to live.



EXPLORATIONS IN LIFE

Explorations in life may be frustrating but they are also God-given privileges in developing manhood. By the time you reach your middle teens, you are a long way toward becoming physically an adult. Herein lies a problem. Although you have the body of an adult, you are still considered a child by your parents and adult friends. This in-between time can be terribly frustrating but it need not be defeating. If you seek to understand yourself and those in authority over you, you will find that growing up can be fun. Too soon you will be thrust out into the "cold, cold" world and miss the warmth and security of home.

PHYSICAL MATURITY

As you grow older, you notice your uneven growth. Your skeleton is getting longer—you are growing taller. This is because you are developing the body of an adult and becoming sexually mature.

The beginning of this growth spurt is called "puberty," which simply means you have started the physical and sexual development that will make you a man. This process takes several years. It begins at different ages in different boys. Evidences of this maturity appear anywhere between ages 10 and 17, so don't be excited if you are early or late in "shooting up" toward your adult height. If you get an early start, relax. The other boys will probably catch up with you sooner or later. If you are late in this physical change, don't get excited. You will no doubt catch up with the rest of the fellas and may even pass some of them in attaining your adult height.

You have no doubt noticed that girls your age are frequently taller than you. This is because girls usually reach puberty a year or two before boys do, so they get a head start in growing taller. However, they slow down in their growth rate and you will soon pass most of them. Generally, both boys and girls reach their maximum height before they are 18 and retain this height the rest of their lives. Poor posture may make it appear that some people "shrink" when they get older, but this is only because they are not standing "tall" to their full height.

Take a hint: don't slump—stand tall to the full height the Lord has given you.

MENTAL MATURITY

With the developing of your body comes the maturing of your mind. Your mental ability is a God-given treasure. Use it to its fullest capacity. Concentrate on your studies at school. The more you learn in high school the easier it will be in college. The better study habits you learn now, the faster you will be able to progress in your vocational field. Since there is a definite correlation between school grades and financial income, you are helping determine your adult salary by striving for excellence *now*. But, more important is the fact that you have been given your mental potential by the Lord and as His servant you are obligated to use it to the best of your ability.

Something to Do: Read Matthew 25:14-30. Ask yourself this question: Am I using my mental capacity to the best of my ability? If you are not sure, make these investigations:

1. If you are having trouble in any school subject,

have a conference with the teacher concerned, asking for advice on how to study for the course.

2. Ask your school counselor or principal to help you choose subjects that will utilize your mental abilities to their fullest extent.

3. Make yourself a time schedule so you have sufficient time to study for your subjects. Allow more time for the subjects you find more difficult.

4. Make your school problems a matter of prayer. The Lord is just as interested in your school problems as he is in your physical problems.

SOCIAL MATURITY

The older you get the more interested you become in girls. This is normal development—just as natural as the hair growing on your chin. Friendships you make during your teens should be enjoyable and uncomplicating. Be friendly and have many friends—both boys and girls.

As you move in friendship circles you may find your special interest narrowing to one girl. You don't have to give up all your other friends just because you have selected a special girl friend.

Before you decide to date one girl more than others, give your social life a careful investigation. Every girl you date won't be your wife but every wedding begins with a first date! For that reason, Royal Rangers cannot afford to date girls who are not suitable for a life's companion. There are a number of factors you should prayerfully consider before you consider going steady. If you do, you will avoid much unhappiness.

1. Do not date a girl whose spiritual experience is less than yours or less than you want your children's

to be. Royal Rangers should not date unsaved girls. In fact, Pentecostal boys should not date non-Pentecostal girls. For, religious conflicts are among the factors that lead to unhappiness and even divorce. Your heart is too delicate—don't expose it to be broken over a religious argument. And, your salvation and Pentecostal heritage are far too valuable to compromise for romantic interests.

2. Do not date a girl whose racial or cultural background would create a problem for you. You want your wife to be accepted by your family and friends, so don't start an absorbing friendship that would cut you off from the rest of your friends. Remember the Rockefeller who married a girl whose cultural level was much different from his? She now lives on his alimony.

3. Look for common interests. Make a list of the things you and your girl friend like to do together. Then make a list of things she does that you do not care for or disapprove of. A third list should be made—the things you like to do and wish to continue doing after you are married. If there are extreme differences in these lists, be careful. There must be mutual interests to hold a marriage together and the interests you have individually must not conflict with ideals held by the other. Such things as music, art, hobbies, recreations, and books have a strong influence on your future happiness.

4. Of major importance is what you want to become in life. Most professions today demand a minimum of four years of college. Many professions require seven and eight years of study and training. Would marriage interfere with these plans? If so, don't start

going steady yet. If you sacrifice your professional goal for an immediate romantic choice, you will hold resentments in your heart that will mar your future happiness. Next to your choice of Christ as your Saviour, your most vital decisions in life are your vocational choice and your selection of your life's companion. Since these last two decisions are so closely interwoven, they must frequently be made together and balanced in your planning.

5. One of the most thrilling events in life is falling in love. Teen-age love is passionate, possessing, compelling. Here is where your spiritual standards and moral integrity make you stand head and shoulders above the rest of the boys.

Recognizing that marriage is God-ordained (Genesis 1:26-28; 2:18, 21-25; Hebrews 13:4), you have a right to make plans for the future. However, God's will must be supreme in your life. If you let Him, He will help you to have a positive attitude toward marriage (1 Timothy 4:12; 2 Timothy 2:22; 1 Thessalonians 4:4, 5) and help you shun moral sin (Leviticus 20:10; 1 Corinthians 6:9). When you think you are falling in love, read 1 Corinthians 13:4-6 to see the relationship between the romantic love of a man for his wife as compared with the love of Christ for His church: "Love suffereth long (*patience*) and is kind (*kindness*); love envieth not (*generosity*); love vaunteth not itself, is not puffed up (*humility*), doth not behave itself unseemly (*courtesy*), seeketh not her own (*unselfish*), is not easily provoked (*good temper*), thinketh no evil (*guileless*), rejoiceth not in iniquity, but rejoiceth in the truth (*sincere*)." Only when this is descriptive of your love do you have a right to ask a girl to share your life with you.

When you are mature enough, the Lord will bring into your life a girl who shares your convictions and will bring you happiness in the years to come. Only she is worthy of your love. Until then—until you are physically, emotionally, and spiritually ready for this type of love—avoid getting serious with any girl. This is the mark of the Royal Ranger who has set his “affections on things above” (Colossians 3:2).



**love
witness
dedication**

COURAGE

ACHIEVEMENT

FRIENDSHIP

LEADERSHIP

WISDOM

HISTORY OF FCF

The Frontiersmen Camping Fraternity was founded during the summer of 1966. For some time prior to this date, the national commander had felt the need for a special honor society to give recognition to men and older boys who had distinguished themselves in advancement, training, and camping.

The early American frontiersman was an excellent example of man's ability to adapt to the outdoors and the wilderness. His achievements were also an example of courage and determination. The national office, therefore, made the decision to base this fraternity on the lore and traditions of these early frontiersmen.

The first FCF chapter was organized in the Southern California District on July 8, 1966. High in the San Bernardino Mountains in a clearing surrounded by gigantic trees, a large group of Royal Rangers sat around a blazing campfire. As they waited, a feeling of mystery and expectancy filled the air.

Suddenly, the blast of a hunter's horn shattered the night's stillness and echoed through the trees. National Commander Johnnie Barnes stepped into the firelight, dressed in a buckskin outfit and a coonskin cap. As he began to explain the new FCF program, a hum of excitement rose above the sound of the crackling campfire. Assisted by two district leaders, Ron Halvorson and Bob Reid, these men proceeded with the first FCF callout. After pledging to endure a time of testing, the candidates were led away carrying a large rope to a mountaintop nearby for an all-night initiation.

Later as the new members (five men and five boys) were officially inducted into the fraternity at the final friendship fire, they sensed that this ceremony was a milestone in Royal Rangers history.

That same year, three more chapters were organized in the Northern California, the Southern Missouri, and the Iowa Districts. This exciting and unique fraternity has so captured the imaginations of men and boys until the program has now grown to include organized chapters in the majority of our districts.

PURPOSE OF FCF

1. To give recognition to men and boys who have shown exceptional interest and outstanding achievement in the Royal Rangers program and in Royal Rangers campcraft.
2. To build a brotherhood of "top-notch" men and boys over the years who will continue to be Royal Rangers program and camping enthusiasts.
3. To emphasize the importance of involvement in the advancement program, development of campcraft skills, and completion of the leadership-training programs.
4. To develop a corps of elite Royal Rangers who will strive to be the very best in Christian example and leadership.

BASIC REQUIREMENTS FOR MEMBERSHIP

BOYS

1. They must meet the following requirements:
 - a. Earn the Trailblazer First Class rating.
 - b. Earn the Advanced Camping Award.
2. They must be recommended by their outpost for this position. (This is done by submitting an FCF application form to the district office prior to the powwow.)

3. After being selected, they must pass Phase I testing.
4. They will be officially "called out" by the FCF staff at a district pow wow during a council fire service.
5. They must participate in an initiation ceremony.

BUCKSKIN FRONTIERSMAN:

BOYS: Complete one additional step in advancement—
or earn the Gold Medal of Achievement.

- MEN:** 1. Complete the new FCF Training Course.
2. Tutor a boy into FCF.

BOTH MEN AND BOYS:

1. Participate in at least one FCF initiation; and be an active member in your chapter for at least 1 year.
2. Make or purchase a complete FCF outfit and wear it at FCF functions.
3. Recite from memory the FCF pledge.
4. Explain the meaning of the FCF symbol.
5. State the purpose of FCF.
6. Make an FCF ID staff.
7. Make your stalking stick into an FCF necklace.
8. Select a frontier-related craft or skill that you plan to develop.
9. Select an FCF name for yourself.

WILDERNESS FRONTIERSMAN:

BOYS

1. Complete one additional step in advancement and earn the Survival Award or earn the Gold Medal of Achievement.
2. Participate in at least two initiations and be an active member in your chapter for at least 2 years.
3. Be sponsored by a Wilderness member.
4. Carry a wilderness pouch for at least 3 months.
5. Tutor another boy in FCF.
6. Pass a previgil testing session.
7. Complete an all-night vigil.

MEN

1. Attend and complete a National Training Camp.
2. Participate in at least four initiations and be an active member in your chapter for at least 2 years.
3. Be sponsored by your district chapter.
4. Carry a wilderness pouch for at least 3 months.
5. Tutor a boy into FCF.
6. Pass a previgil testing session.
7. Complete an all-night vigil.

APPROVAL AND SUPERVISION

Each step of recognition for a Buckskin must be approved by the chapter staff before the member is eligible to wear the recognition pin.

The all-night vigil and previgil test for Wilderness Frontiersmen must be conducted under the supervision of a regional coordinator, a territorial representative, or by a member of the national staff.

F.C.F. RECOGNITION PINS:



FRONTIERSMAN



BUCKSKIN FRONTIERSMAN



WILDERNESS FRONTIERSMAN

THE SPIRIT OF THE FRONTIERSMEN

CAMPING FRATERNITY

The Frontiersmen Camping Fraternity endeavors to develop in each member the same courageous and undaunted spirit of the early frontiersmen. High morale and contagious enthusiasm are developed by urging each member to strive to achieve five important things. These five vital goals are to demonstrate courage, display achievement, develop friendships, demonstrate leadership, and develop woodsmanship.

DEMONSTRATE COURAGE

Early frontiersmen demonstrated outstanding courage by exploring unknown wilderness, scaling high mountains, crossing barren deserts, blazing trails in virgin forests, and by enduring extreme heat, cold, peril, and hardships. Many are the stories of their bravery in battle, their struggle for survival, and their unwavering loyalty in the name of honor. The Frontiersmen Camping Fraternity encourages each member to develop this same spirit of courage.

First, he must demonstrate courage by enduring a night of rugged initiation before he can qualify as a member. Many of the tests and ceremonies of this initiation demand a courageous spirit. Each frontiersman must continue to demonstrate a spirit of courage by taking an unwavering stand for the principles of Christianity, by squarely facing each personal problem, by bravely enduring each difficulty in life, and by promptly aiding those who need help, even at the risk of his own safety.

DISPLAY ACHIEVEMENT

History books are full of the accounts of such outstanding men as Lewis and Clark, Daniel Boone, Davey Crockett, and Kit Carson. These men along with many others carved a name for themselves in our American history because of their outstanding achievements. Their undaunted spirit of determination and their desire to excel provide some of the most colorful and exciting pages in our history books.

Frontiersmen Camping Fraternity members should also maintain this desire to excel and achieve. Proficiency in camping and other phases of the Royal Rangers program is demonstrated by achieving certain milestones in advancement. These abilities are further demonstrated by each candidate during his Phase 1 testing.

The Frontiersmen Camping Fraternity member should also strive to achieve the following goals: progress even further in advancement, become more involved in Royal Rangers, and continue to develop his skills as a good camper.

DEVELOP FRIENDSHIP

The saga of the American frontier contains many accounts of frontiersmen who gave or risked their lives and their fortunes on behalf of friends. Their unwavering loyalty to friends serves as an inspiration to today's frontiersmen. They too endeavor to cultivate the same strong bonds of friendship and display the same loyalty to their friends. This feeling of brotherhood is very strong in the Frontiersmen Camping Fraternity and every member does his best to uphold this tradition.

DEMONSTRATE LEADERSHIP

Many of today's major highways were once only blazed trails through uncharted wilderness, begun by an early frontiersman who led the way. Many of the routes through rugged mountain passes still used today were discovered by frontiersmen exploring new country.

Each FCF member should also be willing to step out and lead the way by being an example in Christian living, participating in Christian service, and by being willing to assume specific responsibilities. There are still many opportunities awaiting the individual who is willing and ready. So prepare yourself now for leadership so you'll be ready when the opportunity presents itself.

DEVELOP WOODSMANSHIP

Early frontiersmen were able to adapt to almost any wilderness situation because they were constantly developing outdoor skills. It became a matter of survival to know what to do and how to do it. As experienced woodsmen, they could spend months on the frontier with only a small knapsack, a blanket, their rifle, and their hunting knife. Today's frontiersmen should also continue to develop outdoor skills. They should use every opportunity available to demonstrate these skills in a camping situation. A frontiersman should not only be a trained woodsman, but also an experienced woodsman.

PART VII

**ADVANCED
AWARDS**



ADVANCED AWARDS

The advanced award section offers Royal Rangers the opportunity to explore new fields of knowledge.

There are many sources of information for each award. However, the best place is probably your library because it makes available books containing the information needed for each award. (Encyclopedias contain the information in most cases.)

Information regarding the Camping, Hiking, and Pathfinder Awards may be found in the *Adventures in Camping* handbook. In some cases individuals can be of great assistance. For example, for the Church Award—consult your pastor. For the Photography Award—consult a professional photographer. For the Auto Mechanic Award—consult an automobile mechanic. For the Music Award—consult your choir or orchestra director. For the Physical Fitness Award—consult an athletic coach or a doctor, and so forth.

PLEASE NOTE:

There is only one type of Advanced Award. These plastic awards are blue and white in color. Advanced Awards are centered over the left pocket in rows of three with a limit of six rows. Additional awards may be worn on an award vest. The highest Pioneer award may also be worn above these awards.



ADVANCED SWIMMING AWARD

Successfully complete the Red Cross Swimmer or the Y.M.C.A. Shark Club requirements.

AMATEUR RADIO



1. Qualify for a novice Ham Radio License from the Federal Communications Commission.
2. Explain how Amateur Radio Operators prepare to handle emergency messages during floods, hurricanes, forest fires, or similar disasters.
3. Give Scripture references for two types of communications mentioned in the Bible.

ARCHERY



1. Explain the safety rules for archery.
2. List the techniques for good shooting and demonstrate each.
3. Describe the parts of an arrow, bow, and string.
4. Explain the following terms: end, round, armguard, tow, glove, quiver, flight arrow, matched arrow, deflexed bow, recurved bow.
5. Name and describe at least three types of arrows.
6. Demonstrate how to store the bow and arrow, wax a bow string, brace a bow.
7. Shoot and score on any nationally recognized round.
8. Write a brief history of archery, listing three famous types of bows.
9. List three Scripture references on archery.

ART



1. Line creates representation on both realistic and abstract levels.
 - a. Select a moderately complex object. Draw the

- object carefully and lightly concentrating on its proportions and relationships.
- b. Use two different media (charcoal, ink, brush and paint) to draw the same subject to see how the new media affect the expression of the drawing.
2. Shapes can be used to portray natural objects in many different ways.
 - a. Make a pencil drawing from a photograph and simplify the subject matter by leaving out little details.
 - b. Draw from the same photo. This time flatten the object shapes and simplify their contours so that they are almost abstract in nature.
 3. The principles of linear perspective can be used to create space.
 - a. Check a book out of your local library about linear perspective.
 - b. Make a pencil drawing of a road, a house, and telephone poles using linear perspective.
 4. A collage is a good way to deal with texture.
 - a. Collect a variety of actual textures, such as cloth, sand, foil, wood, and colored photo textures from magazines. Cut or tear and start arranging materials into shapes by color, value, and texture. Glue these shapes onto a sheet of drawing paper.
 - b. Use the collage idea to construct a face of found textures.
 5. Color wheel problem (like you already have).
 6. Use any media (painting, watercolor, charcoal, ink, etc.) to make two self-portraits. In one of these self-portraits try to express sadness, in the other happiness.
 7. Artist biographies as you have already indicated!
 8. Design a symbol for your patrol flag.

ASTRONOMY AWARD



1. Identify seven different constellations in the sky. Explain why the stars seem to twinkle.
2. Explain the difference between planets, satellites, comets, meteorites, stars, and galaxies.
3. Learn the names and sizes of the planets in our solar system. Draw a chart showing the difference in sizes.
4. Explain what is meant by a "light-year." Give the distance in light-years to the nearest star and estimated distance to the farthest galaxy.
5. Visit an observatory or planetarium, or draw a star map showing the major constellations.
6. With a small telescope study the stars on seven different nights, keeping notes on what you observed, identifying each object.
7. Give three Scripture references regarding stars.

ATHLETICS



1. Explain in detail, how to train for an athletic event.
2. Write a 500-word theme on your favorite sport. Theme should contain information on rules, equipment, techniques, training, purpose of each player, diagram of playing area, such as diamond, field, court, etc., and the value of the sport to an individual.
3. Explain the importance of good sportsmanship.
4. Explain how a Christian can honor Christ as a participant in sport events.
5. Earn a letter in a high school sport.
6. Give three Scripture references about athletics.



AUTO AWARD

1. Describe the parts and functions of the following major chassis systems: drive system, power plant, control system, running gear, and electrical system.
2. Draw a diagram on paper explaining the function of a four-cycle engine.
3. Do the following: change motor oil, remove and clean carburetor air cleaner, clean and adjust spark plugs, change a flat tire, adjust brakes.
4. Keep a record of an automobile's performance over a 2,000-mile period. List things such as: fuel consumption, lubrication, oil consumption, and repairs.
5. Explain the mechanical differences and similarities of three makes of automobiles or trucks. Indicate your choice and explain why.
6. Apply for driver's permit. After receiving permit, demonstrate your ability to drive carefully, and care for an auto properly for two months.



AVIATION AWARD

1. Read the book entitled: PILOT HANDBOOK OF AERONAUTICAL KNOWLEDGE (FAA 61-23A)
2. Identify in flight, at least seven different types of aircraft, giving proper names.
3. Make a sketch of an airfoil and explain how it helps a plane to fly.
4. Using a model airplane, explain the effect of drag, lift, thrust, and gravity on a plane in flight.
5. Make a list of all the working parts of a plane and explain the purpose of each:

6. Explain the difference between a piston, jet, and rocket type of airplane engine.

7. Explain the purpose and importance of the following instruments on an instrument panel: compass, oil pressure, altimeter, bank and turn indicator, air-speed indicator, tachometer, gyro horizon, temperature gauge.

8. Explain in detail the proper procedure for each of the following: take off, banking and turning, and landing.

9. Visit an airport and make a list of equipment and facilities used.

10. Take a flight in some type of aircraft.

NOTE: Enrolling in a flight course until you make your solo flight may be substituted for the above requirements.

BACHELOR AWARD



1. Prepare and cook three different complete meals for your family.

2. Wash and clean the kitchen dishes for five different meals.

3. Clean up the kitchen oven, stove, refrigerator, and wastepaper basket.

4. Wash and fold the family laundry on four separate occasions (under parental supervision).

5. Vacuum, dust the house, and make the family's beds for a period of 1 week.

6. Iron a shirt, a pair of pants, and one other article of clothing.

7. Under adult supervision, demonstrate your ability to plan a weekly menu, prepare a shopping list, and purchase these items from a local store.

8. Under adult supervision, demonstrate your ability to

operate a sewing machine. Mend one article of clothing with a sewing machine. Sew by hand the hem of a shirt.

9. Keep your room, bureau, and clothes closet clean and neat for parental inspection for a period of 2 months.

10. Keep the bathroom facilities and floor clean for a period of 1 week.



BIBLE AWARD

1. Explain how the Bible was written and give two Scripture references.

2. Learn the Books of the Bible in order.

3. Give four Scripture references for each of the following Bible doctrines: Salvation, Baptism in Spirit, Divine Healing, Second Coming of Christ.

4. Give three methods of studying the Bible.

5. Read the New Testament, Genesis, Exodus, Numbers, Deuteronomy, Joshua, Judges, 1 and 2 Samuel, 1 and 2 Kings, 1 and 2 Chronicles, Psalms, and Proverbs.

6. Explain the main teaching of the following parables:

a. The Good Samaritan (Luke 10:30-37)

b. The Sower and the Seed (Luke 8:1-15)

c. The Prodigal Son (Luke 15:11-52)

d. The House Built on a Rock (Luke 6:47-49)

7. Identify the following Bible characters and tell the story of each: Abel, Joseph, Caleb, Gideon, Zacharias, Elisabeth, Stephen, and Barnabas.

8. Quote from memory 10 favorite Bible verses.



BIRD STUDY AWARD

1. Make a list of 20 kinds of birds that you have

identified by sight or with binoculars in the field. Explain how you identified each. The list should include name of bird, area where seen (woods, field, park, etc.), and date observed.

2. Explain how birds are helpful to the farmer. Make a list of 10 birds that destroy insects, rats, or mice.

3. Select a tract (at least 10 acres) of land near you and make a census of the bird life there. You should make at least four field trips into this area.

4. Construct a birdhouse for a particular type of bird. Explain why it is suitable for this type of bird. Construct a feeding station and a bird bath.

5. Visit a bird exhibit in a natural history museum and make a brief report on your visit, or read about a great ornithologist such as James Audubon and describe his contributions to bird study.

6. Explain what may be done to protect birdlife in your area.

7. Give three Scripture references regarding birds.

BOATING AWARD



Earn a Red Cross Boating Certificate or meet the following standards:

1. Swim 100 yards demonstrating these three strokes: breast stroke, side stroke, back stroke.

2. In water six feet or more deep, remove trousers, tie knot in each leg, inflate trousers, and float motionless for one minute.

3. Point out all the essential parts of a rowboat and oars. Define the following nautical terms: ahead, astern, starboard, port, forward, aft, and amidships.

4. With your Commander or instructor in the stern, do the following: row in a straight line for 100 yards, demonstrate proper turns, pivot and backwater in a straight line for 50 yards.

5. Properly demonstrate the following: boarding, launching, landing, tying boat to dock or shore.

6. Demonstrate how to turn a swamped rowboat right side up, and then get in and paddle it for 10 yards with your hands.

7. Demonstrate proper rescue of a swimmer with a rowboat.

8. List the safety rules for boating.

9. Make a list of names of seven small boats and explain the use of each.

10. Participate in a trip by boat of at least 10 hours in length.



BUGLING AWARD

Sound the following calls on a bugle: reveille, to the colors, retreat, call to quarters, taps, mess, church and assembly.



CAMPING AWARD

1. Demonstrate proper selection and packing of clothing for a five-day trip. Show that you can prepare a shelter for yourself. This may include trail, pup, or other type of tent.

2. Show proper pitching of a tent and explain why.

3. Demonstrate how to tie the overhand knot, square knot, clove hitch, and any two other knots, plus whip the end of a rope.

4. Know and explain fire safety rules. Show that you can build three types of fire such as crisscross, tepee, trench, or hunter's, and tell when they should be used.

5. Cook a complete meal on a campfire (it must taste and look good), using two types of cooking—boiling, baking, broiling, or frying. Plan a menu for a patrol for three meals, explaining why you chose each item.

6. Show that you know how to open, close, pass, and sharpen a pocketknife. Make some useful items with your knife such as: fuzz stick, tent stake, etc. Demonstrate your ability to properly use an ax.

7. Demonstrate proper care of food, dishwashing, and disposal of garbage.

8. Lay out a campsite for an outpost showing proper place for fires, tents, latrines, etc.

9. Know how to sight and set a compass. Show how to lay out a course with a compass. Show that you know how to find directions by the stars. Using compass and map, take a cross-country hike of at least 5 miles.

10. Help assemble an outpost first aid kit, explaining, why each item is needed. Make a list of items needed for a three-day outpost camping trip.

11. Demonstrate how to play four outdoor games and plan a program for a campfire service.

12. Camp out a total of at least 10 days and 10 nights.

CANOEING AWARD



Earn a Red Cross Canoeing Certificate or meet the following standards:

1. Swim 100 yards demonstrating these three strokes: breast stroke, side stroke, back stroke.

2. In water 6 feet or more deep, remove trousers, tie knot in each leg, inflate trousers, and float motionless for 1 minute.

3. Discuss contents of a good emergency repair kit and explain how to use it in repairing a 1-inch hole in a canoe.

4. With your commander or instructor in the stern, do the following: paddle in a straight line for 100 yards, demonstrate proper turns, pivot and backwater in a straight line for 50 yards.

5. Properly demonstrate the following: boarding, launching, landing, tying canoe to dock or shore.

6. Demonstrate how to turn a swamped canoe right side up, and then get in and paddle it for 10 yards with your hands.

7. Demonstrate proper rescue of a swimmer with a canoe.

8. List the safety rules for canoeing.

9. Demonstrate the following canoeing strokes in good form: bow, sweep, reverse sweep, J, draw, pushover.

10. Participate in a canoe trip of at least 10 hours in length.



CARDIOPULMONARY RESUSCITATION (CPR)

Earn the CPR certificate through the American Heart Association, or the American Red Cross.

CARPENTRY



1. Do any three of the following:
 - a. Build two sawhorses.
 - b. Name five types of hardwood and five types of softwood. State what purpose they are best suited for.
 - c. Build a birdhouse or a doghouse.
 - d. Identify and display five types of nails or other attaching devices.
 - e. Make a toolbox.
 - f. Make some type of furniture.
2. Read two books on basic carpentry.
3. Name and identify 10 woodworking tools.
4. State safety rules for using woodworking tools.
5. Show how to properly store hand tools.
6. Properly sharpen a saw, chisel, and plane.
7. Give three Scripture passages relating to carpentry.

CHEMISTRY



1. Correctly demonstrate the following experiments: Neutralization, precipitation of a solid from Solution, evolution of a gas, combination of two elements to form a compound.
2. Complete a two-semester high school chemistry course with a grade of at least "B" average.

CHRISTIAN SERVICE AWARD



1. Explain the meaning of the following and give a Scripture reference for each: grace, repentance, faith, new birth, sanctification.

2. Explain in detail the steps in becoming a Christian, and the responsibilities of a person after becoming a Christian, including such things as conduct, faithfulness, stewardship, witnessing, etc.

3. Personally lead a soul to Christ. Continue to encourage the person by praying for and with him, by reading the Bible with him, by discussing problems with him, and so on.

4. Discuss with your pastor ways in which you can be of service to God and your church. Then spend at least 15 hours engaged in Christian service.

5. Make a list of the opportunities in the field of full-time Christian service. Interview two individuals engaged in full-time Christian service such as a pastor, evangelist, missionary, chaplain, etc. After the interview submit a report, including answers to the following questions.

- a. Training and education needed
- b. Opportunities available
- c. Is it satisfying and rewarding?
- d. Sacrifices necessary
- e. How they received their calling

6. Interview a layman who is active in Christian service and discuss with him how a person can serve Christ and the church as a layman engaged in another vocation.



CHURCH AWARD

1. Make a report on the history of your local church, stating: when it was organized, who was the first pastor, etc. Photos of the former building and events will be helpful.

2. Demonstrate your knowledge of your church by

answering the following questions asked by your Commander:

- a. When and where was the Assemblies of God organized?
- b. Give the approximate number of Assemblies of God churches today and the estimated national Sunday school attendance.
- c. Explain the requirements for membership in your local Assemblies of God church.
3. Explain the importance of church membership.
4. Do two of the following:
 - a. Serve for two months as a member of a church choir, band, quartet, etc.
 - b. Serve as an usher for a one-week series of special meetings.
 - c. Direct traffic or parking during four special church functions.
 - d. Take photos of two special church events, such as: Bible school, youth rallies, fellowship meetings, homecomings, etc., and arrange them for display.
 - e. Hold an office in your CA group.
5. Explain how your church is financed. Demonstrate your stewardship by paying the tithe on your earnings to your church. Give a Scripture reference for tithing.
6. Explain the purpose of each department in your church, such as, Sunday school, Men's Ministries, Women's Ministries, CA, etc.
7. In your own words explain the reason why the Assemblies of God is one of the fastest growing church organizations in America.
8. Read the book *We Believe*, by Ralph M. Riggs, and answer any 10 questions selected by your commander from the book. This book may be purchased from Gospel Publishing House, Springfield, Missouri.

9. Spend at least 10 hours promoting your church, such as visitation, etc.
10. Become a member of the church you attend.



CITIZENSHIP

1. Write a 500-word theme on the history of your community, listing such information as: what Indian tribes lived there, first-known settlers, important historical events and people.
2. Using a map, point out important places in your community such as fire stations, police stations, city hall, hospitals, schools, churches, etc.
3. Visit one department of your local government and report on its services to your community.
4. Explain in detail how to do the following: report a fire, report an auto accident, call an ambulance, obtain an auto license, obtain a dog license, obtain a building permit, call a doctor.
5. List and explain five ways a Royal Ranger can be a good citizen.
6. Participate in a community service project.
7. Explain and demonstrate how to properly respect and display the American flag.
8. Read the Declaration of Independence and the Constitution of the United States of America and explain their purpose and how each benefits us as American citizens.
9. List the names and titles of the major leaders in your State Government.
10. List the names of the Senators from your state and the Representatives from your district in Congress.
11. Tell what branch of government is responsible for the following: National Parks, flood control, in-

vestigation of violation of Federal laws, minting of money, Supreme Command of Armed Forces, soil conservation, Atomic Energy.

12. List two Scripture references stating some of our responsibilities to our government and officials.

COMPUTER SCIENCE

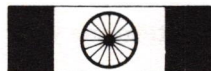


1. Describe the difference between a "bit" and a "byte."
2. Describe the difference between ROM and RAM.
3. Describe the difference between the operation of an on-line system and a batch system.
4. Take a tour of a computer room in operation.
5. Write a brief description of the different jobs performed by the computer personnel (operator, programmer, scheduler, systems analyst, etc.).
6. List and briefly describe three types of input devices, three types of output devices, and two types of storage devices.
7. Draw a flowchart of a simple input/output operation.
8. Identify the difference between a systems programmer and an applications programmer.
9. Do one of the following:
 - a. Research the prospects for a career in data processing in your area listing five possible sources of employment.
 - b. Write an essay of at least 500 words on the history of the computer industry.
 - c. Keep a list for 1 month of all the ways a computer affects your life (bills received in the mail, tickets from cash registers, coded prices on packages, etc.).



COOKING AWARD

1. Plan a menu for a 3-day outing (nine meals).
2. Make a list showing cost and amount of food needed for an eight-man patrol on a 3-day outing.
3. Make a list of utensils needed to complete the menu.
4. Cook six complete meals over a campfire, using three different methods (such as baking, frying, boiling, tinfoil cooking, etc.).
5. Use safe food-handling practices and clean up site thoroughly.



CYCLING AWARD

1. Know and demonstrate proper safety rules on the road.
2. Take apart and clean a bicycle, and then put it together again properly.
3. Repair a puncture in a bicycle tire.
4. With a friend take three separate trips. These trips should be at least 10 miles in length.
5. Keep a log of each trip and make a report to your Commander.



ELECTRICITY AWARD

1. Define the following terms: voltage, amperage, watts, watt-hours, kilowatt, resistance, insulator, wire gauge, receptacle, and switch.
2. Explain what a transformer is and how it works.
3. Explain the difference between direct current (dc) and alternating current (ac).
4. Make a list of items in your home that use direct current and alternating current.

5. Make a chart of your home showing outlets, switches, lights, and appliances that are controlled by fuses or current breakers. Mark these breakers or fuses to indicate what they control.

6. What are your state and city requirements for becoming an electrician?

7. Explain how electricity is generated.

8. Explain the principle of how an electric motor runs.

9. What is an electromagnet?

10. Explain how an incandescent light works.

11. What is the purpose of a grounding wire on your home appliances?

12. What are the generally accepted color codes for neutral, hot, and grounding wires?

13. Read your home electric meter and determine your electric bill for the month.

14. Secure a bell transformer, a doorbell, and a switch. Construct, demonstrate, and explain how a doorbell operates and what each part does.

15. Explain and demonstrate how you would rescue and give first aid to a person who has an electric hotline lying across him.

FIRECRAFT AWARD



1. List fire safety rules including the requirements of a good fire site.

2. Assemble and explain the use of camp site fire-fighting equipment.

3. Following all fire safety rules, demonstrate your ability to start a fire by each of the following methods:

a. One match.

b. Flint and steel.

c. Bow and drill.

d. Metal match.

e. Magnifying glass.

4. Demonstrate building six different types of fires, explaining their purposes.
5. Cook at least three meals using three types of fires.
6. Demonstrate your ability to correctly use at least one type of camp stove.
7. Explain fire-fighting procedures in the following settings:
 - a. Home.
 - b. Woods.
 - c. Open fields.
8. Assemble and use six forms of tinder.
9. Investigate and list other methods of safe fire lighting.
10. Investigate and list methods of coloring flames.
11. Plan and conduct an outpost council fire, construct the fire, provide a unique fire-lighting method, and plan and conduct the program which includes a devotional and other activities.



FIRST AID AWARD

Complete the American Red Cross standard First Aid Course.



FISHING AWARD

1. Name 10 different fish in your area. Identify them.
2. Catch three different kinds of fish, clean for cooking.
3. Name the parts of a pole and reel.
4. Name different kinds of rods and reels and their unique purpose.
5. Catch and identify four kinds of bait.

6. Show how to take care of fishing tackle.
7. Explain the feeding habits and breeding locations of fish in your area.
8. Explain where to find fish during different temperatures.
9. When is open season on game fish in your area?
10. What is your State Fish Conservation doing to promote better fishing in your area?
11. Visit a fish hatchery or a local Fish and Game Conservation office.
12. Learn your state fishing regulations.

FOREIGN LANGUAGE



Take a foreign language course in school and receive a "B" average for the year.

FOREIGN MISSIONS



To be given to any boy who serves with any recognized missionary or missionary organization for 1 month or more in any foreign country.

GARDENING AWARD



1. Demonstrate how to prepare the soil for planting.
2. Plant and cultivate six or more kinds of vegetables in a garden plot. There should be at least 10 units of each of the six kinds of vegetables planted.
3. Demonstrate the proper use of home gardening tools and the care and maintenance of these tools.
4. Explain how to keep insects, small animals, and disease from harming your garden.
5. Explain how and when you would use insecticides

on green leafy vegetables, root vegetables, and fruit vegetables.

6. Keep a weekly log of the growth and development of your garden. Keep records of the cost and man-hours spent in the garden.

7. Demonstrate how to harvest and prepare some of your vegetables. Prepare some of your vegetables for a family meal.

8. Prepare a compost pile from the waste products from your garden and yard.

9. Demonstrate and explain the proper preparation of the soil immediately after the harvest season.

10. List and explain the nutritional value of a leafy vegetable, a root vegetable, and a fruit-bearing vegetable. Explain how to preserve them for future consumption, such as by canning, storing, freezing, etc.



GEOLOGY AWARD

1. Collect at least five ores; list the name, the metals commonly produced from each ore, and how the metal is used.

2. Collect in the field at least 10 rock-forming minerals, listing the name of each.

3. Collect at least 15 different fossils.

4. Visit one of the following commercial operations: (a) a mine, (b) an oil or gas field, (c) a quarry. Discuss with the foreman or someone in charge how the deposit was formed, how it was found, and how it is being developed.

5. Polish a rock-forming mineral and use it to decorate a piece of jewelry such as: a ring, tie clasp, belt buckle, etc.

6. List three Scripture references to geology such as: rocks, gold, silver, copper, etc.

HIDE TANNING AWARD

(Genesis 3:21)



1. Read two books on hide tanning.
2. Know or obtain information on at least three different tanning solutions.
3. What are the antidotes for each solution used in question two?
4. Describe and list at least five tools used in hide tanning.
5. List the safety precautions to be followed in using tools and solutions in hide tanning.
6. Explain in 100 words or less, the complete process of tanning a hide and give solutions used in this process.
7. Explain how to take a hide from an animal.
8. Secure a fresh or salted hide and tan it, (under adult supervision).

HIKING AWARD

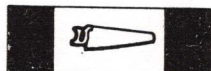


1. Explain safety rules for hiking on the open road, and in the wilderness.
2. Discuss the merits of three different types of packs. State your preference and explain why.
3. Assemble a pack for an overnight hike of a distance of at least five miles. Include a blanket or sleeping bag and whatever supplies are needed for personal use.
4. Make a list of clothes and shoes best for hiking during warm weather, cold weather, and wet weather.
5. Explain the proper care of the feet during hikes to prevent blisters.
6. Explain how to avoid becoming lost in strange

territory. List the rules to follow if you become lost.

7. Take two hikes of at least five miles each. Keep notes on the things you observed on these trips.

8. Demonstrate your ability to use a compass and map. Using a compass and map, take a cross-country hike of at least five miles.



HOBBY AWARD

Do any eight of the following projects. Any additional projects approved by your Commander may be added to this list.

1. Build a small tool box for tools.
2. Paint an oil painting at least 8 by 10 inches in size.
3. Build a yard sign with your house number on it. It should be clearly visible from the street.
4. Make an item with mosaic tile.
5. Build a birdhouse.
6. Make a copper-tooled wall plaque or picture suitable for framing.
7. Build a bird feeder. Observe the kinds of birds that eat there.
8. Construct a small leather article that requires leather tooling.
9. Build a model boat. Use your own plans or buy a kit.
10. Using basket weaving, construct a useful item.
11. Build a model airplane. If you build a flying model, take credit for two projects.
12. Collect eight items (all of the same kind or order, such as: eight Mexican coins, eight Canadian stamps, etc.) mount, identify, and display them.
13. Build a kite that will fly. It must be homemade.

HOME REPAIR AWARD



Do 12 of the following:

1. Repair an electric plug or lamp.
2. Repair a leaky faucet.
3. Clean out a sink trap.
4. Replace a broken windowpane.
5. Paint a room.
6. Clean the gutters.
7. Clean the chimney and fireplace.
8. Scrub and wax a floor.
9. Caulk the windows and fireplace.
10. Clean storm windows and screens. Place them on the window frame.
11. Lay tile.
12. Hang a picture.
13. Help clean out the garage, attic, storeroom, or basement.
14. Repair the water hose.
15. Repair some damaged furniture.
16. Repair a tight-fitting door.
17. Help winterize your home.

HOME SAFETY AWARD



1. Outline a home fire plan and discuss and explain it to your family.
2. Conduct a home fire drill.
3. Survey your home for fire hazards.
4. Locate and learn how to safely turn off the following:
 - a. Main (and other) fuse boxes.
 - b. Main natural gas, LPG, or outside oil tank valves.

- c. Main water valve.
5. Survey your home for electrical hazards.
6. Survey your home for hazardous chemicals and poisons, and plan for proper storage or disposal in cooperation with your parents.
7. Survey your home for dangerous areas and conditions such as unsafe stairways, broken glass, unprotected fans, etc. List and discuss the elimination of these with your parents.
8. List hazardous tools used at your home (such as lawnmower and powersaws) and outline safe operating procedures.
9. Discuss family procedures during power failure.
10. Demonstrate first aid for bleeding, breathing difficulties, and poisoning.
11. Assemble a list of equipment and supplies useful during home emergencies, such as first aid kit, shovel, canned goods, etc.
12. Assemble a home first aid kit.
13. Prepare a list of emergency phone numbers including local police, fire, ambulance, family doctor, power company, family members' business phones, etc., and write these in phone book and/or post near phone.



HORSEMANSHIP AWARD

1. Name four breeds of horses and explain what each breed is noted for.
2. Demonstrate how to harness and saddle a horse. Explain what each piece is and its purpose.
3. Demonstrate how to properly ride a horse at a walk, a trot, and a gallop.
4. Show how to properly mount and dismount.
5. Show how to clean, oil, and treat the saddle and bridle.

6. Explain how to shoe a horse.
7. Demonstrate your ability to feed and water a horse.
8. Explain six common horse diseases, their symptoms, and their cures.
9. Explain what a gait is. Name four types of gaits.
10. List and diagram the different parts of a horse.

INDIAN LORE AWARD



1. Make an Indian costume. It should consist of headdress, shirt, leggings, etc.
2. Make and decorate with Indian designs, two of the following articles: tom-tom, bow and arrows, quiver, lance, belt, war bonnet, or totem pole.
3. Construct a model of an Indian dwelling such as a tepee.
4. Give the history of an Indian tribe that once lived near your home. Explain as much as possible about their customs and habits.
5. Demonstrate three Indian games.
6. Visit a museum containing Indian relics, or visit an Indian reservation, and make a report of your trip.

LEATHERCRAFT AWARD



1. Collect samples of various kinds of leather, such as: horsehide, pigskin, cowhide, calfskin, etc. Explain what characteristics each hide has and the best uses for each.
2. Make two or more articles from leather that involve one of the following: transferring of patterns, cutting, sewing, punching holes, or lacing.
3. Take a piece of leather and decorate it by one of the

following: carving, burning, stamping, tooling, painting, or beading.

4. Demonstrate your ability to clean, waterproof, and care for some leather apparel.
5. Repair one damaged leather article, such as a suitcase, handbag, or pair of shoes.
6. Investigate and explain what types of jobs are available in your community in the leather industry. Choose one particular job that you are interested in and explain what the qualifications are for it.
7. List five Scripture passages referring to leathercraft.



LIFESAVING AWARD

Earn the Red Cross Advanced Lifesaving Certificate.



MODEL ROCKETRY AWARD

1. Memorize Estes Model Rocketry Safety Code.
2. Explain the procedure for rocketry countdown.
3. Explain what the numbering and lettering on a rocket engine means.
4. Build a skill level one rocket, a skill level two rocket, and a skill level three rocket.
5. Fly a rocket for at least three flights.
6. Write a 200-word essay on the flight of a rocket from the time it is on the launchpad.
7. Make or purchase an allescope and explain and show how it works.
8. Draw a design of a rocket and build it.
9. Read at least two books on the history and design of rockets.
10. Give three Scripture references on outer space.

MOTORBOATING



Successfully complete the American Red Cross Motorboating Course.

MUSIC AWARD



1. Sing as a soloist or in a group such as a quartet or choir, or play a musical instrument as a soloist or in a group such as a band or orchestra for a period of at least six months.
2. Read music from a church hymnal; explain all musical signs.
3. Identify 10 musical instruments by sound.
4. Demonstrate your ability to lead in a song service or direct an orchestra, using proper conducting patterns.
5. Select 10 of your favorite hymns or gospel songs and give the story of how each came to be written.
6. Give three Scripture references regarding singing or musical instruments.

NATURE STUDY AWARD



1. Select for study one typical wildlife community (forest, prairie, marsh, desert, mountaintop, etc.) near your home. Take a hike, making notes on trees, plants, animals, birds, insects, etc., that you see. Explain how to identify each of these.
2. Be able to locate the Big Dipper, Little Dipper, the North Star, and one other constellation. Explain the legend about one of the constellations.

3. Make an indoor desert garden or woodland terrarium, using five plants, or make an aquarium and keep three species of fish in it.

4. Do any 10 of the following:

a. Collect and identify leaves from 10 kinds of trees or plants in deserts, such as: cactus, yucca, etc.

b. Collect and identify a sample of the seed or fruit of 10 kinds of trees.

c. Collect and identify a sample of six kinds of wood.

d. Catch and identify three kinds of fish.

e. Be able to name and identify five types of frogs or five kinds of reptiles, either alive or by using pictures.

f. Take a bird hike and count the number of birds you see and hear and the nests you see.

g. Recognize in the field five signs of wild animal species (tracks, dens, sight, etc.).

h. Make a collection of 20 bird pictures. Be able to identify each bird.

i. Make a collection of 10 kinds of insects and mount them.

j. Make a collection of at least seven varieties of flies and identify them.

k. Make a collection of seven kinds of seashells.

l. Make a collection of 10 kinds of flowers.

m. Describe how to recognize three kinds of poisonous plants such as: poison oak, poison ivy, etc.

5. Know the conservation pledge and show that you understand it.

6. Explain what you can do to aid in conservation.

7. List three Bible verses showing God's concern for the things of nature.

PATHFINDER AWARD



1. Describe two types of compasses. Know the sixteen points of the compass; you should be able to express each point in terms of degrees.
2. Know the meaning of the following terms: magnetic north, true north, and magnetic variation.
3. Demonstrate your ability to find directions, using the face of a watch and by using stars.
4. Sketch a map of an area, one mile square, where you have hiked or camped, indicating landmarks (using proper symbols), contours, and compass direction.
5. Take part in at least three orientating races or exercises, demonstrating your ability to use a compass and maps efficiently.
6. Obtain a topographic map for your area and become acquainted with its symbols, contours, etc.
7. Using compass and map, take a cross-country hike of at least five miles.
8. Give three Scripture references regarding symbols used on a map, such as: rivers, mountains, trees, highways, cities. etc.

PHOTOGRAPHY AWARD



1. Submit 25 black and white photographs, 20 color transparencies, or two 50-foot reels of movie film taken by yourself. List the type of camera used, lens setting, time taken, and where taken. Picture must be acceptable.
2. Explain the principle of photography. Explain what happens to film inside the camera and in the darkroom.

3. Identify the following camera parts: viewfinder, speed adjustment, shutter release, focus adjustment, film wind, and rewind knobs. Explain the purpose of each.
4. Explain the purpose of the following items: flash bulbs, exposure meter, telephoto lens, filters, and tripod.
5. Set up a darkroom and develop and print a roll of black and white film you have taken yourself.
6. Investigate the opportunities open for a career in some aspect of photography. Make a report of your findings.



PHYSICAL FITNESS AWARD

1. Demonstrate your understanding of physical health by answering the questions asked by your Commander on the following:
 - a. Importance of being fit.
 - b. Basic foods needed in your daily diet.
 - c. The importance of cleanliness in the control of illness.
 - d. The need for sanitary control of water.
 - e. The effects of tobacco and alcohol on good health.
2. Present a list of your personal health habits including:
 - a. Number of hours of sleep.
 - b. Care of skin, hands, and fingernails.
 - c. Care of teeth.
3. Demonstrate five exercises suitable for all-round physical development. Do each of these daily for a period of not less than eight weeks.

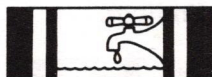
4. Demonstrate your ability to meet the following physical fitness tests after training for each.

	<i>Age 15-17</i>
Push-ups	17
Pull-ups	7
Sit-ups	45

5. Take a hike of at least 5 miles.

6. Give three Scripture references to physical exercise such as: walking, running, wrestling, etc.

PLUMBING AWARD



1. Obtain from your local library or purchase a book on simple plumbing and read it.

2. Draw a diagram of the plumbing in your bathroom showing the route of hot and cold water to the tub, shower, sink, and commode from the water meter of your home.

3. Tell how you would make the water system in your home safe from freezing.

4. Draw a diagram of the drainage system in your home and explain how it works.

5. Show how to use six different plumbers tools.

6. Identify and explain the purpose of the following: washer, cup nut, elbow, nipple, plug, union, drain pipe, pipe vent, float, flux, and tee.

7. Do two of the following:

a. Cut and thread two pieces of copper tubing.

b. Clean out a lavatory trap.

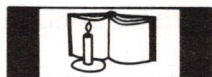
c. Replace a washer in a faucet.

d. Replace a float in a commode.

e. Locate your water meter and explain how to turn it off and on.

8. Demonstrate how to join two plastic pipes together.

9. Explain eight important local health regulations related to plumbing.



READING AWARD

1. Read 20 books in the next 12 months (other than school-related texts): 5 books should be RR/campcraft related, 3 biographical, 3 fictional, 3 in the area of arts/science, 3 religious, and 3 electives. Write a brief review of each book. Keep a log of your reading time.

2. Visit your local library and learn how to use the catalog files and locate materials on the library shelves. Have your librarian certify your knowledge of the use of the catalog system.

3. Keep a scrapbook on current events for 6 months. Use materials from magazines, newsletters, newspapers, etc.

4. List the books you have in your own personal library. Explain how you plan to develop a more complete library for your home.

5. Subscribe for 1 year to a magazine of your choice.

6. Explain how to develop good reading habits.

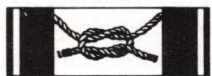


RIFLE MARKSMANSHIP

1. Qualify for the National Rifle Association Junior Sharpshooter Award.

2. Explain and observe the safety rules for using a rifle on a shooting range or a field.

3. Explain and observe the laws of your state concerning the use of firearms.



ROPECRAFT AWARD

1. Explain the history of rope.

2. Explain six kinds of ropes, their value and purpose.
3. Explain how to care for ropes.
4. Learn six additional knots other than those listed in your Rangers book.
5. Make a rope machine and manufacture a 6-foot length of rope, $\frac{1}{4}$ -inch thick.
6. Demonstrate your skills in these:
 - a. Short splice
 - b. Eye splice
 - c. Return splice
 - d. Square lashing
 - e. Diagonal lashing
 - f. Sheer lashing
 - g. Continuous lashing
7. Construct one of the following:
 - a. Rope bridge
 - b. Tower
 - c. Table, etc.



SAFETY AWARD

1. Demonstrate how you would make yourself visible on a nighttime hike. What precautions would you take on such a hike?
2. Make a safety inspection of your home. List any conditions that may prove dangerous. Talk to your parents about these hazards. Explain what measures were taken to remedy these hazards.
3. Plan with your family what procedures you would follow in the event of a fire, tornado, or accident in your home. Make a list of these. What preparations can your family take to prepare themselves for such emergencies?
4. Explain and demonstrate the proper safety procedures for riding a bike on a public road. What safety equipment should you have on your bike? List these.
5. Demonstrate the proper safety procedures for using an ax, knife, saw, and other hand tools.

6. Demonstrate how to handle firearms safely and how to store them safely.

7. What safety precautions should be taken in a swimming area?

8. Explain what safety precautions should be taken before venturing out in a small watercraft.

9. Make a safety inspection (under adult supervision) of the family car. Check such things as: lights, turn signals, wiper blades, tires, brakes, exhaust, emergency lights, etc. List any conditions that may prove to be hazardous. Talk to your parents about how these conditions can be remedied. List some of the safety equipment that should be carried in the family car during a winter trip.

10. What safety precautions should you take when using power tools such as a lawn mower, lawn edger, electric hedge clippers, etc.? Demonstrate safely the proper use of a lawn mower (under adult supervision).



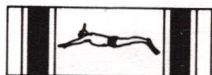
SAILING AWARD

Earn the Red Cross Sailing Certificate, or meet the following:

1. Write a 500-word essay on the history of sailing.
2. List five types of sailboats and briefly describe them.
3. Name and describe five types of sails.
4. Name the main parts of the riggings and sails and explain their use.
5. Name the main parts of a sailboat and explain the function of each.
6. List the required and recommended equipment for day and night sailing.
7. Explain what the Federal Rules of the Road are in detail.
8. With the aid of another person, properly do the following:

- a. Rig a sailboat.
 - b. Get underway from a dock or mooring.
 - c. Set sails.
 - d. Beating, reaching, running, jibe.
 - e. Upright a capsized sailboat.
 - f. Anchor.
 - g. Dock landing and a mooring.
 - h. Furl and stow sails.
9. Demonstrate your ability to tie the following:
- | | |
|------------------------------------|---------------------|
| a. Figure eight knot | f. Fisherman's bend |
| b. Slipped reef knot | g. Rolling hitch |
| c. Sheet bend | h. Short splice |
| d. Bowline | i. Eye splice |
| e. Round turn and two half hitches | j. Long splice |

SCUBA DIVING AWARD



Earn your basic Scuba Diving Certificate from one of the following:

- a. Professional Association of Diving Instructors (PADI)
- b. YMCA
- c. National Association of Underwater Instructors (NAUI)
- d. National Association of Scuba Diving Stores (NASDS)

SIGN LANGUAGE AWARD

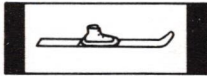


1. Complete a beginner sign language course or learn 800 words in sign language. (Sign language books may be purchased from Gospel Publishing House.)

2. Speak to a deaf person about Christ, using the following Scripture passages: Romans 3:23; Romans 6:23; John 1:12; and Revelation 3:20.

3. Read a book regarding deaf people.

4. Visit and speak to a deaf individual.



SKIING AWARD

1. Demonstrate your ability to do the following:
 - a. Turning skills: step turns, kick turns to the right and left, jump turns to the right and left.
 - b. Climbing skills: herringbone, side step, and diagonal step.
 - c. Stopping skills: snowplow, braking, and christiana turn.
2. Explain the proper care and storage of ski equipment.
3. Demonstrate your ability to fall and get up again on a set of skis.
4. Explain the difference between slalom and cross-country skiing. How do the techniques and equipment differ?
5. Run a slalom course or take a 5-mile cross-country ski trip.
6. Present yourself properly dressed and equipped for a day of skiing.
7. Demonstrate the proper use of ski poles.

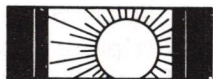


SKIN DIVING AWARD

Earn your basic skin diving certificate from one of the following:

1. Professional Association of Diving Instructors
2. YMCA
3. National Association of Underwater Instructors

SOLAR SCIENCE AWARD



1. Read three books on solar energy.
2. Write an essay of 200 words or more on the value of solar energy.
3. Explain in detail what solar energy is.
4. Build two of the following:
 - a. Solar still
 - b. Solar furnace
 - c. Solar water heater
 - d. Sun-powered radio
 - e. Any other solar energy project.
5. Read the book *Solar Science Projects for a Cleaner Environment* by D. S. Halancy Jr.

SPACE EXPLORATION AWARD



1. List all manned space flights from 1961 to 1969. Include:
 - a. The crew members' names
 - b. The project name
 - c. The date of launch
 - d. On project Mercury give the names of the capsules
 - e. Collect patches, if possible
2. Give the name of the first astronaut to fly in space, the date of his flight, and the name of the project.
3. Explain why the space shuttles of the U.S. were built.
4. Give seven uses of the space shuttles.
5. Name the oldest man to fly in space, giving his age at time of flight.
6. Give the name of the first U.S. woman to fly in space.

7. Write a 500-word report on one manned space flight of your choice.
8. Give the name of the first satellite in space.
9. Pick a planet. Make a report consisting of a map, photos of the planet, rate of spin or rotation, time of revolutions, number of moons and any other information you can find. (Do not use Earth.)
10. Submit basic information about all nine planets including a map of their position around the sun.
11. Submit copies of at least five photos taken by the Apollo Eleven crew.
12. Who was the first astronaut in the Bible? Give Scripture reference.



SWIMMING AWARD

Successfully complete the Red Cross Beginner Swimmer or the Y.M.C.A. Minnow Club requirements.



TOOLCRAFT AWARD

1. Ax
 - a. Name the parts of an ax.
 - b. Name the different types of axes.
 - c. Explain the proper way of passing an ax and other safety factors.
 - d. Demonstrate how to sharpen an ax.
 - e. Demonstrate the proper use of a handax and a longhandle ax.
 - f. Replace a handle in an ax.
2. Knife
 - a. Name the parts of a knife.

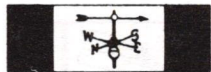
- b. Describe five different types of knives and their purpose.
 - c. Explain the safety factors in using and passing a knife.
 - d. Demonstrate how to sharpen a knife.
3. Camp Saws
- a. Name the parts of a saw.
 - b. Name five types of saws.
 - c. Explain the difference in saw teeth and the purpose for each difference.
 - d. Explain the safety precautions in using a saw.
 - e. Properly sharpen a camp saw.
 - f. Demonstrate your ability in using a camp saw.

WATER SAFETY INSTRUCTOR AWARD



Earn the Red Cross Water Safety Instructor Certificate.

WEATHER AWARD



1. Explain the cause of fog, clouds, dew, rain, snow, sleet, and hail.
2. Describe the following clouds: cirrus, stratus, cumulus, nimbus.
3. Explain the cause of the following: rainbows, mirages, northern lights, lightning, and thunder.
4. Demonstrate your ability to read a thermometer, barometer, and rain gauge. Explain the importance of pressure and temperature in determining weather conditions.
5. Keep a daily record of the weather for two months. It should include dew or frost, wind direction, tem-

perature, kind of clouds, rain, snow (if any), and time of sunrise and sunset.

6. Explain what precautions should be taken if a tornado or a hurricane is expected. Name the places where the danger of lightning is greatest during a severe thunderstorm.

7. Visit a weather bureau and make a report of your trip.

8. Give three Scripture references regarding the weather such as: rainbows, lightning, storms, etc.



WILDERNESS SURVIVAL AWARD

1. Demonstrate your ability to build a fire without matches.

2. Cook a meal of at least three different items without using cooking utensils.

3. Build an overnight shelter and a ground bed, using native materials, and use them for one night.

4. Demonstrate your ability to construct from native materials two of the following items. Each item must work properly and be usable.

a. A snare for small animals.

b. A fishhook.

c. A frog or fish spear.

5. Submit a list of 10 edible wild greens and explain how they should be prepared for eating.

6. Submit a list of five edible roots and explain how they should be prepared for eating.

7. Submit a list of 10 small animals that may be used for emergency food.

8. With a friend or group go on a survival camping trip of at least one day and one night. You should build your shelter and bed from native materials, eat

only food you have found or caught on the field, and cook your food without the aid of utensils.

9. Place yourself into the following three imaginary situations.

- a. Lost in a wooded, mountainous, wilderness area.
- b. The only survivor of a plane crash in a cold snow-covered area.
- c. Stranded in a jeep in a hot, dry desert.

Assuming you have only a pocketknife and it will be three days before you are rescued, make a list of the things you should do in order to survive. This list must be realistic and based on survival knowledge and technique.

10. Know how to give the proper distress signals, using fire, smoke, flashlight, mirror, gun, etc. Explain three ways you can find directions on a cloudy day without using a compass.

WILDLIFE AWARD

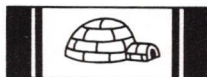


1. Make four field trips to observe wildlife. Keep a record of the trips, listing animals seen, date, place, and type of habitat.

2. Do one of the following:

- a. Visit a game refuge and make a report of your trip.
- b. Visit a game farm or fish hatchery and make a report of your trip.
- c. Make a plaster cast of two sets of animal tracks and display them.

- d. Photograph two wild animals in their natural habitat.
3. Visit a zoo or museum to observe as many wild animals as possible. Submit a list of these animals.
4. Be able to recognize from photos or drawings at least 30 mammals native to North America.
5. Make a study of four wild animals native to your state. Submit a notebook, including the following: a photo or drawing of the animal, a sketch of its tracks, area where found, food it eats, value of animal such as for food, fur, etc.
6. Give the conservation pledge and explain what you can do to help protect wildlife.
7. Give three Scripture references about three different animals.



WINTER CAMPING AWARD

1. Explain the advantages and disadvantages of the following shelters: Snow trench, "A" frame, Snow cave, and Lean-to.
2. Construct one of the above shelters and sleep in it for two nights during the cold winter months (under adult supervision).
3. Explain what hypothermia is, its symptoms, and first-aid treatment for it.
4. Explain what frostbite is. What is the treatment for first-, second-, and third-degree frostbite? How do you prevent frostbite?
5. What is trenchfoot? How do you prevent trenchfoot?
6. What is snowblindness? What is the treatment for snowblindness? How can you prevent snowblindness?
7. Explain how to give the proper distress signals using: fire, smoke, a flashlight, a mirror, or gunshots in snow conditions.

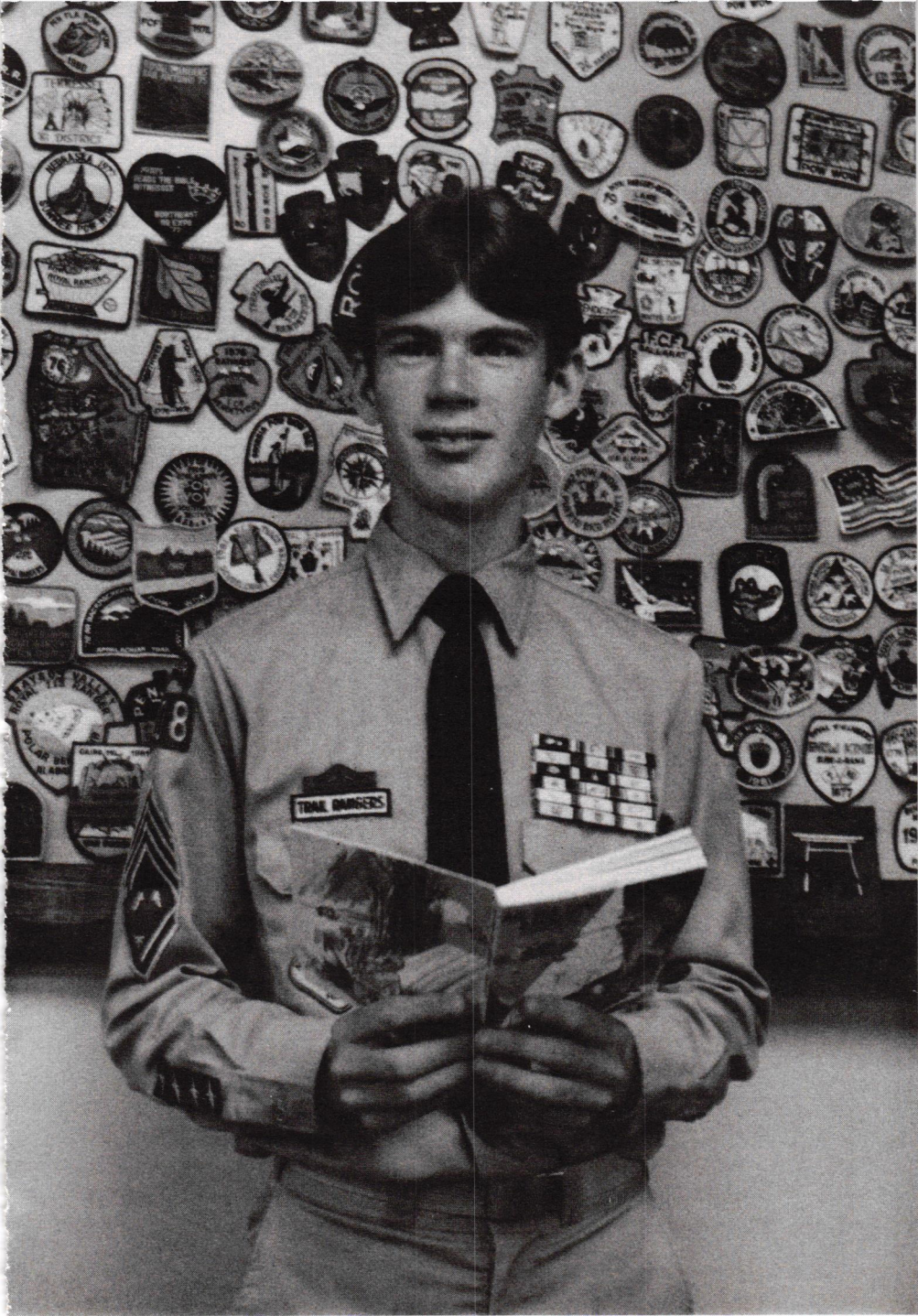
8. List and make up an emergency survival kit you would carry with you in the family car during a winter trip.

9. Demonstrate your ability to light a fire without matches.

10. Explain how to obtain drinking water in the following ways: from snow, ice, a frozen river, and a solar still.

11. Demonstrate your ability to make and set four different small animal snares. List five possible sources of food that can be obtained through the use of a snare.

12. List what clothing you would need for a winter outing. Take into consideration: snow, sleet, and rain in a cold winter environment.



PART VIII

**THE GOLD MEDAL
OF ACHIEVEMENT**

THE ROYAL RANGER

GOLD MEDAL OF ACHIEVEMENT

After earning The Highest Rating in either the Sea Rangers, Air Rangers, or Trail Rangers you may earn the top award of the Royal Ranger program, The Gold Medal of Achievement.

The following three requirements are necessary to earn this award.

1. Read the *Royal Rangers Leader's Manual*.
2. A Statement from your commander that you qualify for the award and a list of the advanced awards you have earned.
3. Write a 500-word theme on the subject, "The Value of Royal Rangers." The subject should include the most important benefits you have received in being a Royal Ranger; also, what you believe this program would do for other boys. (This theme, along with the statement from your commander, is sent to the district commander for his approval.)
4. Be a minimum of 14 years old.

Upon earning the Gold Medal of Achievement, you will also be commissioned to the rank of Junior Commander in your outpost and have the privilege of wearing the Junior Commander bars. You may hold this rank until you are 18. Then you will have the opportunity of becoming a Lieutenant Commander.



LEFT POCKET



JUNIOR COMMANDER INSIGNIA

**REQUIRED ADVANCED AWARDS FOR THE
GOLD MEDAL OF ACHIEVEMENT**

AIR RANGERS

Bible Award
 Church Award
 Aviation Award
 Weather Award
 Pathfinder Award
 Physical Fitness Award
 Survival Award
 Christian Service Award
 Astronomy Award
 Citizenship Award
 First Aid Award
 Eight Elective Awards

SEA RANGERS

Bible Award
 Church Award
 Boating Award
 Weather Award
 Pathfinder Award
 Physical Fitness Award
 Survival Award
 Christian Service Award
 Swimming Award
 Citizenship Award
 First Aid Award
 Eight Elective Awards

TRAIL RANGERS

Bible Award
 Church Award
 Camping Award
 Weather Award
 Pathfinder Award
 Physical Fitness Award
 Survival Award
 Christian Service Award
 Nature Study Award
 Citizenship Award
 First Aid Award
 Wildlife Award
 Seven Elective Awards

Note: You must be a minimum of 14 years old.

ADDITIONAL AWARDS

GOLD BUFFALO

Royal Rangers who have earned the Gold Medal of Achievement may obtain additional recognition by earning the Gold Buffalo.

The Gold Buffalo is awarded for earning six (6) additional Advanced Awards of your choice beyond the Gold Medal of Achievement.

The Gold Buffalo is worn centered on the ribbon of the Gold Medal of Achievement.

SILVER BUFFALO

The Silver Buffalo is awarded for the earning of seven (7) additional Advanced Awards of your choice beyond the Gold Buffalo.

The Silver Buffalo is worn just above the Gold Buffalo on the ribbon of the Gold Medal of Achievement.

THE GOLD WING AWARD

The Gold Wing Award is for men and boys who have earned their F.A.A. private pilot certificate.

The Gold Wing Award is worn $\frac{1}{2}$ inch centered above the left pocket or $\frac{1}{2}$ inch above the Advanced Awards. If the Gold Wing Award is worn by adult leaders, the Leadership Training Course Award Pins will not be worn.

JUNIOR LEADERSHIP TRAINING CAMP

The Junior Leadership Training Camp patch may be earned by completing the requirements at a Junior

Leadership Training Camp. The Junior Leadership Training Camp patch is worn centered on the left pocket.

JUNIOR LEADERSHIP TRAINING TRAILS

The Junior Leadership Training Trails patch may be earned by completing the requirements at a Junior Leadership Training Trails. The Junior Leadership Training Trails patch is worn centered on the left pocket. See your district commander concerning the next JLTT.

THE STANDARD LEADERSHIP TRAINING COURSE

The Leadership Training Course may be taken by those boys who have earned the Gold Medal of Achievement. The Leadership Training Course pins and Leader's Medal of Achievement may not be worn, however, until one's 18th birthday.

BUCKAROO/STRAIGHT ARROW LEADERSHIP TRAINING COURSE

The Buckaroo/Straight Arrow Leadership Training Course may be taken by those boys who have earned the Gold Medal of Achievement. The Buckaroo/Straight Arrow Leadership Training Course pins and the Buckaroo/Straight Arrow Leader's Medal of Achievement may not be worn, however, until one's 18th birthday.

NATIONAL TRAINING CAMP

Gold Medal Achievers may attend National Training Camp providing they are 17½ years old.

BUCKAROO/STRAIGHT ARROW TRAINING CONFERENCE

Gold Medal Achievers may attend the Buckaroo/Straight Arrow Training Conference providing they are 17½ years old.

GOD AND COUNTRY PROGRAM

This program which helps the church's ministry with its youth was developed by a commission from a majority of Protestant churches in America. Design and outlines are comparable with age-level comprehension. Awards are given for program completion.

GOD AND CHURCH

This program for ages 11-14 provides an opportunity to get to know the pastor and counselor more intimately. It helps them understand their church's structure, objectives, and mission. The God and Church Award may be earned by completing the requirements. The God and Church Counselor Packet and Student Packet may be purchased from the Gospel Publishing House. The God and Church Medal may be worn on the left pocket.

GOD AND LIFE

This program for ages 15-20 offers guidance exercises for students wanting to increase their faith, make responsible vocational choices, and find identity in family, church, and country. The God and Life Award may be earned by completing the requirements. This award is worn on the left pocket of your uniform. Counselor and student packets for this award are available from the Gospel Publishing House.

NOTE: When wearing the Gold Medal of Achievement, the God and Country Awards are worn on the left pocket to the right of the Gold Medal of Achievement.

ADDITIONAL RECOGNITION

CUT AND CHOP CARD

The Cut and Chop Card may be earned by completing the Cut and Chop requirements. See your outpost commander concerning this recognition. Cut and Chop Cards may be purchased through the Gospel Publishing House.

TRAPPER'S BRIGADE AWARDS

Frontiersmen Camping Fraternity members may earn the following awards: Company Trapper, Bourgeois, Free Trapper, and Free Trapper year pins. These awards are earned by being involved in various approved types of Christian Service Projects. Requirements for the various awards may be found in the *Frontiersmen Camping Fraternity Handbook*.

BLACK POWDER SHOOTERS CARD

The Frontiersmen Camping Fraternity Black Powder Shooters Card may be earned by demonstrating your ability to load and fire a muzzle-loading rifle in a safe manner. Requirements may be found in the *FCF Handbook*. See your district FCF president or representative for qualifying.

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MEDAL OF VALOR

The Medal of Valor is given to those who save the life of an individual at the risk of their own lives. The Medal of Valor is worn on the left pocket.

CERTIFICATE OF VALOR

The Certificate of Valor is given to those who save an individual's life at no risk to their own lives.

CHAPLAIN'S AIDE

A boy may be appointed to help the outpost chaplain in specific assignments. These responsibilities will be assigned by the outpost commander. A navy blue name tab with white lettering may be worn on the flap of the right pocket of the uniform. The first line should give the person's name; the second line should indicate the title "Chaplain's Aide." The tab should be 3" x $\frac{3}{4}$ ".

CHI OMEGA RHO

The purpose of Chi Omega Rho is to provide a means for college-age students to be involved in the Royal Rangers ministry while in college. Check to see if your college has a chapter. If not, contact the national Royal Rangers office for details and information. A unique Chi Omega Rho patch is worn on the RR uniform. Chi Omega Rho patches may be ordered from the Gospel Publishing House.

NOTES

The first part of the paper is devoted to a study of the properties of the function $f(x)$ defined by the equation $f(x) = x + f(x^2)$. It is shown that $f(x)$ is a continuous function on the interval $[0, 1]$ and that it is strictly increasing. The function $f(x)$ is also shown to be concave down on the interval $[0, 1]$.

In the second part of the paper, the function $f(x)$ is extended to the interval $(1, \infty)$. It is shown that $f(x)$ is a continuous function on the interval $(1, \infty)$ and that it is strictly increasing. The function $f(x)$ is also shown to be concave down on the interval $(1, \infty)$.

The final part of the paper is devoted to a study of the function $f(x)$ on the interval $(-\infty, 0)$. It is shown that $f(x)$ is a continuous function on the interval $(-\infty, 0)$ and that it is strictly increasing. The function $f(x)$ is also shown to be concave down on the interval $(-\infty, 0)$.

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