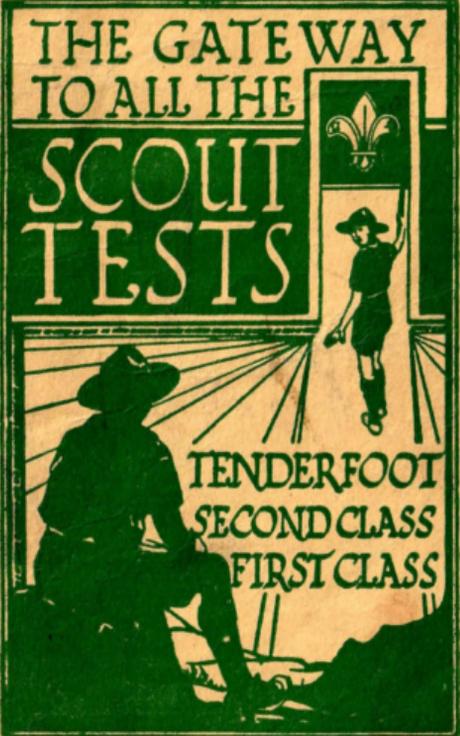


Completely revised in accordance with the Regulations
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The Gateway to all the Scout Tests

BY
A. V. BROOK
AND
W. HAMBLIN

Past Scouters of the 3rd Altrincham (Grammar School) Group



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THE SCOUT LAW.

- (1) A Scout's honour is to be trusted.
- (2) A Scout is loyal to the Queen, his Country, his Scouters, his Parents, his Employers, and to those under him.
- (3) A Scout's duty is to be useful, and to help others.
- (4) A Scout is a friend to all, and a brother to every other Scout, no matter to what country, class, or creed the other belongs.
- (5) A Scout is courteous.
- (6) A Scout is a friend to animals.
- (7) A Scout obeys orders of his Parents, Patrol Leader, or Scoutmaster, without question.
- (8) A Scout smiles and whistles under all difficulties.
- (9) A Scout is thrifty.
- (10) A Scout is clean in thought, word, and deed.

THE SCOUT PROMISE.

On my honour I promise that I will do my best:

- (1) To do my duty to God, and the Queen.
- (2) To help other people at all times.
- (3) To obey the Scout Law.

THE GATEWAY TO TENDERFOOT TESTS

Before being invested, the boy must be told of the adventurous life and achievements of the Founder, and something of the history of the Movement, and he must satisfy his Scoutmaster in the following tests:—

1. Scout Law and Promise.
2. Salute.
3. Union Flag.
4. Cleaning and Dressing a Wound.
5. Woodcraft Signs.
6. Knots.
7. Whipping.

"Before being invested as a Scout, the boy must be told of the adventurous life and achievements of the Founder, and something of the history of the Movement."

LORD BADEN POWELL OF GILWELL.

1857-1941

He had indeed an adventurous life, or rather two lives.

Life Number One.—After leaving school, he became a young officer in the Army and gained rapid promotion. In this life there was the romance of seeing strange lands, through serving in India, Afghanistan, South Africa, West Africa and Egypt. He commanded that grand lot of men and women who held Mafeking in the Boer War, and organised the South African Constabulary for the settlement of the country after the campaign. At the early age of forty-two he found himself a Major-General.

Life Number Two.—After the age of fifty-one he began what appeared to be an altogether new life. He brought up the vast family of Boy Scouts and Girl Guides which then came into being. He had the remarkable experience of seeing the movement grow from the tiny acorn of twenty-five boys encamped on Brownsea Island into a Brotherhood and Sisterhood which embraces almost the whole world.

Such is the brief outline of his career. To know more about it, we advise you to get a copy of "Scouting for Boys", written by our Founder. No Scout should be without his copy of the "Boys' Edition" a grand book, and cheap (only 2s. 6d., nearly 200 pages). As Lord Somers, the late Chief Scout of the British Empire, says in the Introduction: "Don't read it straight through; take it yarn by yarn, and then try to do some of the things suggested." When you have reached the end you will realise that "B.-P." was a Scout from his earliest years and that his success in Scouting gave him his

chief title to fame in the Army, long before he started our Movement. Scouting was the connecting link between his two lives.

Something about the History of Scouting.

In 1907, "B.-P." held a Scout Camp on Brownsea Island and in the following year published "Scouting for Boys." Within the next ten years Girl Guides, Wolf Cubs and Rover Scouts started, and Scout Rallies were held in the chief cities of Great Britain.

In 1920 came the first of many World Jamborees and International Conferences, and "B.-P." was acclaimed Chief Scout of the World. In the next ten years he visited India, Canada, U.S.A. and South Africa. Imperial Headquarters was opened and Gilwell Park was presented to the Movement for the Woodcraft training of Scouters.

In 1931 occurred the First Rover Moot, in Switzerland, and "B.-P." visited Australia and New Zealand. In the next ten years he repeated his visits to India, Canada and S. Africa. Great liners were chartered to take Scouts to the Baltic and Mediterranean. The woodcraft and camping side of Scouting expanded. Air Scouts started.

In 1941 (8th January) "B.-P." died in Kenya, after a life of wonderful service to his fellow-men.

An excellent picture biography is: "B.-P.'s Life in Pictures," told by Roy Burnham, 4/- (Post 7d.), published by the Boy Scouts Association.

After the death of Lord Somers in 1944, Lord Rowallan became "Chief Scout of the British Commonwealth and Empire."

On 22nd February, 1957, the centenary of the Founder's birth was celebrated.

(A brief résumé of the Movement is: *Your Movement*, published by the Boy Scouts Association, 1/-, postage 3d.

TEST NO. 1: SCOUT LAW AND PROMISE.

"Know the Scout Law and Promise and their meanings, in accordance with his age."

The Scout Law and the Scout Promise, as being so very important, are given you on the first reading page of this book (page 4). They are short so that you may easily learn them off by heart. This, however, is not enough. Behind each of the points of the Law lies a great depth of meaning, which should be explained to you by one who has been trying to model his life on them. This is a much better way of learning to understand the Law than by reading its meaning in a book—though, if this is the only way possible, you will find it clearly explained in "Scouting for Boys" (pages 17-19).

In your Scout Promise you undertake that you will *do your best* to achieve three things. Do not expect always to succeed, you will sometimes fail. But you promise that, when you fail, you will try again—and try harder than before.

TEST No. 2: THE SCOUT SALUTE.

"Know the Salute, as given in Camp Fire Yarn 3 of 'Scouting for Boys.'"

The Scout Salute.

If not carrying a staff, a Scout salutes with his right-hand (Fig. 1), whether with or without a hat. The three fingers remind him of the three parts of his Scout Promise.

If carrying a staff, a Scout salutes as in Fig. 2, when standing at the "alert": as in Fig. 3, when marching.

When both hands are occupied salute by turning eyes smartly to right or left.

Scouts always salute at hoisting of Union Jack; at playing of National Anthem; at the passing of a funeral—whether in uniform or not.

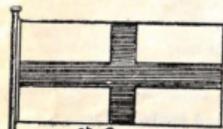


The left hand is used by a Scout when shaking hands with other Scouts.

Some interesting facts about the history of saluting are given in Camp Fire Yarn No. 3.

TEST No. 3: UNION FLAG.

"Know the composition of the Union Flag, and how to hoist, break and fly it."



St. George.



St. Andrew.



St. Patrick.



Union Jack.

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The Union Flag is made up of the old national flags of the three former kingdoms of England, Scotland and Ireland.

In 1606, King James VI of Scotland, who was also King James I of England, added to the flag of Scotland (which was a *blue flag with the white diagonal cross of St. Andrew*) the flag of England (which was a *white flag with the red cross of St. George*). This was the first British Union Flag.

In 1801 there was added to this Union Flag a *red diagonal cross on a white ground* to represent Ireland, since St. Patrick's Cross was too much like St. Andrew's to serve. Thus was formed the Union Flag of Great Britain and Ireland—now the flag of Great Britain and Northern Ireland, and also of the whole British Commonwealth.

How to fly the Union Flag.

It is all a matter of having the *broad white band at the top*. Your instructor, from the diagram, will show you what this means. If you have the flag wrong way up, you are flying a signal of distress. If the flag is at half-mast, it is a sign of death or of mourning.

How to hoist and break the Flag.

This is shown by the diagram.

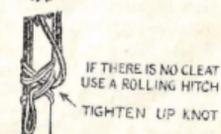
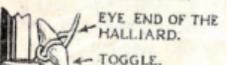
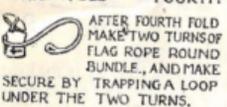
TEST No. 4: CLEANING AND DRESSING A WOUND.

"Clean a wound, and make and apply a dressing."

Notice that at this stage you are not required to know how to stop bleeding but to get the dirt off a wound *Have your own hands clean!* Even then, don't touch the wound with your fingers. Wash outwards from the wound with a clean piece of cotton wool or lint and clean water containing antiseptic (e.g. Condy's Fluid). Cover wound with clean boracic lint (woolly side out), then bandage.

The Gateway to all Scout Tests 11

HOW TO BREAK AND FLY THE UNION FLAG



READY TO BREAK

THE FLAG HAS BEEN HOISTED BY PULLING ON THE HALLIARD ATTACHED TO THE TOGGLE

TO BREAK—

PULL ON THE END OF THE HALLIARD ATTACHED TO EYE OF THE FLAG ROPE

MAKE SECURE THE HALLIARD TO CLEAT

IF THERE IS NO CLEAT USE A ROLLING HITCH TIGHTEN UP KNOT

READY TO HOIST

TEST No. 5: WOODCRAFT SIGNS.

"Make the Woodcraft Signs given in Camp Fire Yarn 4 of 'Scouting for Boys'."

A Scout needs signs by which he can make clear to others the road or track along which he is travelling.



He can put a small stone on top of a big one (Figure 1). He can tie a clump of grass or reeds into a knot (Fig. 2). He can fix a stick upright in the ground (Fig. 3). All these signs mean, "This is the way."



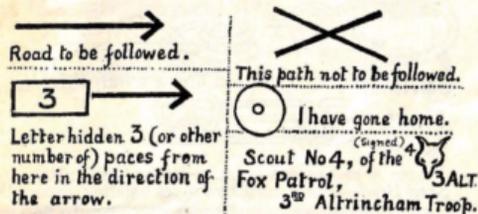
Then the Scout may wish to show that he is making a turning. If his message is, "I am turning to the right," he can put a small stone on the right of a big one (Fig. 4). He can slope a stick towards the right (Fig. 5), or bend a stick fixed in the ground (Fig. 6). He may find a clump of reeds long enough to be tied and twisted in the direction required (Fig. 7). Finally, an arrowhead to point out the turn may be made with twigs or pebbles (Figs. 8 and 9).

To pass this test you will not, of course, draw these woodcraft signs but demonstrate them with materials. It is a good way of learning them—and also good fun—to lay a trail with them, for a friend to follow, over

a short stretch of open country (not laying the signs too close to one another!), and then let him do the same for you.

There are also signs which can be scratched on the ground, and these are illustrated below. Others of the same kind can be devised, such as an arrow with parallel zig-zag lines behind it, which means, "This way to water."

You should try to avoid making these signs on a wall fence, etc. If it is really necessary, then put them close to the right-hand side of the road.



TEST No. 6: KNOTS.

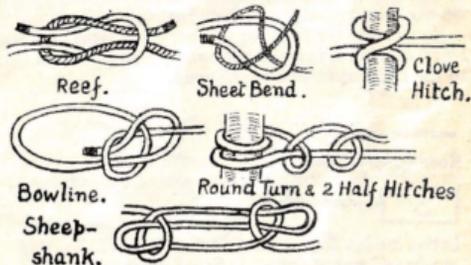
"Demonstrate with rope how to tie the following knots: reef, sheetbend, clove hitch, bowline, round turn and two half hitches, sheepshank, and explain their uses.

How to pass this test properly:

(1) Use proper rope, not bits of string. (2) Do not learn the knots from diagrams but, as B.-P. says, from "a fellow who knows." (3) Practise the actual uses of each knot; for instance, when doing the sheepshank, make fast the ends of the rope. (4) Practise often—knots are very easily forgotten.

Uses of the Scout Knots.

Reef.—For joining ends of two ropes. Used in all "first-aid" knots. Useful for parcel-tying since it can be drawn up quite tight to the parcel.



Sheet Bend.—For joining two ropes together, especially ropes of different sizes, and ropes which are to become wet. Easily made, easily untied, never draws tight. Take care to tie the thinner rope on to the thicker and not *vice versa*.

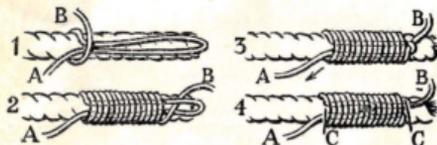
Clove Hitch.—For fastening a rope to a pole, for mooring ships, for scaffolding, and all kinds of rigging work. For starting and finishing a lashing. A rope attached to a vertical spar with this knot and pulled tight will not slip up or down. Practise in two ways: (a) when the knot, ready formed, can be passed over end of spar: (b) when the knot has to be formed round the spar in the position it is to hold.

Bowline.—Really a *loop* which will not slip. Made at the end of a rope. The loop may be used for mooring ships (hence its name), for fastening animals, for lowering persons from burning buildings, for dragging along

insensible persons. Practise the loop round yourself as well as around others—and practise tying blind-fold.

Round turn and two half hitches.—For securing a rope which is bearing a strain to a holdfast.

Sheepshank.—For shortening a rope, or to strengthen a weak part which has to bear a strain. Practise with both ends of the rope made fast.



TEST No. 7: WHIPPING.

"Must know how to whip the end of a rope."

Here again you should "learn by doing." The whipping must be done firmly; every turn pulled tight, and the work neatly trimmed off.

The whipping should be started about an inch and a half from the end of the rope, to prevent strands from unravelling.

Lay a loop of twine along the side of the rope, with the loop towards the end. Begin winding the running end *B* tightly over the loop (Figure 1).

Continue winding towards the end of the loop until within a quarter of an inch of the end of the rope. Then slip the running end *B* through the loop (Figure 2).

Pull the standing end *A* so that end *B* is drawn inside the whipping (Figure 3).

When both loops are drawn into the centre of the whipping (as shown in Figure 4), cut off short both ends of the twine at the points marked *C*.

TENDERFOOT TESTS.

	Date of Passing	S.M.
1. Law and Promise
2. The Salute
3. Union Flag
4. Cleaning and Dress- ing a Wound
5. Woodcraft Signs
6. Knots
7. Whipping

Badge Awarded

Date

S.M.'s Signature

THE GATEWAY

TO

SECOND CLASS SCOUT TESTS

1. Minor Accidents.
2. Rules of Health.
3. Kim's Game.
4. Naming Trees.
5. Knots.
6. Lashings.
7. Axemanship.
8. Compass.
9. Fire-lighting and Cooking.
10. (a) Highway Code.
(b) Bicycle (if used).
11. Journey.
12. Period of Service.
13. Re-passing Tenderfoot.

TEST No. 1: MINOR ACCIDENTS.

"Show how to deal with the following common minor accidents:—Minor cuts and scratches; bleeding from the nose; stings and bites; burns and scalds.

"Know how to avoid sunburning.

"Demonstrate the use of the triangular bandage as a sling. Demonstrate how to summon help and to treat for shock (not electric)."

Cuts and Scratches.—If small, wash in clean water, dab with iodine or an antiseptic (e.g. Dettol, T.C.P., or Condy's Fluid). If deep, wash in water containing antiseptic, apply clean dressing. If the wound is dirty, wash the dirt on the surrounding skin away from the wound. In all you do, keep your own fingers sterilised (by putting antiseptic on them).

Bleeding from Nose.—Patient to sit up with head slightly forward (if indoors, near open window). He should breathe through his mouth, not his nose. Try pinching the nose just below the bridge, but do not plug. If the bleeding does not stop, put a cold compress (such as flannel soaked in cold water, or a wet sponge) over the nose, and another at back of neck. He should not blow his nose for some time after bleeding has stopped.

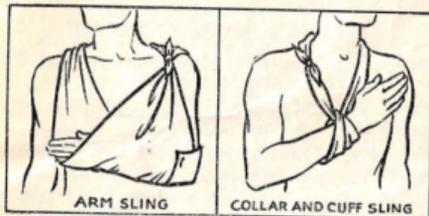
Stings and Bites.—For a wasp sting, apply vinegar or a raw onion. For a bee sting, first try to remove the sting with a sterilised needle, then apply weak ammonia or solution of washing soda or blue-bag. For a nettle sting, apply a dock leaf, or treat as for a bee sting. For an animal bite, treat as for a flesh wound—and take the patient to the doctor.

Burns and Scalds.—Burns are caused by dry heat, scalds by wet heat, but both are treated in the same way.

Don't remove burned clothing; *don't* apply lotions. *don't* break blisters. Cover the affected area with cotton-

wool, lint, gauze, any clean dressing that will exclude air. Bandage lightly if blisters are suspected, but more firmly otherwise. Make your patient comfortable, keep him warm and, if it is a minor burn, give him hot, sweet, weak tea. (This is only a summary, and you must have practice in your Troop with dressings and bandages.) Treatment of serious burns is not expected of you; that is a matter for the doctor.

Avoidance of Sunburning.—Sun burns can be prevented by gradual exposure to the sun and by massaging the skin exposed with calamine lotion. If you are "caught" by the sun, this lotion is also the best cure.



Triangular Bandage.—Two uses, which you must learn by practising with an instructor, are shown below. The purpose of the large Arm-Sling is to support the forearm and hand. The purpose of the Collar-and-Cuff Sling is to support the wrist, by means of a Clove Hitch (Manual 25-27).*

How to Summon Help.—The best and quickest way is by telephone.

* There is a note about the "Manual" on page 38 of this booklet.

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Then dial 999, and wait for the voice of the operator asking you, "number please?"

If it is not a dial telephone, the operator speaks to you when you lift the receiver.

(3) When you hear the operator, simply say, "Ambulance." You will then be told what to do. You will not have to put money in the coin box for an Emergency Ambulance Call.

How to Treat for Shock (not electric).

The patient may be faint or unconscious. Lay him flat with head low. Give him air. Loosen clothes round his neck. Keep him warm with blankets, etc. A little cold water may be sprinkled on his face. Give him no alcohol

TEST No. 2: RULES OF HEALTH

"Know the general rules of health as given in Camp Fire Yarn 18 of 'Scouting for Boys.'"

You should read Camp Fire Yarn No. 18. What follows is only a summary.

Keep clean—Yourself, your clothes, your mind.

Don't Smoke. Don't Drink any kind of alcohol.

Rise early—Sleep with open windows: avoid soft bed: cold bath, or rub down with wet or dry towel: deep breathing exercises.

Breathe through the nose, play games.

Drink much pure water—early in morning, between meals, before bed.

Smile all the time, and laugh when you can.

TEST NO. 3: KIM'S GAME

"Kim's Game: Describe, in writing, 16 out of 24 well assorted articles following one minute's observation, or follow a trail half a mile long containing not less than thirty woodcraft signs, in 25 minutes."

The Gateway to all Scout Tests 21

Read the short version of Rudyard Kipling's story of *Kim*, as given in "Scouting for Boys," pages 2-5. Then turn to that most readable Camp Fire Yarn 11. You will then understand, first, that the purpose of this test is to train powers of observation, and secondly, how very interesting such training can be—see pages 88-89, for instance, about "Details of People."

Notice that the test requires you to *describe* the articles, not simply to *name* them.

There are many ways in which Kim's Game can be played—see page 32 (full edition) for some of them. Do *not* try to get this test over and done with quickly.

Three methods of Laying a Trail, any of which your S.M. may choose:—

(1) Using small bits of wool, leaves, foliage, etc.

(2) Fastening tracking irons (or some design in nails or spikes) on his feet.

(3) Using the Tenderfoot Woodcraft Signs.

A splendid test is to bring all three methods into one trail. An even more enjoyable way of passing the test is to follow the trail of an animal: you would be lucky, for instance, if you could be given the trail of a dog over snow through a wood.

(Scouts good at Kim's Game will like to try for the "Observer" Badge.)

TEST No. 4: NAMING TREES.

"Be able to recognise and name, from a list submitted by the Scout, six common trees, and know the values of their woods for fires."

In "Scouting for Boys," page 123, eighteen common trees in Great Britain which a Scout should know by sight are named. Here, and in First Class Tests, we show means of recognising twelve of them.

Trees, like human beings, are recognised by their features; that is, by their shape, trunk, leaf, twig, flower and fruit. We do not, however, give pictures of all these features for each tree, but only of the features which are striking. Trees have flowers and fruit but sometimes they are very small and out of reach—very different from the snowy spikes of bloom and the “conker” of the Horse Chestnut. Certainly the Lombardy Poplar, and in a slightly less degree the Oak and Elm, are “given away” by their shape. Nearly all the trees which we illustrate have leaves which cannot be mistaken. The Beech, Birch and Plane, among others have very distinctive trunks, the Ash and the Horse Chestnut have twigs which are easily identifiable. The fruits of the Oak, Sycamore, Beech and Scots Pine are well known.

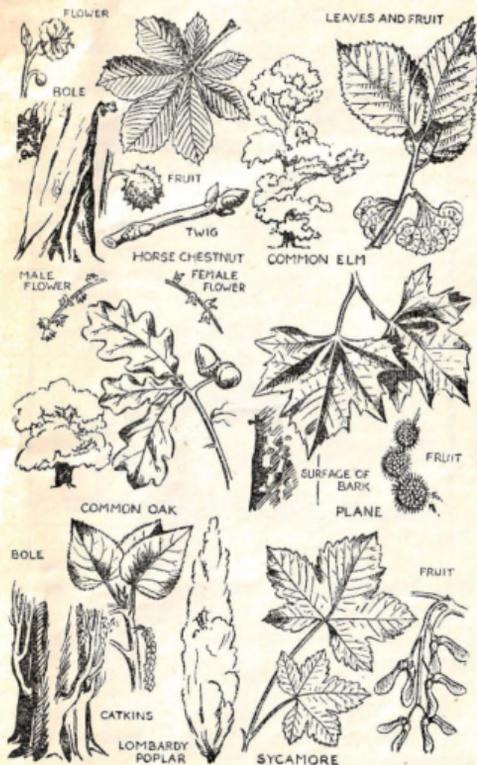
You will, however, get most of your knowledge of trees from examining them in the open, with the help of a naturalist friend. If you live in a town, you will find plenty of trees in the public park—often in greater variety than in the country. Choose one of each kind of tree that interests you and pay it a visit in each of the four seasons, so that you become familiar with the changes through which it passes in a year.

Making a collection is always interesting and you can make one of leaf impressions—page 187 of “Scouting for Boys” (full edition) tells you how to go about it.

How Woods Burn.

This rhyme will help you to remember:

These hard woods burn well and slowly:
 Ash, Beech, Hawthorn, Oak and Holly.
 Soft woods blaze up, quick and fine:
 Birch, Fir, Hazel, Larch and Pine.
 Elm and Willow you'll regret,
 Chestnut green and Sycamore wet,

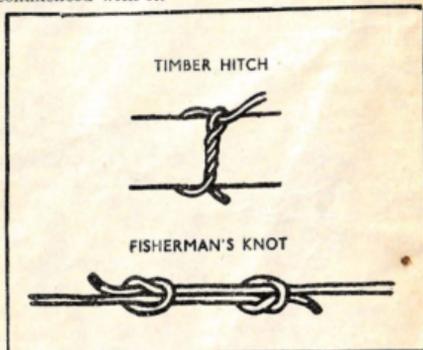


TEST No. 5: KNOTS.

"Tie the following knots and know their uses: timber hitch and fisherman's knot."

Timber Hitch.

This is used for securing the end of a rope to a spar or package, and for drawing together a bundle of faggots, poles, etc. With the addition of a Half Hitch it is useful when dragging timber; and the Diagonal Lashing is commenced with it.



Fisherman's Knot.

This is used when two wet or slippery lines have to be joined together. Useful for fishermen. In the diagram the two thumb knots are separated—draw them together to complete knot.

TEST No. 6: LASHINGS.

"Demonstrate square and diagonal lashings by constructing a trestle of Scout staffs."

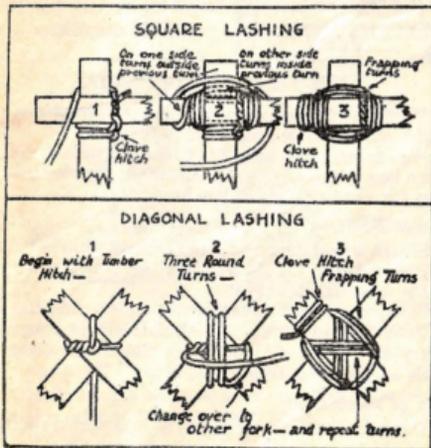
Square and Diagonal Lashings.

It is a fine art making really secure lashings, and for this reason competent instruction is essential. When practising use actual pioneering materials, if possible—rope and spars, not string and meat-skewers.

Square Lashing.

This lashing is extensively used in pioneering constructions for securing one spar to another, when they cross each other at right angles, or nearly so.

Begin with a Clove Hitch round upright spar immediately below position of horizontal spar, then twist running end round standing end; next 3 or 4 lashing turns, followed by 2 or 3 frapping turns to hold lashing turns together; then a Clove Hitch.



Diagonal Lashing.

Used when it is desired to secure together two spars which have a tendency to spring apart. Start with Timber Hitch to draw spars together; then make 3 or 4 lashings round each fork and, finally, several frapping turns; finish with Clove Hitch.

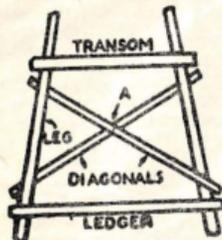


Diagram to show arrangement of Scout staffs for a Two-legged Trestle.

N.B.—Every lashing is square, except the one marked (A) in the diagram, which is diagonal.

TEST No. 7: AXEMANSHIP.

“Know the safety rules and care of a hand-axe, and knife. Demonstrate how to chop firewood.”

We can only give here a few hints on the subject; to learn how to use an axe it is essential to receive instruction from one who is competent.

Use of Knife.

Sheath knives should be kept in sheath when not in use. Pocket knives should be closed when not in use; oil blade hinges occasionally.

Never make cutting strokes towards yourself.

Both axe and knife blades should be kept sharp, and every care taken not to damage the cutting edge by nails and knots in wood, grit, etc.

Use of Hand-Axe.

Don't use hand-axe when anybody is within radius of six feet.

Wear leather boots or shoes and remove lanyard and scarf when chopping.

Always use firm chopping-block.

When chopping keep your eye on intended cut, and rest when hand or arm becomes tired.

Split wood while it lies flat on top of chopping-block.

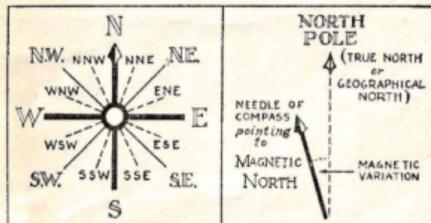
Chop lengths of branches on far edge of block; they will then fall to earth and not hit you in the face!

Never use axe with loose head; a loose head can be made secure by swelling end of shaft and wedge in linseed oil, faling which a new wedge will be necessary.

When an axe is not in use it should be either in its case or masked in convenient log.

TEST No. 8: COMPASS.

“Know the 16 points of the compass and how to set a map.”



Learn the compass points thus—first the cardinal points (shown in the first diagram by the blackest lines), then the half-cardinal points (which come half way between them), then the three-letter points.

Before reading a compass, take care that (i) no iron is near (e.g. a fence, bicycle, railway lines), (ii) the compass is horizontal, (iii) the needle is at rest.

The use of the compass is best practised by games, e.g. the S.M. can set a sort of trail with simple compass directions and short distances in paces; if the trail ends in a "Treasure." all the more fun!

Setting a Map with the Compass.

From the second diagram (above) you see that the compass needle does not point to the "true" North and the North Pole but to a point north of Canada known as the Magnetic North Pole. The angle between magnetic and the true north is called the Magnetic variation.

Lay your compass over the Magnetic North line which you will find on your map. Do not disturb the compass, but turn the map slowly round until the North end of the Magnetic North point on the map is exactly under the North end of the needle. Your map now corresponds with the ground, and the True North line on it is pointing to the True North.

TEST No. 9: FIRE-LIGHTING AND COOKING.

"Lay and light a fire out-of-doors with natural materials, using not more than two matches; cook over this fire a sausage and potatoes, a twist or damper, and make tea."

First, get together a good supply of *dead* wood, both twigs and heavier pieces. Get dry wood, of course, if you can; if not, split log open, get to dry interior, cut into long strips. If you can't get twigs, use whittled sticks—your S.M. will explain what this means. The great point is—you must have *small* wood.

Secondly, build up cone or pyramid of the small wood round the tinder. Light from below on windward side. Start with very small fire and keep adding to it. When fire is well alight you can use thicker pieces of wood for fuel.

Thirdly, build frame of logs, at back and sides, leaving open the side facing wind.

Sausage and Potatoes.

First melt small amount of fat in frying pan. Put in the sausage, after pricking it a few times in the *hope* that it will not burst! Frequently turn, so that it becomes "browned" all over.

If your potatoes are also to be fried, peel and cut them into very thin slices and fry them in the hot fat.

Potatoes can be boiled either in their skins or peeled. Put into *boiling* water to which salt has been added—about one teaspoonful for two pounds of potatoes (enough for four Scouts). If potatoes are large, cut into halves or quarters. Boil until they are soft when prodded with a fork.

Twist Baked on a Stick.

Mix dough as for "Damper" and roll into a "snake." Peel a green stick at least thickness of Scout pole, heat stick in fire, quickly clean. Wind "snake" spirally round hot stick. Hold, or lean, over *hot-ember fire*. Turn from time to time while baking.

Damper.

To a large cupful of flour, add a pinch of salt—also a pinch of bicarbonate of soda or Epsom salts if the flour is not self-raising. Do not add fat. Make flour into a stiff dough with water (adding this in a very small quantity at a time). Knead with the hands. Make into *flat* cakes, which must be thin; otherwise they are often not cooked right through. Two ways of cooking are: in a greased pan over *hot embers*, or on a hot stone. Turn damper over while cooking. It is cooked when a knife comes out clean. Eat hot with butter.

Making Tea.

The water must be really *boiling*. Either put the tea direct into a billie (or in a mesh bag), or into a teapot. If teapot, heat it before putting the tea in, and take it to the billie, not the billie to the pot! One heaped teaspoonful for every two cups to be drunk. Ready to drink five minutes after "coming off the boil."

TEST No. 10(a): THE HIGHWAY CODE.

"Show that he understands the Highway Code. Paras. 1-15 inclusive (the road user on foot). Paras. 16-63 inclusive (the road user on wheels)."

For pedestrians, chief paragraphs are 6, 7, 8, 9 and 10.

6. Always use subways, footbridges, pedestrian crossings or central refuges when provided. Otherwise cross where you have a clear view of the road both ways. Take extra care if your view is limited by stationary vehicles or other obstructions.

7. Before you cross, STOP AT THE KERB, look right, look left, and right again. Do not cross until the road is clear; then cross at right-angles, keeping a careful look-out all the time. Where there is a refuge, stop on it in a position where drivers on the far half of the road can easily see you, especially at night. When the road is clear, complete the crossing.

8. When you have stepped off the kerb on to a zebra crossing (which must have black and white stripes, studs and lighted beacons), you have the right of way, BUT ALLOW APPROACHING VEHICLES AMPLE TIME TO GIVE WAY, especially if the road is wet or icy.

Do not stand on the pavement at a zebra crossing if you do not intend to cross.

9. Although you have the right of way once you are on the crossing, keep a look-out to right and left as you cross, because a driver's view of you may have been obstructed.

10. Where a zebra crossing has a central refuge, each half is a separate crossing: treat it as such.

The cyclist must note carefully the "extra rules for pedal cyclists," Nos. 59-63).

59. If there is an adequate cycle track, use it.

60. Ride in single file when road or traffic conditions require it, and never more than two abreast.

61. Never carry anything that may interfere with the proper control of your machine.

62. Do not hold on to another vehicle or another cyclist.

63. Do not ride close behind a moving vehicle.

Note also: (a) You must not carry a passenger on a bicycle not constructed to carry more than one person. (b) Turning right without due care contributes to 12,000 accidents a year. Be very careful, therefore, if you intend to turn right, not to pull out sharply from the nearside, but signal in good time and take up a position just left of the centre of the road.

TEST No. 10 (b): CARE OF BICYCLE.

"If he has the use of a bicycle, demonstrate that he is keeping it properly maintained and that he is able to effect minor repairs."

Have two sound brakes (one for a bicycle with fixed wheel or with wheels up to 18 inches diameter, including tyre). Keep them, and bell, in good order.

Know how to remove an outer tyre and repair a puncture. (Instructions given with any repair outfit.)

At night, see that front and rear lamps are alight, and that the reflector is efficient. (Page 29, Highway Code.)

TEST No. 11: JOURNEY.

"Go by day, on foot, with another Tenderfoot Scout, a journey of eight miles. The journey will have a route laid down by the S.M. and an objective will be given. A verbal report, from notes, will be made to the S.M. by the Scout immediately he returns.

"NOTE.—If both Scouts are taking the test, each will report independently."

This can be a very jolly test, so that you may wish your S.M. would let you do it more than once! It can be taken at any season of the year, and in a leisurely fashion. All the time you keep your eyes open for anything worth while reporting to your S.M. later in the day, and he can be trusted to set you an interesting "objective"—perhaps a sketch, or a plan, or finding a camp site.

TEST No. 12: PERIOD OF SERVICE.

"Have not less than three months' service as a Scout."

TEST No. 13: RE-PASSING TENDERFOOT.

"Re-pass the Tenderfoot tests. This test will be taken last."

Note.—"Before the Second Class badge is awarded, the S.M. will ensure that the Scout understands the Promise and Law in accordance with his age and development, and is a satisfactory member of his Patrol."

SECOND CLASS SCOUT TESTS.

	Date of Passing	S.M.
1. Minor Accidents
2. Rules of Health
3. Kim's Game
4. Naming Trees
5. Knots
6. Lashings
7. Axemanship
8. Compass
9. Fire-lighting and Cooking
10. (a) Highway Code
(b) Bicycle (if used)
11. Journey
12. Period of Service
13. Re-passing Tenderfoot
Badge Awarded to
S.M.	Date

See "NOTE" printed in italics on Page 31



Picture of a Patrol Leader who is a Queen's Scout. Notice round his right shoulder the Bushman's Thong; on his left arm the Queen's Scout Badge, with the Ambulance Badge above, the Public Service Proficiency Badges round it, and the First Class Badge below; on his right arm the Ambulance Badge (the only badge worn twice) and other Proficiency Badges below.

(On the Hat, a *metal* arrowhead badge and scroll. On the Beret, a *cloth* P.L.'s badge (in silver and red on green background) above the left eye.)

HOW TO BECOME A QUEEN'S SCOUT.

- (1) Be a First Class Scout.
- (2) Hold the Bushman's Throng (or Seaman's or Airman's Badge, for which *any* Scout is eligible).
- (3) Obtain the Ambulance Badge.

34 The Gateway to all Scout Tests

(4) Obtain **THREE** of the other 12 Senior Public Service Badges—See Page 63 for titles.

(5) Be interviewed by the District Commissioner.

(6) Be recommended by his Group Council as "setting a personal example of the Scout Way of Life."

HOW TO OBTAIN THE BUSHMAN'S THONG.

(1) **Be a First Class Scout.**

(2) Obtain the Venturer Badge.

(3) (a) For the Bushman's Thong: Obtain **TWO** of the six senior badges numbered 11, 20, 36 (or 8) 39, 53, 55 on Page 63.

(b) For the Seaman's Badge: Obtain either No. 9 or No. 24, and also **ONE** of the following: 8, 19, 32, 33, 36, 39.

(c) For the Airman's Badge: Obtain either No. 2 or No. 3, and also **ONE** of the following: 8, 21, 36, 39.

(4) Make his own Thong (according to special instructions).

HOW TO OBTAIN THE SCOUT CORD.

(1) **Be a First Class Scout.** (Under 15 years).

(2) Obtain **SIX** Proficiency Badges from the list of badges on page 63 for Scouts in the under-15 group, of which **ONE** must be from those numbered, 7, 18, 37, and also **ONE** from those numbered 12, 14, 48, 50, 52, 54.

These two pages tell you how to obtain the highest ranks among Scouts. You will notice that for each of them the first step is to win the First Class Badge. Your way, therefore, lies clear before you.

THE GATEWAY TO FIRST CLASS SCOUT TESTS

1. Camping.
2. Emergencies.
3. First Aid.
4. Swimming.
5. Tracking.
6. Trees and Birds.
7. Estimation.
8. Knots and Lashing.
9. Axemanship.
10. Map-reading.
11. Re-passing Second Class.
12. Journey.

TEST No. 1: CAMPING.

"Must have camped, as a Scout, for a total of 10 nights before completing his First Class tests. One week-end camp at least must be included in the total."

TEST No. 2: EMERGENCIES.

"Demonstrate the proper method of dealing with the following emergencies: fire, drowning, ice-breaking and electric shock."

(1) *Fire.* First, warn the inhabitants. Then, warn the fire brigade or police. Remember that if you break a fire alarm you must wait till the brigade arrives, in order to tell situation of fire.

If you have to enter a room full of smoke, cover nose and mouth with wet cloth and keep head within 6 in. of ground. Learn how to drag (not lift) an insensible person. Throw sand or earth (not water) on blazing oil or petrol. If a person's clothing is on fire, do two things: make him lie down, and smother the fire with coat or rug.

(2) *Drowning.* There are two emergencies here:—(a) Rescuing a drowning person; (b) reviving him if apparently drowned. Both these things you must learn by practical demonstration.

(3) *Ice Breaking.* Tell the victim not to try to crawl up on the broken ice, but to spread his arms over the ice and wait. Do not try to walk out to him. Push out to him a long board or ladder till it lies across the hole. If necessary, crawl along this in order to drag him out.

(4) *Electric Shock.* Send for the doctor, but do not wait for him. *Is the victim still in contact, direct or indirect, with a live wire or charged metal?* If so, you must be careful. Before you touch him, you must insulate yourself either by (a) standing on rubber or dry glass, or by (b) covering your hand with a rubber glove, rubber tobacco-pouch, rubber mac, several thicknesses of dry newspaper, etc., or by (c) using a dry piece of timber to push him clear. Touch his clothing rather

than his body. Get him away with one quick action. *When there is no longer any contact.* If his tongue has been drawn into his throat, pull it out and tie it down with a handkerchief under his chin. Apply artificial respiration. When he is conscious, treat any burns.

TEST No. 3: FIRST AID.

"Know the position of the main arteries and how to stop external bleeding from veins and arteries.

"Demonstrate how to deal with a fracture of the collar bone. Understand the importance of immobilising a fractured limb, and the importance of not moving other suspected fractures.

"Demonstrate the use of the triangular bandage as applied to the knee, head and foot.

"Demonstrate how to deal with shock."

Note.—A Scout who has gained the First Aid badge will be deemed to have passed this test.

The Main Arteries.

The aorta (or chief artery) conveys the blood which is forced out of the heart each time it contracts. The aorta leaves the left side of the heart and goes up to the neck, giving off branches to the head and arms. Then, coming downwards behind the heart, it reaches the centre of the body and splits into two forks which go down the legs. Branches of the arteries penetrate to all parts of the body, becoming smaller and smaller till they are known as capillaries, so tiny as to be invisible to the eye. There are certain points where arteries come near to the surface with a bone behind them. By pressure on any of these points, blood can be stopped from passing that point. This however, is a method of stopping bleeding which must be left to the doctor and not be practised by the Scout. Veins carry the blood back to the heart. Capillaries join to form small veins, these small veins unite to form large ones, and thus the blood gets back again to the right side of the heart.

Sources of Bleeding.

(1) From arteries. The blood is bright red in colour and flows out in jerks. (2) From veins. The blood is dark purple and comes out in a steady flow. (3) From capillaries: the blood is brick-red and oozes out. This kind of bleeding is the simplest to treat, and the Scout has already learnt how to do so in Test No. 1 of the Second Class.

Bleeding from Arteries and Veins.

This is often much more serious. *Send at once for the doctor.* Until he comes, take the following steps towards stopping the flow of blood:

- (1) Have the patient sitting or, better still, lying down, and raise the bleeding part above the level of the heart.
- (2) Do not disturb any blood clot which has formed.
- (3) Apply pressure direct with the thumb or thumbs, over a clean pad, on the part of the wound from which blood is flowing.
- (4) If you cannot easily see the actual point of bleeding, grasp the whole of the wound with your hand and squeeze tightly: this will almost certainly stop all bleeding for a time, and if you relax your grasp slowly you will see the bleeding point and so know where to apply pressure with your thumb.
- (5) Having got the flow of blood under control with your thumb, first apply an antiseptic and then a dressing and pad over the wound, and bandage firmly. Deep wounds may need other pads on top of the first.

There are special rules to be observed when a foreign body is present in the wound or a broken bone projects. For these and for amplification of the rules already given, the best book to consult is: *First Aid*, the authorised Manual of the St. John Ambulance Association, St. Andrew's Ambulance Association, and the British Red Cross Society, obtainable from the Boy Scouts Association, price 4s., plus postage.*

Fracture of Collar-bone.

Suppose the fracture is on the left side (as illustrated):—

- (1) Get an assistant (or the patient himself) to support the left arm. Undo any brace on the left side. Take off no more clothing than an overcoat.
- (2) Put a pad between the left arm and chest and broad bandage round the left upper arm and the right side of the chest (not the right arm).

* Referred to several times in this booklet under the short title of the "*Manual*."

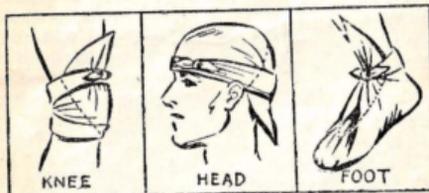
- (3) As support to the left upper arm and to keep the hand well raised, finish off with a special type of triangular sling ("*Manual*" 28).



If the fracture is on the left side, then of course, in the above instructions "left" is changed to "right" and "right" to "left."

Triangular Bandage for Knee, Head and Foot.

The three uses are illustrated in the following diagram.



("Manual" 30 and 34)

How to Deal with Shock.

Shock is a nervous depression which interferes with the flow of blood to the brain. It is caused by severe injury, fractures or heavy bleeding, or by strong emotions. The patient is pale, his hands are cold, breathing is irregular, pulse feeble, and he is faint or unconscious.

If it is a case of concussion, send for a doctor at once. In the meantime, if there is bleeding, check it.

For ordinary shock, which results from a minor injury,

accident or emotional stress, you must try to re-assure the patient by being cheerful and alert. Lay him down as comfortably as possible, with his head low and to one side. Loosen clothing about his neck, chest and waist. Keep him warm with a rug, blanket or coat. If he complains of thirst, a few sips of water or weak tea may be allowed, but not even that if there is any expectation that he will be given an anaesthetic for some necessary operation.

Do not use massage of the limbs. Do not use hot water bottles. Never give him alcohol.

If there is any chance of severe injury, remove the casualty urgently to hospital.

The Instructor will explain such matters as:

Simple, compound and complicated fractures. Signs and symptoms of each type of fracture. What attitude to adopt with patient. Importance of keeping patient warm. Where and when to attend to fracture. Why different forms of slings are necessary. What to do in cases of doubt. When it is *not* safe to remove patient. Where and when the doctor comes in.

TEST No. 4: SWIMMING.

"Swim fifty yards. The Scout should make every effort to pass the test as soon as possible.

"If a doctor certifies that bathing is dangerous to a boy's health, the latter must, instead of this, pass one of the following badges: For Scouts under 15—Camper, Jobman, Woodcraftsman, Backwoodsman, Stalker, Starman; For Scouts over 15—Camp Warden, Handyman, Naturalist, Senior Pioneer, Tracker, Astronomer.

"The District Commissioner may allow a Scout to gain the First Class badge without passing the swimming test, provided he is satisfied that it is not practicable for the Scout to obtain facilities for learning to swim, and that the Scout gains the alternative badge, as in the case of those holding a doctor's certificate."

Notice what B.-P. said about swimming: "No Scout can be of real use till he can swim and to learn swimming is no more difficult than to learn bicycling."

TEST No. 5: TRACKING.

"Read the meaning of a series of simple tracks made in sandy or other suitable ground. These should include running, limping, carrying a weight, walking backwards and blind gaits."

Tracking is a wide subject. It covers the study, among other things, of human tracks, of those made by domesticated animals (such as horse, cow and sheep), by bicycles, motor-cars and other vehicles, and by wild creatures (mostly small, in our country).

For a full treatment of this wide subject we refer Scouts to "Scouting for Boys" (Camp Fire Yarn 12, especially pages 93-94 and 100-102) and to "Training in Tracking" by Gilcraft. Accounts of the different kinds of human tracks named above will be found in the latter book, pages 101 to 109.

In these notes we confine ourselves to wild creatures which have a particular fascination for a Scout, venturing, however, to include among them the cat and dog, which like to break away from civilised ways and take a jaunt "on their own" into the country.

We call our illustration "A Tracker's Paradise," and we can imagine the excitement of a veteran tracker if he came across a small stretch of sandy ground, less than 8 square feet in area, with all these tracks clearly marked upon it. The scale of our sketch is *approximately* one-eighth full size—that is, 1 inch in the drawing represents 8 inches on the ground. We have numbered our 10 tracks and here is a brief note about each of them.

1. Hare, showing ordinary gait.
2. Rabbit, showing ordinary gait.



Notice that, at the speed shown, the larger impressions made by the hind feet appear ahead of the fore paws: the faster the speed, the more the hind feet get placed ahead.

Differences between tracks of hare and rabbit are: (a) the tracks of the hare are much larger and are more widely spaced; (b) the hind foot impressions of the hare are nearly parallel, while those of the rabbit are more played out.

3. A Land-bird, or ground-walker, such as starling, crow, rook, jackdaw, partridge and quail—with one foot in front of the other.
4. A Wader, living in swampy ground, such as the moorhen—with large feet for the size of bird and toes widely separated.
7. A Water-bird, such as duck, swan and gull—with webbed feet, walking with toes turned in.
10. A Tree-bird, or tree-percher, such as blackbird, robin, sparrow and thrush—hopping with feet in line with one another.
5. Dog, trotting.
6. Fox, walking.
9. Cat, walking.

The cat has 4 toes, like the dog and fox, but unlike them it leaves no claw impressions. A cat's tracks look as if made by a two-legged animal, because the cat places the hind paws in the exact places previously occupied by the front paws—hence a series of paw impressions in an *almost* straight line.

The fox also walks in very much the same way as the cat, except that its hind paws are not placed exactly over the *whole* of the marks made by the front paws.

A single impression of a fox's paw resembles that of a small dog, with the noticeable difference that it is narrower in proportion to its length.

8. Otter: unlike the three animals just named, it has five toes to their four.

(NOTE that there are "Stalker" and "Tracker" Proficiency Badges.)

TEST No. 6: TREES AND BIRDS.

"Be able to recognise and name, from lists submitted by the Scout, 12 common trees and 6 common birds."

Trees.

Here are some "skeleton" notes on the trees illustrated in this Test and in Second Class Test No. 6:—

Oak.—"Monarch of Trees," typically British; massive trunk; gnarled branches; often a dead branch sticking out of top, spreads out in open, tall in forest; grows slowly, full-grown after 200 years, may live 1000 years.

Elm.—Tall, domed shape; grows in open and in hedges more than in forest; leaf has one side joining stem lower than the other; usually has brushwood growing at base; branches often rot and break off in storm—don't, therefore, camp under it.

Horse Chestnut.—Brought to this country from E. Europe 350 years ago (originally an Indian tree); when old, has rough scaly bark, branches remain smooth; grows very quickly; horse-shoe marks on twig—really the scar where last year's leaf stalk joined the twig; often planted in avenues, for the beautiful display of its spikes and blossoms.

Plane.—Bark flakes off in winter; strings of spiky fruit balls unharmed by smoke, and so flourishes in cities, where it is often much mutilated by lopping; in country grows to height of 100 feet.

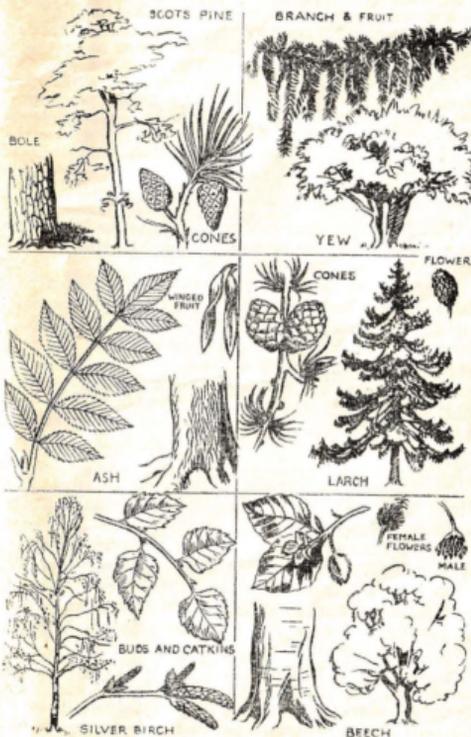
Sycamore.—Brought to this country 400 years ago; grey, smooth bark; flowers in clusters, double-winged fruit; notice shape of leaf, and its red stalk; full grown in 50 years, lives about 200 years.

Lombardy Poplar.—Brought to this country from Turin less than 200 years ago (originally a Himalayan tree); stands like a sentinel; branches grow nearly straight upwards; bark nearly black; grows very quickly; has short life.

Scots Pine.—Evergreen; can grow on barren soil; reddish-brown bark; has a way of losing its lower branches; tough, needle-shaped leaves, staying on for 2 years, arranged in tufts of 2 to 5 needles; woody cones 2 inches to 3 inches long, which open in dry weather and release winged seeds; no vegetation beneath it.

Ash.—Smooth, grey trunk; up-growing branches; grey twig with 2 black buds at tip; flowers in dense bunches from end of twigs before buds open; leaves appear, and fall, late; "ash-keys" (seeds) hang on into winter; timber both tough and flexible, much used; little or no vegetation beneath it.

Silver Birch.—Graceful, known as "The Lady of the Woods," delicate branches; pale-green mist of the tiny leaves in April very beautiful; silvery, paper-like bark which cracks and peels off.



Beech.—Massive tree, with wide-spreading dense branches, bark silvery grey, showing horizontal cracks near base; delicate, smooth leaves, bright green in Spring, rich colours in Autumn; fruit 3-cornered nuts ("beech mast"); little or no vegetation under it.

Larch.—One of the very few cone-bearing trees that shed leaves; keeps cones in winter; branches droop, lowest sweep the ground; needle-shaped leaves (20 to 30) in clusters, bright green; cones only 1-inch in length, pink when young.

Yew.—Evergreen; reaches great age; short, rugged and ancient in appearance; rarely more than 30 feet in height, trunks often of great girth; reddish-brown bark; red berries; narrow leaves in rows on each side of twig; often found in churchyards.

NOTE that there is a Proficiency Badge—the "Forester"—for Scouts who are interested enough in trees.

It is a good plan to start a note-book, give a page to each tree, and during the course of the year enter up details about these trees, as you study them season by season. It will be a record to be proud of, especially if you can adorn it with sketches.

A good book to help you is "Trees of the Wayside and Woodland," Step (Warne).

Birds.

The trouble with birds is that, unlike trees, they don't "stay put" while you pull out a handbook with coloured illustrations and identify them at leisure. "What's that bird?" you ask, as it flashes past, and you are lucky if you have a naturalist friend with you who replies, "That's a chaffinch, that was!"

The best way for the Scout to start taking an interest in birds is to feed them. Here are some of the things you will notice about six of your visitors:—

Robin.—Very friendly to man; has an alarm note ("tic tic"); never flies far, and always with an up and down motion; makes long hops, likes giving his tail a sudden little flirt.

House Sparrow.—Watchful and suspicious of man; chirrups; usually in little crowds; flies straight; likes a dust-bath,

Starling.—Quarrelsome and greedy; whistles, chuckles and croaks (mimics other birds); bobs his head when running.

Song Thrush.—A wonderful singer—sings two or three notes, then repeats them several times (for instance, "Quik—quik—come on then, come on then"); listens on grass, head on one side, for worms; makes long hops.

Blackbird.—When disturbed, flies away with an alarm note (a shrill chatter) and settles some distance off with tail raised and extended fanwise; like the thrush, listens on grass for worms; sings most in early morning and evening; unlike thrush, rarely repeats his notes.

Blue Tit.—A little bird; blue head, white cheeks, greenish-blue back; will come to meat, suet, cheese rind or cocconut hung up above the ground.

All this is by way of a beginning, but it sets you on the right lines of knowing what to look out for. In time, if you are interested enough and have a little patience, you will learn to recognise the songs of many birds. You will be able to distinguish them by their flying: you will find it easy, for instance, to know the peewit by his jerky flight, with whirring wings; the swallow by his wavy flight in curves from side to side; the skylark by his vertical climb, spiral descent, and final straight drop.

"Scouting for Boys," pages 116-118 tells of other sides of bird study—and points out that robbing birds of their eggs is NOT one of them.

The Librarian of your local Public Library will be glad to advise you about books on trees and birds.

TEST No. 7: ESTIMATION.

"Using improvised apparatus, such as a Scout staff, estimate three distances not more than half a mile, and three heights not more than a hundred feet. In each case the estimate to be within ten per cent. error above or below the actual."

- Note:** (1) Checking your results is quite necessary while you are *training* yourself in Estimating.
- (2) Certain personal measurements are useful:—span of thumb and forefinger; of thumb and little finger; knee-cap to ground; extended arms; height; pace, etc.

Distance.

For *short distances*, get some units firmly fixed in your mind and compare other distances, which you are trying to estimate, with them: the frontage of your house or school—a 100 yards course—a "Soccer" pitch (120 yards long)—a cricket pitch (22 yards). Check your estimates—by pacing.

For *longer distances*, try to acquire some mental unit, e.g. half a mile in a straight line from your house to a church tower. Check your estimates—by the Ordnance map.

The distance of thunder, of a man chopping wood, of a batsman hitting the ball—you get a check in such cases if you multiply difference in seconds between sight and sound by 1100 feet (sound travelling, roughly, at $\frac{1}{5}$ -mile a second).

Height.

(a) Begin by judging small heights: chair, table, window, door, ceiling.

(b) Then turn to objects rather higher; with small trees flagpoles, etc., you are helped by imagining how many times your own height will go into them. With houses, multiply average height of room by number of storeys.

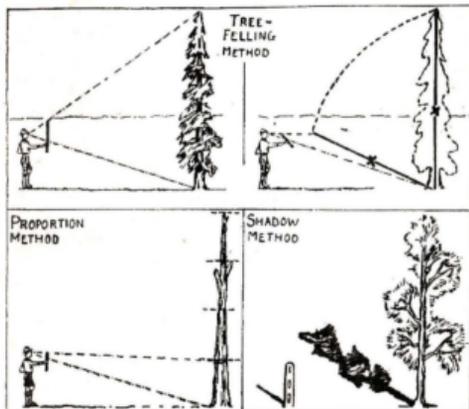
(c) With tall trees, houses, towers, etc., the checking of your estimate becomes more complicated.

Three methods of finding the height of a tall tree are shown in the illustration.

- (i) *Shadow Method.* Place stick in ground and measure its shadow. Measure shadow of tree. Work

out how many times the stick-shadow will go into the tree shadow. Multiply height of stick by this figure, and you have height of tree.

(ii) *Tree-felling Method.* Take a stick of any length. Step back a good distance from the tree. Stretch out your arm. Hold your stick quite upright. Close one eye. Move the stick so that your open eye sees the top of the stick touching the top of the tree. Now move your hand down the stick till your thumb touches



bottom of trunk. Now move the stick 90° from vertical to horizontal, keeping your thumb still at the tree trunk. Mark well the spot where the top of the stick now seems to touch the ground. Measure from this spot to the tree trunk, and you have the height of the tree.

- (iii) *Proportion Method.* Put a piece of white paper on trunk at height of your eyes. Step back. Use stick

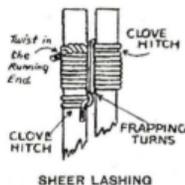
as before to show height from ground to white spot. Then move stick up trunk and see how many times it will be into height of tree. Four times in all. Then multiply the height of your eyes above ground by 4.

TEST No. 8: KNOTS AND LASHING.

"Demonstrate the following: sheerlashing; back and eye splice; fireman's chair knot; manharness knot; rolling hitch."

Sheerlashing.

Sheerlashing is used when it is desired to lash together two spars to serve as sheer legs (as used for aerial runways or when a heavy weight has to be lifted); it is also useful

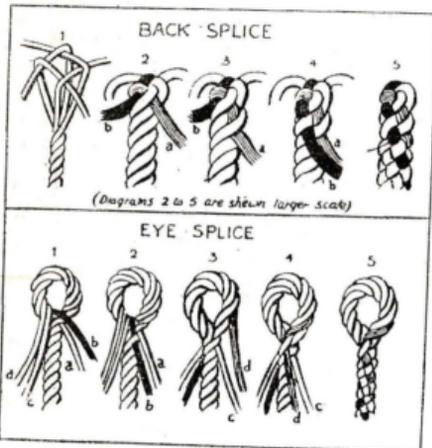


when lashing together parallel spars where they overlap, to serve as footway for bridge, or in cases where spars are placed in pairs for additional strength.

The lashing consists of a clove hitch round one spar, with the running end twisted round standing end; then 7 or 8 complete turns are taken round both spars; next, the turns are tightened with a couple of frapping turns, and finished with clove hitch round most convenient spar. When the spars lie touching they should be wedged apart while being lashed together, otherwise it will be found impossible to insert the frapping turns.

Back Splice.

Unravel the strands for a distance of about twice the circumference of the rope. Place the strands as shown in the diagram (Fig. 1), noting the over and under pattern. The same method is used also for three-strand rope. Draw up the pattern quite tight, and you have what is known as a "Crown knot."

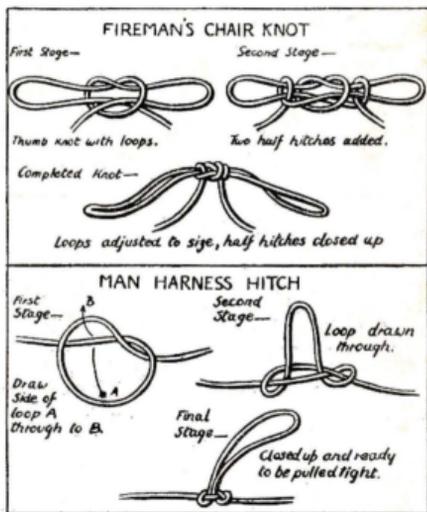


Next take one unlayered strand (a) and draw it down so that it lies across the first strand "in lay," and at right angles to it; lever up the next and pop the loose strand under it, and draw tight. Do the same with the next unlayered strand (b). Continue with this operation until all four strands are spliced in. Each unlayered strand should be interlaced three times with the strands

in lay, in order to make a secure job (see Fig. 5). Cut off short protruding ends of strands, and roll splice under foot.

Eye Splice.

Unstrand short length of the rope; then bend the rope back on itself so as to form eye of desired size, arrange



loose strands so that (a) and (b) (see Fig. 1) fall at right angles to lay of rope. Poke strand (a) underneath strand in lay, as illustrated. Take strand (b) to left and

over strand (a) and poke it underneath next strand in lay (see Fig. 2).

Next turn the rope round and splice in strands (c) and (d) (3 and 4). Continue interlacing the loose strands and finish as Back Splice. (Completed splice shown in Fig. 5).

Fireman's Chair Knot.

This chair knot is made in the middle of the rope and is used for lowering a person from a height. One loop passes under the knees and the other goes under arms and round back; these loops can be adjusted to suit the person who is being lowered by first slackening the half hitches.

Those above the person use one end of rope, while the other end enables those below to pull clear of any obstructions. You should learn to tie and apply the chair knot in the dark, or blindfolded, and in the middle of the rope.

Manharness Knot.

When you have a load to pull, make this loop or hitch in the rope, and place it over your shoulder. It will not slip and can be made in the middle of the rope without access to the ends.

Rolling Hitch.

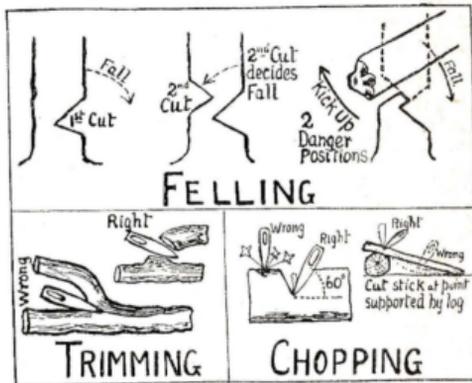
In some respects this knot is similar to a Clove Hitch, but will stand up better to a pull sideways. Used when a rope has to be attached to one under strain. In the diagram the knot is loose and open to show construction.



TEST No. 9: AXEMANSHIP.

"Use a felling axe for felling or trimming light timber or, if this is impracticable, be able to log up a piece of timber and demonstrate the theory of felling a tree, and use a bush or cross-cut saw. Demonstrate the care and maintenance of an axe."

(1) Before you begin the felling, clear away undergrowth, creepers, etc., within the reach of the extended axe, overhead as well as around you.



(2) Keep spectators three times this distance away.
 (3) Remove lanyard, scarf, and any other apparel likely to obstruct swing of axe.

(4) Wear leather boots or shoes while chopping.
 (5) Decide in what direction the tree is to fall. (It is a good plan to fasten a long rope at least one-third up the trunk to guide the fall.)

(6) On this side cut slightly more than half-way

through the trunk, making your cut of the shape shown in the diagram, page 54.

(7) Then on the other side make a similar cut, slightly above the other one.

(8) Call out "Timber!" as the tree begins to fall. (Note the two dangers shown in the diagram.)

(9) Rest when you are tired. Do not put much force into your strokes—the weight of the axe should do the work.

(10) Always trim (that is, take off branches) upwards, from the lower end of trunk.

(11) Mask your axe when not in use.

TEST No. 10: MAP READING.

"Read and be able to use a 1-inch Ordnance Survey Map (or its local equivalent). Use a compass. Point out a compass direction by day or night without the aid of a compass."

Reading an Ordnance Map.

To pass this part of the test properly you must use the map itself. Do not think that all you are expected to do is to tell the examiner what various signs on the map mean when he points them out to you. That would be like saying that a child can read as soon as he can recognise letters of the alphabet. You should be able to look at the map and tell from the various markings *what kind of country it is*. Of course, you must begin with the conventional signs—they are like the letters of the alphabet to one learning to read.

On the following page most of the Signs on the "New Popular Edition" of the map are shown. (The Signs differ slightly on different editions.) The contour line is a "level" line, running through places of the same height above sea-level: indeed, on our beaches a contour

CONVENTIONAL SIGNS		One Inch Ordnance Survey Map NEW POPULAR EDITION	
	Railway Double Line		Station
	Main Road		Foot Bridge
	Minor Road		Watercourse
	Foot Path		Marshland
	Gradients, cover 1 in 7		Wood
	Electricity Transmission Lines		Orchard
	Pipe Line (water) direction of flow		Park & Ornamental Ground
	Boundaries, British		Quarry
	County boundaries		Gravel Pit
	Contours, at 50 ft intervals		Post Offices
	Siding and Tramways		With Telegraph
	Canal (in blue) and Aqueduct		Other Post Offices
<p>The Map uses colours to indicate: Red for Class A roads. Blue for water. Orange for contours.</p>		<p>Church with Tower: Church without either: Marshland: Wood: Orchard: Parks & Ornamental Ground: Quarry: Gravel Pit: Post Offices: With Telegraph: Other Post Offices</p>	
<p>Roads: (Minor roads, Meta-foot): Gradients, cover 1 in 7: Electricity Transmission Lines: Pipe Line (water) direction of flow: Boundaries, British: County boundaries: Contours, at 50 ft intervals: Siding and Tramways: Canal (in blue) and Aqueduct</p>		<p>Traverse Roads: G.P.O. A. R.M.C. Wireless Aerial Mast: Windmill: Wind Pump: Light House: Light Ship: Beacon: National Trust Areas: Glass Houses: Stream, Lake & River: Rough Pasture: Site of Battle: Youth Hostel:</p>	

line is marked by the line of seaweed left at high tide. From these contour lines the hiker quickly gets an idea of the "shape" of the land: where the lines lie close together, the land rises steeply; where farther apart, there is a gentle slope.

When you know these signs, plan imaginary journeys on the map and practise trying to describe the country. Is it level or hilly? Would that road be an easy one for cyclists? In what direction are the rivers flowing? Are there any ancient remains? And so on.

Using an Ordnance Map.

Can you make actual, not imaginary, journeys by means of the map? Can you go over 5 miles of country which you have not visited before, keeping to the foot-paths which you have planned to follow?

Using a Compass.

(1) Can you find your compass directions wherever you are? Can you follow compass directions? For instance, can you carry out the following instructions, with the aid of compass and pacing? Go 100 yards to S.E., then 200 yards to N.N.E., then ¼ mile to N.W.—and so on?

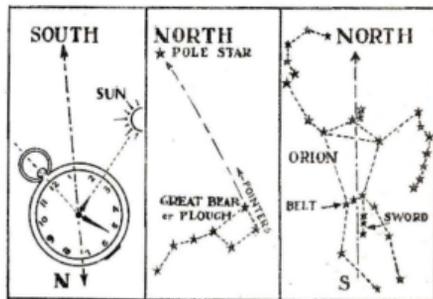
If you cannot, then you are ignorant of the first thing about using a compass.

(2) You have already, in your Second Class Tests, learnt how to "set" a map with the compass.

(3) Find out what is meant by compass bearings (as distinct from compass directions). Explorers use bearings, not points of the compass, so that you ought at least to know what is meant by them.

(These three uses are about all possible with an ordinary compass and are sufficient for the test. With a prismatic compass more can be done—those interested should consult such a book as "Exploring," by Gilcraft.)

Pointing a Compass Direction without the help of a Compass.



(1) By Day:

Here are two ways:—(a) *A watch method.* Point hour hand to Sun: imagine another hour hand pointing to the figure XII: the line bisecting the angle formed by these two hands points to South. This calculation is correct if the time is G.M.T. (Greenwich Mean Time)—deduct 1 hour for Summer Time: e.g., if the hour hand points to 4, reckon it as 3.

(If you use this method before 6 a.m. or after 6 p.m. (G.M.T.) you must remember to bisect the angle which is greater than 180°.)

(b) *Another watch method.* The Sun is always S.E. at 9 a.m., S. at noon, S.W. at 3 p.m. In summer it is also E. at 6 a.m. and W. at 6 p.m. (G.M.T.)

(2) By Night:

In "Scouting for Boys," (pages 41-43) there is a description, with large illustrations, of two constellations, or groups of stars, which all Scouts should know, and

of the way in which they show where the North or Pole Star lies.

These two constellations are:—(a) The Plough (or Great Bear), always above our horizon, the two important stars being called the Pointers; (b) Orion, visible from autumn to early spring, the three stars known as the Sword pointing North.

TEST No. 11: RE-PASSING SECOND CLASS.

"Re-pass the Second Class tests 1-10 inclusive. This test will be taken next to last."

TEST No. 12: JOURNEY.

"Go on foot, alone or with another Scout, a 24 hours' journey of at least 14 miles.

"In the course of the journey he must cook his own meals, one of which must include meat, over a wood fire in the open; find his camp site and camp for the night.

"He must carry out any instructions given by the Examiner as to things to be observed en route, and make a log of his journey sufficient to show he has carried out those instructions.

"A Sea Scout may do this journey partly by water and partly by land—at least 5 miles of the 14 to be done on foot.

"This Test should be taken last."

Why the "Last Test?"

Because in it you should show that you can (1) act as a Scout (think of all that this means), (2) choose food and prepare your meals, (3) pick out a good camping site, (4) use your map and compass, (5) sleep in a tent, (6) prepare a report.

Much previous training in the clubroom and out of doors lies behind these qualifications.

Cooking a Meat Meal.

You will already have camped for 10 nights with your Troop or Patrol, and so should have had much practice in cooking. If you have not already read Camp Fire Yarns 9 and 10, now is the time to do it. They will "round off" your ideas, which are, perhaps, rather vague on some points. Two simple meat dishes are:—

1. *Bacon*.—Remove or slit rind. Fry over *hot ember* in clean frying-pan (bacon provides the fat).

2. *Hunter's Stew*.—First, chop up any vegetables (except greens), put them in the billy-can and cover with water. Secondly, chop meat into small chunks; mix flour, a little salt, and a dash of pepper on a plate, rub meat in mixture, then put meat in billy. Let water just cover. Thirdly, simmer (not boil) for $1\frac{1}{2}$ hours, adding more water from time to time, if needed. Test potatoes with fork. Use a *gentle fire*.

The Scouter's Instructions.

The Examiner in his instructions will try to make the journey a *real adventure*. He will vary the route and the requirements of the report according to your special interests. He may ask for an account of some (not all) of the following:—

- (a) The route, with compass directions, sketches of cross-roads;
- (b) The type of country, crops, bus routes, bridges, landmarks;
- (c) The life of the district, occupations, animal and bird life, flowers, local history;
- (d) Buildings of various kinds.

Or he may make sketching or photography the main purpose of the journey; all depends on your special interest.

"The Log"—Hints to the Scout.

Write as you go along, do not make a "fair copy" after you return. Do not write a school essay—use "telegram language." Record only what is unusual. Let your report show that you can look after yourself, follow a route accurately, use your powers of observation. Make your report interesting with small sketch maps and sketches of details.

"The Examiner."

The District Commissioner (or his nominee) gives the instructions for the journey and examines the rough notes made during the journey, and the log which can be written up after the journey. The nominee must not be a Scouter of the Scout's own Group. The Scoutmaster examines for all 1st Class Tests, except the journey.

Note.—"Before the First Class badge is awarded, the S.M. will ensure that the Scout understands the Promise and Law in accordance with his age and development, and is a satisfactory member of his Patrol."

SPECIAL PROFICIENCY BADGES.

So far we have been studying the rules for the *general* Proficiency Badges—the Second Class Scout and the First Class Scout.

Besides these, there are 53 *special* Proficiency Badges in different subjects for Scouts under 15 years of age, and 55 for Scouts over 15 years of age.

Some special points to be noted are:—(1) The 15th birthday is normally the dividing date. (2) A Scout may not gain more than six Proficiency Badges before gaining the First Class Badge. Two of them may be gained, and worn, from the over-15 range, even if he has not reached the age of 15.

On page 63 is given a list of all the Badges in the two groups, and those in each group which are called Public Service Badges are indicated.

FIRST CLASS SCOUT TESTS.

	Date of Passing	S.M.
1. Camping
2. Emergencies
3. First Aid
4. Swimming
5. Tracking
6. Trees and Birds
7. Estimation
8. Knots and Lashing
9. Axemanship
10. Map Reading
11. Re-passing 2nd Class
12. Journey
<i>Badge Awarded to</i>		
<i>S.M.</i>	<i>Date</i>	

See "NOTE" printed in italics on Page 61.

LIST OF BADGES: UNDER 15 YEARS.

(The figure given after each badge indicates the corresponding badge in the over 15 range. An asterisk indicates a Public Service Badge.)

1. Air Apprentice	19 *Pilot (18)	37 Pioneer (53)
2. Air Glider (21)	20. *First Aid (5)	38. Piper (29)
3. *Air Spotter (4)	21. Gardener (27)	39. Printer (22)
4. Air Modeler	22. *Guide (41)	40. Reader (10)
5. Angler (19)	23. Helmsman (24)	41. Rider (26)
6. Athlete (49)	24. *Jobman (23)	42. Rope Spinner (56)
7. Backwoodsman (53)	25. Joiner (22)	43. Scribe (00)
8. Basket Maker (22)	26. Leather Worker (22)	44. *Signaller (30)
9. Bellringer (50)	27. *Life Saver (47)	45. Smallholder (17)
10. Boatwain's Mate (9)	28. *Linguist (28)	46. Speaker (40)
11. Bookbinder (22)	29. Marksman (56)	47. Sportsman (00)
12. Camper (11)	30. Master-at-Arms (56)	48. Stalker (55)
13. Canoeist (32)	31. Metal Worker (22)	49. Stamp Collector (42)
14. Cook (33)	32. *Missioner (44)	50. Starman (8)
15. *Coxswain (43)	33. Music Maker (38)	51. Swimmer (34)
16. *Cyclist (15)	34. Oarsman (24)	52. Weatherman (36)
17. Designer (7)	35. Observer (55)	53. Wirelesman (46)
18. Explorer (51)	36. Photographer (52)	54. Woodcraftsman (39)

LIST OF BADGES: OVER 15 YEARS.

(The figure after each badge indicates the corresponding badge in the under 15 range. An asterisk indicates a Public Service Badge.)

1. Aircraft Constructor (4)	20. Forester	39. Naturalist (54)
2. Air Mechanic	21. Glider Pilot (2)	40. Orator (46)
3. Air Navigator	22. Handicraft (8, 11, 25, 26, 31, 39)	41. *Pathfinder (22)
4. *Air Observer (3)	23. *Handyman (24)	42. Philatelist (49)
5. *Ambulance (29)	24. Master Helmsman (23, 34)	43. *Pilot (15)
6. Archaeologist	25. Hiker	44. *Public Health (32)
7. Artist (17)	26. Horseman (41)	45. Quartermaster
8. Astronomer (50)	27. Horticulturist (21)	46. Radio Mechanic (53)
9. Boatwain (10)	28. *Interpreter (28)	47. *Rescuer (27)
10. Bookman (40)	29. Leading Piper (38)	48. Rock Climber
11. Camp Warden (12)	30. *Leading Signaller (14)	49. Senior Athlete (6)
12. Cave Explorer	31. Map Maker	50. Senior Bellringer (9)
13. *Civics	32. Master Canoeist (13)	51. Senior Explorer (18)
14. *Conservation	33. Master Cook (14)	52. Sen. Photographer (36)
15. *Despatch Rider (16)	34. Master Swimmer (51)	53. Senior Pioneer (7, 37)
16. Electrician	35. Mechanic	54. Skier
17. Farmer (45)	36. Meteorologist (52)	55. Tracker (35, 48)
18. *Fireman (19)	37. Mountaineer	56. Venturer (29, 30, 42,)
19. Fisherman (5)	38. Musician (33)	57. World Friendship

"B.P.'S" LAST MESSAGE

Dear Scouts,—If you have ever seen the Play "Peter Pan" you will remember how the pirate chief was always making his dying speech because he was afraid that possibly when the time came for him to die he might not have time to get it off his chest. It is much the same with me, and so, although I am not at this moment dying, I shall be doing so one of these days and I want to send you a parting word of good-bye.

Remember, it is the last time you will ever hear from me, so think it over.

I have had a most happy life and I want each one of you to have as happy a life too.

I believe that God put us in this jolly world to be happy and enjoy life. Happiness doesn't come from being rich, nor merely from being successful in your career, nor by self-indulgence. One step towards happiness is to make yourself healthy and strong while you are a boy, so that you can be useful and so can enjoy life when you are a man.

Nature study will show you how full of beautiful and wonderful things God has made the world for you to enjoy. Be contented with what you have got and make the best of it. Look on the bright side of things instead of the gloomy one.

But the real way to get happiness is by giving out happiness to other people. Try and leave this world a little better than you found it, and when your turn comes to die you can die happy in feeling that at any rate you have not wasted your time but have done your best. "Be prepared" in this way, to live happy and to die happy—stick to your Scout Promise always—even after you have ceased to be a boy—and God help you to do it.

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"THE HIGHEST RANKS IN SCOUTING."

When we wrote on this subject (pages 33 and 34), we mentioned Badges from which a choice had to be made in order to reach these "Highest Ranks."

All the subjects are, quite rightly, practical, but, however practical a subject may be, a little knowledge gained from a book is useful.

We strongly advise our ambitious Scouts to obtain a handbook on the subject of their choice, which will give them both the exact requirements of the Badge and also valuable hints based on the Scouting experience of the writer.

There are handbooks on the Proficiency Badges. All of them can be obtained from the publishers of "The Gateway"—Messrs. Brown, Son & Ferguson, Ltd., 52 Darnley Street, Glasgow, S.1., who will be pleased to send you a list.

Good Scouting to you!

THE AUTHORS
of "The Gateway"