

Ten Basic Water Skills Patch Program



GIRL SCOUTS - *Mt. Wilson Vista Council*

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Website - www.gsmwvc.org

Rev. 06/05



THE TEN
BASIC WATER SKILLS
(effective 06/05)

Once you complete the program you will . . .

- 1) . . . be able to take care of yourself and others safely while engaging in water activities.
- 2) . . . be able to swim well enough to engage safely in boating activities.
- 3) . . . know how to observe the weather and make decisions about your water activities.
- 4) . . . be able to explore and observe water life.
- 5) . . . know how to send and receive messages across the water.
- 6) . . . know how to protect the natural water world.
- 7) . . . know how to catch and be able to prepare sea food.
- 8) . . . be able to handle rope and tie knots which are useful in water activities.
- 9) . . . be able to know where you are and how to get where you want to go.
- 10) . . . be able to use aquatic equipment correctly and safely.

THE TEN BASIC WATER SKILLS GENERAL INFORMATION



This patch program has been developed to help Girl Scouts acquire skills needed to participate in water activities that are fun, enjoyable and easy.

The levels of progression in the Ten Basic Water Skills are approximately parallel to the levels of progression in the Eight Basic Camping Skills.

All girls (Brownie through Senior) start with Level I and continue at their own pace. Juniors may advance through the skill levels in resident camps as well as in their own troops. Cadettes and Seniors may advance in the same way or by teaching these same skills to a younger camp unit or troop. *These activities are not appropriate for Daisy Girl Scouts.*

It is best if the girls see only the requirements of the level on which they are working.

Some Ten Basic Water Skills activities can be used to fulfill requirements for Brownie Try-Its, Junior badges and Cadette and Senior interest project awards. Because this is a patch program, an activity may be used for this program **and** a Try-It, badge or interest project award requirement. Program links are in the Leaders Guide Sheets in this booklet.

GENERAL HINTS

- **DEVELOP SKILLS**

These activities, such as tying a knot, need to be done more than once. Make sure girls are learning by *doing*, not just by listening. Try to get every girl to participate in the activity and the discussions.

- **KEEP THE TIMELINE FLEXIBLE**

Girls don't have to do an entire level in one week or one month. You can take all year with a group of Brownie Girl Scouts. With Junior Girl Scouts you might complete an entire level during a session of resident camp or a weekend campout. Cadettes might finish the first levels quickly with more time spent on the advanced levels. There is no limit to the number of levels that may be earned in one year.

- **USE RESOURCES**

A list of publications and web sites that can help you is included in this packet. People who can help you include: the camp first-aidier or school nurse, the camp lifeguard, older Girl Scouts, troop consultants, parents, neighbors, leaders of other troops, etc.

- **THE LEADERS GUIDE SHEETS**

These sheets are ideas and suggestions that may help you when working with girls to carry out a program featuring the Ten Basic Water Skills. Use these guide sheets along with additional resources.

TEN BASIC WATER SKILLS LEVEL I

LEADERS GUIDE SHEET

These are the basic steps to help a girl get acquainted with the skills needed to be resourceful, happy, and comfortable in an aquatic setting.

Health and Safety (this information is appropriate for all 5 levels of participation)

Factors which must be considered in determining a “Girl Scout safe” water site are enumerated in *Safety-Wise*, Girl Scout Program Standards, 1, 2, 3, 6, 7, 10, 12, 13, 14, 16, 22. Also see the *Universal Checkpoints* on page 81, as well as the *Activity Checkpoints* (pages 112 – 125) for water activities that include: canoeing, fishing, kayaking, rafting, row boating, sailing, swimming, tubing, water skiing, and windsurfing. Also be sure to check GS-MWVC council policies. If troops from other councils participate in this patch program, they should check their own council's policies.

The safest water facilities are those where instruction and lifeguards are provided.

DRESS

Appropriate footwear should be worn near water sites. In some cases, enclosed footwear must be worn in the water due to hazardous footing, while in other cases flip-flops might be appropriate. Some sort of cover-up for legs and arms must be available for even short exposure times. A windbreaker or jacket should be considered if the area might be windy.

Factors that must be taken into consideration when dressing for water activities are: the range of weather conditions, duration of stay, type of activity, terrain and hazards, and available shelter.

Depending on the activity, headgear should provide protection from either glare or direct sun or both. Swimming caps *may* be required by pool owners or to distinguish swimming ability in a crowded area.

Use of a waterproof sunscreen is advisable. Products should have a SPF rating of at least 15. Choose a brand that is waterproof.

EMERGENCY ASSISTANCE

Emergency assistance is available from site lifeguards, troop provided lifeguards and “watchers”, other adults, by telephone and through the use of equipment such as: poles, towels, oars, rings, buoys, etc. Have the girls look around a site and identify all possible sources of assistance before going into the water.

PROGRAM LINKS:

Junior Girl Scouts - Small Craft badge #8, Environmental Health badge #1.

S W I M M I N G

All swimming activities need to be done in accordance with *Safety-Wise*. Please note the differences between lifeguard and “watcher” requirements when swimming in backyard pools, public pools, or lakes, slow-moving streams, rivers or oceans. These requirements, as well as GS-MWVC policy, must be followed to complete the requirements for this level.

PROGRAM LINKS:

Brownie Girl Scouts – Sports and Games Try-It #4
Junior Girl Scouts – Water Fun badge #4

W E A T H E R

Enjoy! Consider having the girls make up stories, poems, or song lyrics about the cloud images that they observe.

PROGRAM LINKS:

Brownie Girl Scouts – Earth and Sky Try-It, #4
Junior Girl Scouts – Weather Watch badge, #3

W A T E R L I F E

Take a trip to a water site. Have the girls use their eyes and ears to explore, but not to destroy what they discover. With the troop, make a list of all the things that were discovered. Encourage the girls to draw some pictures or take photographs. Girls could make “water scopes” to make underwater observations from above the surface of the water. Help them to make plankton nets from wire coat hangers and old nylons.

PROGRAM LINKS:

Brownie Girl Scouts – Water Everywhere Try-It #4
Junior Girl Scouts - Water Fun badge #2, Water Wonders #4
Cadette and Senior Girl Scouts – From Shore to Sea interest project, Skill Builders #1.

☉ C O M M U N I C A T I O N

Discuss ways of communicating an idea from one person to another (other than with the human voice or on paper), such as body language, the hand alphabet, etc. Some ideas that the girls may generate are: drums, whistles, bonfires, smoke signals, torches, flags, blinkers, mirrors, lanterns, lights, etc. Each conveys something that can be translated into useful information. Then help the girls understand which ones can be understood at a moderate distance across water.

Morse Code: Around 1832, Samuel Morse devised his dot-dash-space code utilizing telegraph lines to transmit short and long pulses of electric current separated by intervals of no current. The Morse Code has since been adapted for use by blinkers, wigwag flags, flashlight, buzzers, etc. There have been some changes in his original patterns of “dits” and “dahs” resulting in the International Morse Code, which is used today.

PROGRAM LINKS:

Junior Girl Scout – Communication badge #2

Cadette and Senior Girl Scouts – Do You Get the Message? interest project, Skill Builders #1.

☉ CONSERVATION ☉

Good manners include:

- Do not pollute. It takes a long time to fix, is dangerous to animal life, and is unsightly.
- Do not litter. It is dangerous to animal life, can cause pollution, and is unsightly.
- Do not take radios, etc. It is inconsiderate of others who are enjoying the quiet of nature.
- Leave the site the way you found it. Don't dig up plants or dig along the sides of river- banks. It causes erosion.
- Don't take home **ANY** souvenirs unless the site staff gives you permission.

FISHING

Let the girls enjoy the fun of "goin' fishin'." Actually catching a fish is not necessary. Fishing is an end unto itself.

Any branch or pole will do. Line can be string or nylon monofilament fishing line. Bait depends upon where you will be fishing and the type of fish you are trying to catch. Stop at the bait shop near where you plan to fish to inquire.

Keep this simple. Just get out there and fish.

PROGRAM LINKS:

Junior Girl Scouts – "Doing" Hobbies badge #3, Environmental Health #4.

LINE ROPE AND KNOTS

Overhand Knot

- Used at the end or in the middle of a line (rope) as a stopper or to prevent slipping.
- To stop the end of a line (rope) from fraying temporarily when it is not whipped.
- To begin many other knots.

Square Knot

- To join two lines (ropes) of equal thickness.
- To secure First Aid bandages.
- To tie a bandana.

PROGRAM LINKS:

Brownie Girl Scouts – Art to Wear Try-It #6 – or - Ready, Set, Go Camping Try-It #5

Junior Girl Scouts – Outdoor Fun #8

NAVIGATION

There are many ways to find the points on the compass. N-S-E-W are the CARDINAL points. The easiest way to teach this is to have the girls discover the SUN. Ask them where it comes up? (EAST) Where does it go down? (WEST) Have them put their right arms out to side. Point them toward the upcoming sun (EAST). They will now be facing NORTH. Have them put their left arms out to the side toward the afternoon sun (WEST) and they will be facing NORTH. In both cases, SOUTH will be behind them.

Place a large piece of paper (8 ½" x 11" at least) on the ground. Insert a stick (approximately 6" long) through the paper in a vertical position. Mark an "X" on the paper at the end of the shadow the stick makes. Wait at least 15-20 minutes and mark the end of the shadow again. Now, draw a line connecting both marks. The line will be an EAST-WEST line. A line drawn perpendicular to this line will be a NORTH-SOUTH line.

PROGRAM LINKS:

Junior Girl Scouts – Finding Your Way badge #2

Cadette and Senior Girl Scouts – Outdoor Survival interest project, Technology #3.

WATER SPORTS

Don't forget to note the safety precautions, as indicated in the swimming requirement.

Have the girls play a form of leapfrog with the girls standing in shallow water and swimming through the other girls' legs (instead of jumping over each other). "Streets and Alleys" could be adapted to the water, or "London Bridges". Use your imagination, but keep it safe. After talking about safety, have the girls make up their own game.

PROGRAM LINKS:

Junior Girl Scouts - Water Fun badge #5

Cadette and Senior Girl Scouts – Water Sports interest project, Service Projects #6.

COMPASS ROSE

A relay to teach compass points

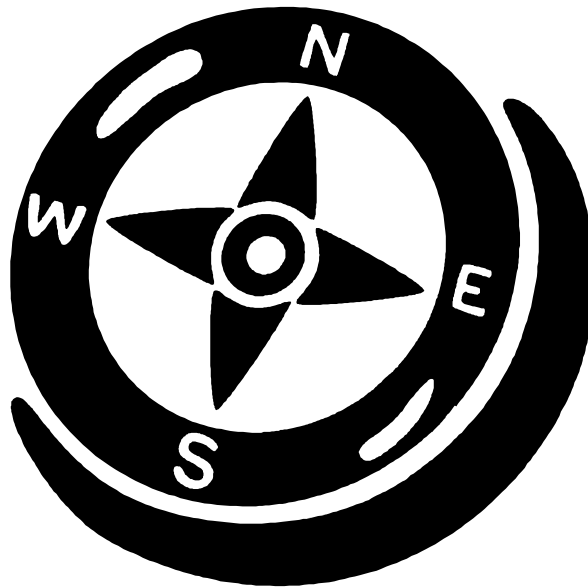
You need: Two decks of 3" x 5" index cards with each of the 32 points of the compass on them. You may only want to do 8 or 16 points, depending on the group, and a judge to watch the circles.

N, S, E, W are the **Cardinal Points** of the compass.

NE, SE, SW, NW, are the **Ordinal Points** of the compass.

Next come: NNE, ENE, ESE, SSE, SSW, WSE, WNW, and NNW, which are called **Diamond Points**.

How to play: Demonstrate the compass rose to the girls by laying down the cards in order in a circle, starting with **N** at the top of the circle. Divide the group into two teams, each with a shuffled deck of cards. Teams line up in file formation and player No. 1 takes the first card and runs to the designated area and lays it down in an imaginary circle. She runs back to tag player No. 2, who takes the next card and lays it in the proper position in the circle. This goes on until the compass rose is complete. If a card is placed incorrectly, the next girl must put it in its right place, before taking a new card. NOTE: The game can be simplified by using only the first 8 or 16 points on the Compass Rose.



TEN BASIC WATER SKILLS LEVEL I

GIRL WORKSHEET

1. Discuss where it is safe for you and your buddy to swim or play in or near the water and how to dress. Be aware of where help is available.
2. Be able to demonstrate the following skills:
 - Glide/float 5 feet unassisted with your face in the water
 - Float on your back, unassisted, for 5 seconds
 - Bob 5 times, unassisted, with bubbles
3. Watch clouds and share with others the imaginary creatures that the cloud shapes suggest to you. You can make up a story, poem, or song lyrics as a way to share your thoughts about the clouds.
4. Explore a seashore, tide pool, edge of a stream, pond, or lake.
5. Discuss ways to signal someone. Learn about Morse Code.
6. With an adult or older Girl Scout, make a list of rules for good manners at the beach or water's edge.
7. Go fishing.
8. Learn to tie an overhand knot and a square knot. Know how they are used.
9. Learn how to find North, South, East, and West.
10. Play a safe water game. Invent a new water game to play with others.



TEN BASIC WATER SKILLS LEVEL I I

LEADERS GUIDE SHEET

HEALTH AND SAFETY

Everyone, regardless of swimming ability, must wear a PFD (Personal Flotation Device) at all times when boating. Even if you swim well, if you are injured, you may not be able to swim.



You must get a PFD and follow the instructions for putting it on before getting in the water. There is no alternative to this exercise for teaching the skill.

(Remember, buoyant cushions are worn clutched to the chest, not on the back and are used for emergency situations only - not to be worn as a PFD while boating.)

H.E.E.P. OR HUDDLE

If a victim cannot get out of the water and rescue is not imminent, additional protection against the cold can be obtained by assuming the **HELP** (victim alone) or **HUDDLE** (several victims) positions. **HELP** stands for **H**eat **E**scape **L**essening **P**osture. A person wearing a life jacket should assume this position to conserve body heat in cold water while awaiting rescue.

To assume this position:

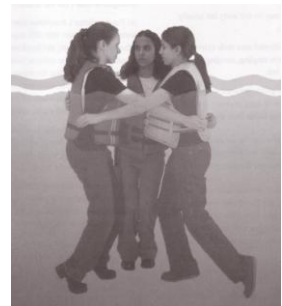


- Draw your knees up to your chest.
- Keep your face forward and out of the water.
- Hold your upper arms at your sides, and hold your lower arms against or across your chest.
- Do not use the **HELP** position in moving water.

The **HUDDLE** (pictured at right) position is for two or more people wearing PFD's to conserve body heat in *cold water* while awaiting rescue.

- With two people, put your arms around each other so that your chests are together.
- With three or more people, put your arms over each other's shoulders so that the sides of your chests are together. Place children or elderly persons in the middle of the huddle.

Do not use the **HUDDLE** position in fast-moving water.



PROGRAM LINKS:

Junior Girl Scout badge - Small Craft #1 or Water Fun #1
Cadette and Senior Girl Scout – Paddle, Pole, and Roll interest project, Skill Builders #*1

S W I M M I N G

See Ten Basic Water Skills, Level II, girl worksheet for specific swimming requirements. In addition to a certified lifeguard and “watchers”, you will need a Red Cross Water Safety Instructor to certify the girls for the “Beginner” level. Call your local Red Cross Chapter or YMCA for potential sources of WSI’s.

PROGRAM LINKS:

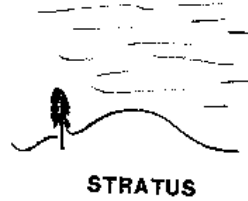
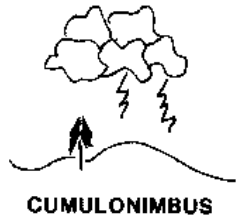
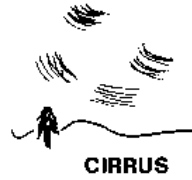
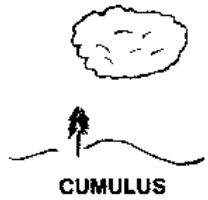
Brownie Girl Scout Try-It – Sports and Games #3
Junior Girl Scout badge – Swimming #4
Cadette and Senior Girl Scout interest project – Water Sports, Skill Builders #3

W E A T H E R

If the wind is blowing FROM	and the CLOUDS are	the WEATHER is apt to be:
W or NW to N	Cirrus	Good
NE or E to S	Cirrus	Rainy or snowy in a day or two if the wind is steady
NE or E to S	Cumulus	Fair - but if these clouds build up, they may bring a storm
NE or E to S	Cumulonimbus	Rainy soon; thunderstorm
NE to S	Stratus	Rainy or snowy in fifteen or twenty hours, usually a steady rain
Westerly	Stratus	Overcast sky or light drizzle

You can teach the girls the different kinds of clouds by making a cloud chart with cotton pasted on paper.

- Cumulus clouds look like puffs of cotton
- Cirrus clouds look like thin wisps of cotton
- Cumulonimbus look like big cauliflowers with wisps of cirrus feathers coming off the top
- Stratus clouds look like solid cotton strips



PROGRAM LINKS:

Junior Girl Scout badge - Weather Watch #10

Cadette and Senior Girl Scout interest project – Smooth Sailing, Technology #1

WATER LIFE

Have the girls compare what they discovered at the aquarium, marine nature center, etc., to what they discovered on their trip to the seashore, tide pool, etc. in Level I. See reference sheet at the end of this packet for suggested locations for these visits.

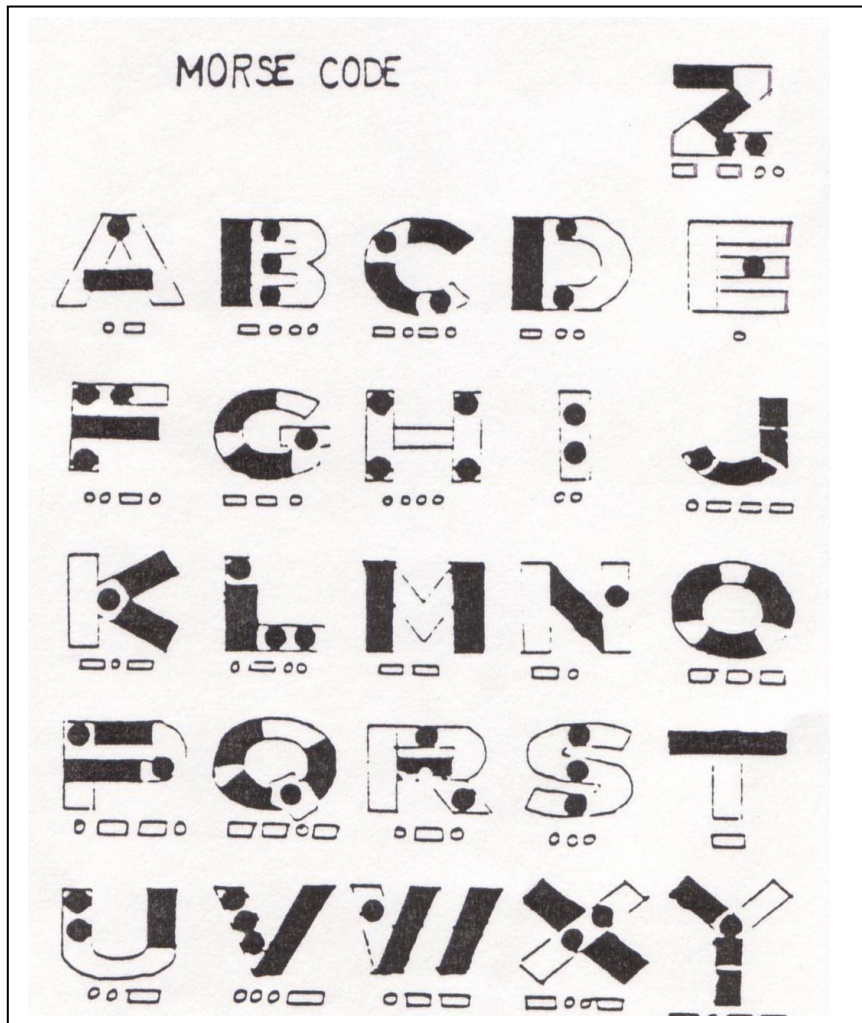
PROGRAM LINKS:

Junior Girl Scout badge - Water Fun #8

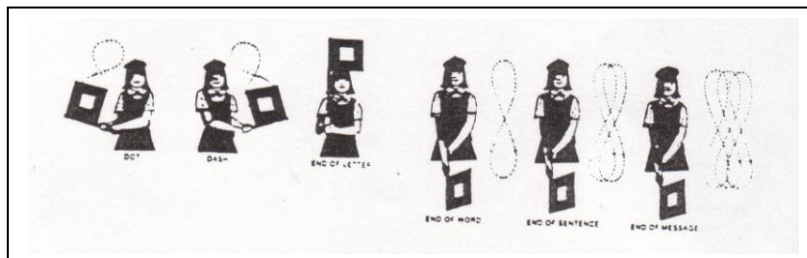
Cadette and Senior Girl Scout interest project – From Shore to Sea, Skill Builders #6

COMMUNICATION

Morse Code - The “dits” or dots and “dahs” or dashes are the thick dots and dashes placed on each letter so that they read from top to bottom or left to right (or both), and are outlined in correct order below the letters.



In the case of wigwag flags, the sender's right side is the "dits" or "dots," and the sender's left side is the "dahs" or dashes.



PROGRAM LINKS:

Cadette and Senior Girl Scout interest project – Do You Get the Message? Service Projects #4

C O N S E R V A T I O N

Please see the reference sheet at the end of this packet for suggestions of names, addresses, and web sites for organizations that work to protect wildlife in or near the water.

PROGRAM LINKS:

Junior Girl Scout badge – Environmental Health #5

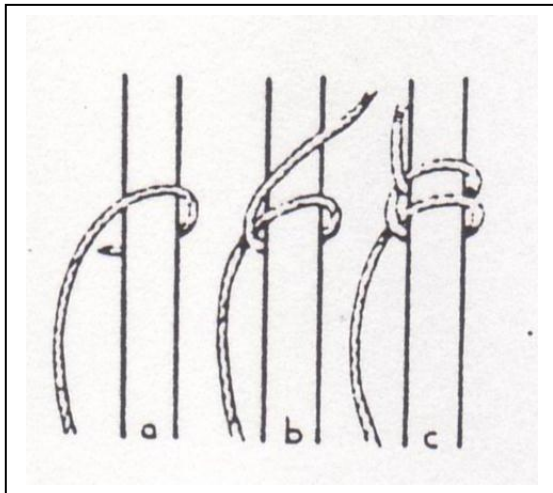
F I S H I N G

Contact your local Fish and Game Department. If a fish hatchery is not accessible, consider visiting a trout farm, fish ladders, a site where fish are being restocked, or any similar facility or activity.

PROGRAM LINKS:

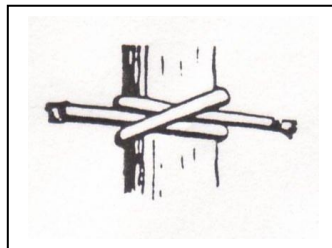
Junior Girl Scout badge - Water Wonders #9

L I N E R O P E A N D K N O T S



CLOVE HITCH

- To secure a boat or floating object to a stationary piling (post)
- To attach a clothesline to a tree



N A V I G A T I O N

The girls have learned the four CARDINAL points of the compass. The next four to learn are the four ORDINAL points. Using a blackboard, flip chart, or paper and pencil, draw a circle and divide into eight parts and name each POINT as shown below. Show the girls a real compass. Let each girl hold it to see how the NEEDLE always points the same way - NORTH. Move the compass around so the compass card reads NORTH under the needle. The compass is now ready to use as a direction finder.

See Compass Rose game sheet in appendix

W A T E R S P O R T S

Have a lifeguard teach and supervise how to use a kickboard safely.

Instruct the girls not to submerge the kickboard or sit on it and to not allow it to “pop” up. Generally speaking, have the girls hold the kickboard with two hands with their arms stretched out in front of them and use the kickboard for upper body flotation only.

TEN BASIC WATER SKILLS LEVEL I I

G I R L W O R K S H E E T

1. Demonstrate how to put on a “life jacket” or PFD (personal flotation device) out of the water. Tell why it is important to wear a PFD. Learn how to do H.E.L.P. and HUDDLE in the water.
2. Be able to demonstrate the following level of swimming competency:
 - Paddle stroke 25 yards un-assisted with your face in the water and repeatedly blow bubbles and come up for air
 - Kick and fin (with hands) on back, unassisted, for 15 yards
 - Tread water for 20 seconds and swim on your back to side of pool, unassisted
 - Retrieve a toy from 5 ft. depth and return to side of pool
3. Learn to identify two (2) different kinds of clouds and the kind of weather associated with each.
4. Visit and explore an aquarium, a marine nature center, a water life sanctuary, or some other site that has been set aside for teaching about water life.
5. Learn the Morse Code letters: E, I, S, H, T, M, and O. Send your name and the emergency S O S signal in Morse Code.
6. Find out about some organizations which work to protect life in or near the water.
7. Visit a fish hatchery.
8. Show that you can tie an overhand knot, a square knot, and a clove hitch. Know how they are used.
9. Be able to identify the eight (8) main points on a compass. (4 cardinal and 4 inter-cardinal).
10. Demonstrate how to use a kickboard safely.

TEN BASIC WATER SKILLS LEVEL III

LEADERS GUIDE SHEETS

HEALTH AND SAFETY

For the safety of the rescuer, the rule of thumb is “Row, Tow, Throw, Go”. Whenever possible, you should avoid getting into the water to assist a swimmer in distress.



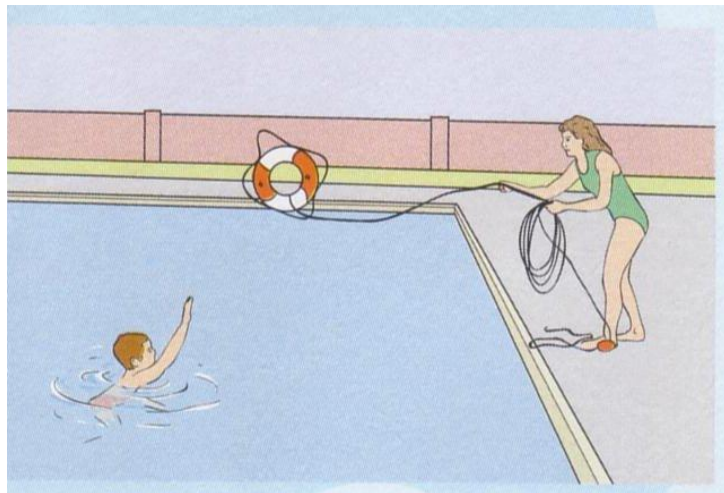
In a reaching rescue, the rescuer on the deck (do NOT bend over), with body anchored and securely braced, extends a hand, towel, ring buoy, pole, oar, board, etc. to the tired swimmer.

Ring Buoy and Line

Teach the girls to hold the ring buoy in the throwing hand, grasping it on the side away from the body. It should be held directly opposite where the line is attached. Place the foot farthest from the buoy forward across the end of the line. The coiled line hangs over the extended and open non-throwing hand. Show the girls how to do an underhand toss. They should aim the buoy just beyond the victim.

Leaders please note:

It takes lots of practice to be able to place the buoy accurately without hitting the victim. Use a non-human target as the victim during practice.



PROGRAM LINKS:

Junior Girl Scout badge - Outdoor Dabbler #1.2, Water Fun #4, Swimming #*1

S W I M M I N G

Buddy System: A safety practice in which girls are paired to keep watch over each other. The paired girls should be of equal swimming ability. (If you have an uneven number of girls, you may have one group of three).

Buddy Call: Any agreed upon signal at which the buddies must find each other quickly and raise joined hands. i.e. count; "1 chimpanzee, 2 chimpanzees, 3 chimpanzees, Ape!" Buddies should be together by "Ape".

PROGRAM LINKS:

Junior Girl Scout badge - Swimming #2, #5

W E A T H E R

BEAUFORT SCALE OF WIND VELOCITY

Beaufort Reading	Speed	Description	Observe
0	0-1 mph 0-1 knot	calm	No wind at all Smoke rises vertically Sailing craft becalmed Sea is like a mirror
1	1-3 mph 1-3 knots	light air	Smoke drifts slowly Wind vanes do not move Ripples on the water
2	4-7 mph 4-6 knots	slight breeze	Feel wind on face Leaves rustle Small wavelets Sailing craft close hauled
3	8-12 mph 7-10 knots	gentle breeze	Leaves, twigs, loose paper move constantly A light flag waves Good kite flying weather Very small waves w/crests
4	13-18 mph 11-16 knots	moderate breeze	Dust, snow, papers blow about Small branches move Ideal sailing weather

5	19-24 mph 17-21 knots	fresh breeze	Take care with all fires Small trees, shrubs sway Moderate sized waves Dust devils stirred up
6	25-31	strong breeze	Large branches sway Wires whistle Difficult to use umbrella Small craft off water
7	32-38 mph 28-33 knots	moderate gale	Whole trees in motion Inconvenience in walking Waves beginning to build
8	39-46 mph 34-40 knots	fresh gale	Twigs break off trees Storm warnings hoisted Garbage cans overturned

WATER LIFE

The life cycle starts with birth and includes dietary habits, migratory habits and sites, spawning habits and sites, life span, predators, and other threats to the survival of the species.

see resource list for reference

COMMUNICATION

The sender must get the attention of the receiver by some method. When sending pulse Morse Code, the sender sends the letters "CQ" to get attention. When using wigwag flags, the sender must wave the flags to get attention. Either way, the receiver must acknowledge that she is ready to receive the message by sending or signaling the letter "K".

If the receiver needs a letter or word repeated, she signals the letters "IMI". (Think of this as saying, "I missed it!") The sender must then repeat the ENTIRE WORD (never just a single letter) since she has no way of knowing which letter was missed. If the sender makes a mistake, she sends a series of the letter "E" (usually 5 or 6 in a row).

The sender finished her message with the letters "AR". (Think of this as saying, "All received?") The receiver acknowledges with the letter "R". (Think of this as saying, "Received!")

CONSERVATION

The Water Cycle

Heat evaporates millions of tons of water into the air daily. Lakes, streams and oceans send up a steady stream of water vapor. An amazing amount of water transpires from the leaves of green plants. A single apple tree may move 1,800 gallons of water into the air in a six-month growing season.

As moist warm air rises, it slowly cools. Finally it cools so much that its relative humidity reaches 100 percent. Clouds form and under certain conditions, rain or snow comes down. This eternal process of evaporation, condensation, and precipitation is called the "water cycle".

You could have the girls draw pictures of this. One fun way to demonstrate the water cycle is to be creative and do it as a skit or play.

Some examples that could be researched that relate to dependency are:

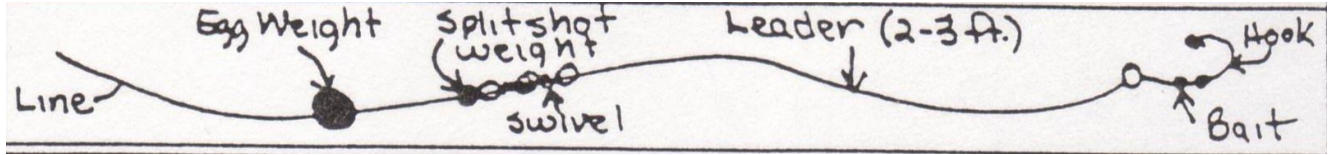
- What do sea otters eat?
- Why do sea otters need kelp beds?
- The hermit crab uses the shells of other sea life for protection. How do they go about getting those other shells?
- Coral reefs have a particularly delicate balance that you may want to explore.

Junior high science teachers and high school biology teachers can be excellent resources. Also, check your local PBS and other stations for television specials on nature and sea life. Look for *National Geographic* and Cousteau Society presentations, etc.

F I S H I N G

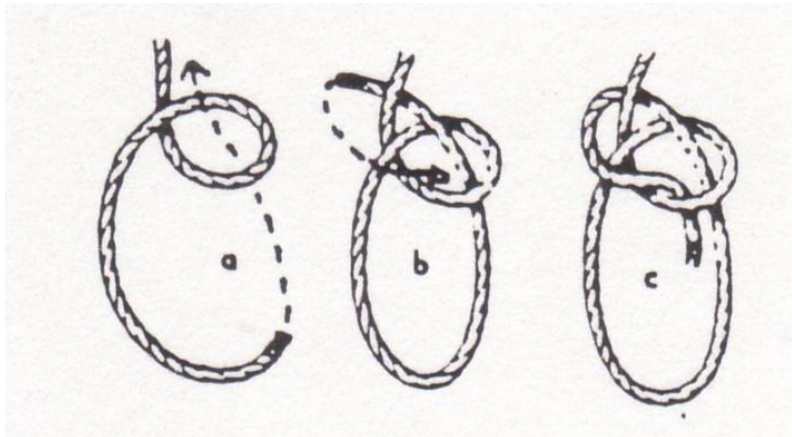
Equipment	Lake	Stream	Ocean
Rod & Reel Size	Sm. - Med. size Spinning or bait cast	X-Sm. - Sm. size Spinning, bait cast, or fly reel	Lg. - X-Lg. size Spinning or level wind
Line Type	4-8 lb. test	2-6 lb. test	10-12 lb. test
Weight Size	¼-1/2 oz. egg weights & split shots	¼-1/2 oz. egg weights & split shots	1-4 oz. pyramid ocean weights
Swivel Size	#6-10	#8-12	#1-4
Leader Type	2-4 lb. test	1-2 lb. test	5-15 lb. test
Hook Size	#6-10	#8-12	#1-6

Bait	Worms, insects marshmallows, cheese bait, fish eggs	Worms, insects cheese bait, fish eggs, artificial flies	Squid, clams, mussels, and anchovies
------	--	--	--



ROPE KNOTS

BOWLINE



- To make a fixed loop which cannot slip after being pulled tight
- To attach a rope to a boat, spar, or ring

To demonstrate the uses of the knots, you could have the girls act out situations in which the knots can be used and then tie the knots. Knot practice can be made fun by playing a relay game.

NAVIGATION

This is best accomplished outside at a meeting on a day outing. You will need at least one compass for each 4 girls, or one may be passed around from group to group. Explain how the needle always points to magnetic NORTH. (The needle is being pulled towards the earth's magnetic pole.) The compass must be held flat or laid on the ground. Turn the compass until the needle is on NORTH.

Have the girl stand facing NORTH and, without moving the compass, sight across the compass to an object that is NORTH and name it. Choose another object in a different direction. Then have the girl sight over the compass to that object and read the direction from the face of the compass. Continue in this fashion. You could devise a game ahead of time with predetermined objects and have the girls discover their directions.

WATER SPORTS

Watch out for that air valve!

Maneuver means: Having the girls use their arms as paddles, move themselves and the craft forward and backwards in a straight line for at least ten (10) feet, and turn to the right and left upon command and proceed in another direction.

You might want to set up a course for a relay race to practice these skills. Or invent an "Inner-tube Water Ballet".

TEN BASIC WATER SKILLS LEVEL III

GIRL WORKSHEET

1. Learn and demonstrate how to rescue a tired swimmer with a towel, pole, oar, life ring buoy, or other available equipment, without entering the water yourself.
2. Be able to demonstrate the following skills:
 - Make the Buddy System really work every time you swim. Use a “buddy board”. Pair off swimmers of equal ability. Practice “buddy calls” until every pair of buddies gets together quickly.
 - Be able to swim 25 yards: Freestyle, Elementary Backstroke, and Backstroke with proper form
 - Tread water for 1 minute and swim back to side of pool, unassisted.
3. Know what the Beaufort Scale is and what it measures. Be able to tell at what level on the Beaufort Scale small craft must not be on the water.
4. Find out about the life cycle of a fish, water mammal, sea bird, crustacean, or other water creature.
5. Learn about the procedures that are used for sending or receiving messages.
6. Explore how plants and sea life depend upon each other. Demonstrate, in any way you wish, the “Water Cycle”.
7. Learn what types of bait and equipment are needed for one of the following: lake fishing, stream fishing, ocean fishing. Go fishing and use what you have learned.
8. Show that you can tie an overhand knot, a square knot, a clove hitch, and a bowline. Demonstrate the uses of each knot.
9. Learn to use a compass. Be able to sight on an object and name the direction in which the object lies. You may use either letters or degrees.
10. Wearing a PFD, sit across an inner tube. Be able to get in and out of the inner tube safely in shallow water. Be able to maneuver it.

TEN BASIC WATER SKILLS LEVEL IV

LEADERS GUIDE SHEET

HEALTH AND SAFETY

CONDITION: Heat Cramps

SIGNALS: Painful muscle spasms, usually in the legs and abdomen.

CARE: Have victim rest in a cool place. Give cool water to drink. Lightly stretch the muscle and gently massage the muscle. DO NOT GIVE SALT TABLETS. Watch for signals of heat illness.

CONDITION: Heat Illness

SIGNALS: *Early stages* - Cool, moist, pale, or flushed skin, headache, nausea, dizziness, weakness, exhaustion.

CARE: Move the victim to a cool place. Loosen tight or remove perspiration-soaked clothing. Apply cool, wet cloths to the skin or mist with cool water and fan the victim. If conscious, give cool water to drink.

Late stages – Red, hot, dry skin. Changes in level of consciousness, vomiting.

CARE: If the victim refuses water, vomits or loses consciousness - send someone to call 9-1-1 or the local emergency number and place the victim on his or her side. Continue to cool by placing ice packs or cold packs on the victim's wrists, ankles, groin, neck and in the armpits. If the victim becomes unconscious, give rescue breathing or CPR if needed.

CONDITION: Hypothermia

SIGNALS: Shivering, numbness, glassy stare, apathy, weakness, impaired judgment, loss of consciousness (in late stage of hypothermia).

CARE: Check the scene and the victim. Send some to call 9-1-1 or the local emergency number. Gently move the victim to a warm place. Give rescue breathing or CPR, if needed. Remove any wet clothing and dry the victim. Warm the victim SLOWLY by wrapping in blankets or by putting dry clothing on the victim. Hot water bottles and chemical hot packs may be used when first wrapped in a towel or blanket before

applying. DO NOT WARM THE VICTIM TOO QUICKLY, such as immersing him or her in warm water. Rapid warming can cause dangerous heart rhythms.

PREVENTING HYPOTHERMIA

Protect yourself from hypothermia in the following ways:

- When you're near cold water – playing, working, hunting, fishing – remember that cold water is dangerous even if you don't intend to go in.
- Join in water activities only when and where you can get help quickly in an emergency.
- Wear a Coast Guard-approved life jacket (PFD) while boating. Have life jackets at hand whenever you're near cold water.
- If you will be near water in cooler weather, wear rain gear or wool clothes. Wool insulates you even when it is wet.
- Wear layers of clothes.
- Carry matches in a waterproof container. You may need to build a fire to warm up after a fall into cold water.

In general, illnesses caused by overexposure to extreme temperatures can be prevented. To prevent heat or cold emergencies from happening to you or anyone you know, follow these guidelines:

- Avoid being outdoors in the hottest or coldest part of the day.
- Change your activity level according to the temperature.
- Take frequent breaks.
- Dress appropriately for the environment.
- Drink large amounts of fluids.

CONDITION: Sunburn

SYMPTOMS: Superficial burn (first degree) involves only the top layer of skin. The skin is red and dry, and the burn is usually painful. The area may swell. Most sun burns are superficial burns. Superficial burns usually heal in 5 to 6 days without permanent scarring.

CARE: Stop the burning by removing the victim from the source of the burn. Cool the burn by using large amounts of cool water to cool the burned area. DO NOT USE ICE OR ICE WATER on other than *small* superficial burns. Ice causes body heat loss.

PREVENTION: First avoid exposure to the sun between 10:00 a.m. and 4:00 p.m. because UV rays are most harmful during this period. Second, wear proper clothing, which includes a shirt that covers the shoulders and that shades the head, back of the neck, face and eyes. Third, if you are going to be exposed to the sun, protect your skin and eyes. Commercial sunscreens come in various strengths. The American Academy of Dermatology recommends year-round sun protection including use of a high Sun Protection Factor (SPF) of 15 or greater for everyone, but particularly for people who

are fair-skinned and sunburn easily. Apply sunscreen 15 to 30 minutes before exposure to the sun and reapply it often (every 60 to 90 minutes).

Swimmers should use sunscreens labeled as water-resistant and reapply them as described on the label. Do not forget to apply lip balm that contains sunscreen with an SPF of 15 or greater.

It is equally important to protect your eyes from sun damage. Sunglasses are a sunscreen for your eyes and provide important protection from UV ray. Ophthalmologists recommend sunglasses that have a UV absorption of at least 90 percent.

CONDITIION: Fishhooks snags

SYMPTOM: Fishhook stuck in skin

CARE: If the fishhook is deeply embedded in a person's skin, do not try to remove it. Treat it like an object stuck in a wound and secure it with dressings and bandages. The person should see a doctor. If the fishhook is not embedded but has cut the skin, clean the wound, stop the bleeding with direct pressure on the cut, and cover it with a sterile dressing. The victim should chick with his or her doctor to see if a tetanus booster shot is needed.

PROGRAM LINKS:

Junior Girl Scout badge - Small Craft #9, Swimming #6

S W I M M I N G

Buddy Board: A check board system indicating, by buddies, who is in or out of the water and in which area.

PROGRAM LINKS:

Junior Girl Scout badge - Swimming #8, #9, Water Fun #10

W E A T H E R

Anemometer - Measures wind speed.

Barometer - Indicates changes in atmospheric pressure. The average good weather reading is 29.9 to 30.0 inches. A rapid rise hails the approach of good weather, as far as rain is concerned, but may also mean wind. A sudden drop means strong winds and wet weather if clouds indicate rain.

Hygrometer - Measures the degree of moisture in the air. Cold air can hold less moisture than hot air. When the percentage reaches 100% there will be precipitation.

Thermometer - Measures the degree of temperature.

PROGRAM LINKS:

Junior Girl Scout badge - Weather Watch #1

WATER LIFE

One way to explore differences is to use the encyclopedia to answer the following questions or similar ones:

- Why does coral live only in the South Pacific Ocean?
- Why do trout live only in lakes or streams?
- Why do sardines live only in cool seas?
- Why do tuna live only in the ocean?

Then discover one unique feature about the water life in your own area. You might want to call or write your local Fish and Game Department or visit them on- line at www.dfg.ca.gov/.

PROGRAM LINKS:

Junior Girl Scout badge - Water Wonders #10

COMMUNICATION

The same general procedures govern the sending of both semaphore and Morse Code. Semaphore is the quickest sight method of sending messages since each motion or position is a single letter, whereas in Morse Code, one needs to send an average of 3 motions or positions per letter.

The procedures concerning use of International Code flags are somewhat more sophisticated and include the additional concept of certain signal flags having the meaning of a whole sentence. For our introductory purposes, just expose the girls to the simple alphabet in the colorful flags.

See the reference section for full page semaphore and International Code flag instructions.

CONSERVATION

The Conservation Pledge: "I give my pledge as an American to save and faithfully to defend from waste the natural resources of my country -- its soil and minerals, its forests, waters and wildlife."

Go over the wording with the girls to make sure they understand each term. Many girls don't know what "natural resources" means.

"Interference" (negative or positive) could mean:

- pollution
- irrigation
- acid rain
- dams
- forest fires

- reforestation
- unchecked erosion

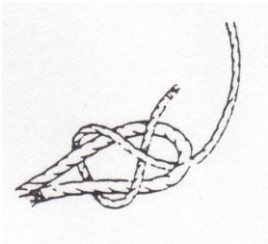
You might explore the organizations listed in Level II as further resources.

F I S H I N G

There is more than one way to approach this topic. One suggestion is for you to lead an open discussion touching on various types of water life. You might have encyclopedias and other resources available, or make assignments for presentation at the next meeting.

FISH:	Types of saltwater and fresh water fish are too numerous to mention. See a good encyclopedia.
MAMMALS:	(Cetaceans) Whales, porpoise, dolphins
SHELLFISH:	(Crustaceans) Crayfish, crab, shrimp, lobster. There are about 10,000 species.
MUSSELS:	(Mollusks) Snails, clams, oysters, squid, scallops, octopus, abalone.
PLANT LIFE: (saltwater)	Seaweed, algae, "Irish moss" is edible. Other, such as "agar" are used in laboratories. Even more are used for medicine. The ashes of kelp is a source of iodine.
PLANT LIFE: (fresh water)	Watercress is used in salads. Wild rice is also edible.

E I N E R O P E A N D K N O T S S H E E T B E N D



- Used to join two pieces of rope of different thickness.
- Sailors named it in the days of sailing ships when they would "bend" (tie) the "sheets" (ropes in the rigging of a ship.)

N A V A G A T I O N

Marine navigation aids are maintained by the United States Coast Guard and have an annual maintenance budget of over \$11,000,000. They include:

- Lighthouses, which are the signal stations by means of which mariners determine their exact location.
- Day Beacons, which are structures (not buoys) and are not lighted. They are used for marking obstructions, entrances to harbors, important turning marks in a channel, etc.
- Offshore Light Stations occupy stations at which it would be impracticable to build lighthouses.
- Range Lights, which are two lights, located some distance apart, visible usually in one direction only, and used together.

- Buoys, whose primary function is to warn the mariner of some danger, some obstruction, or change in the contours of the sea bottom. They are given numbers and are painted. Numbers increase from seaward and are kept in approximate sequence on the two sides of the channel. Odd numbered buoys mark the left hand sides of channels entering from seaward. Even numbered buoys mark the right hand sides of channels entering from seaward.

Types of Buoys include:

1. Lighted
2. Can
3. Spar
4. Unlighted Bell
5. Unlighted Whistle
6. Nun

WATER SPORTS

Step into the center of the craft, keeping your body weight low, in a crouch, and holding the sides of the craft. Never stand up in a small craft. Get out in a similar manner.

TEN BASIC WATER SKILLS LEVEL IV

G I R L W O R K S H E E T

1. Learn First Aid for the treatment of hypothermia, sunburn, heat exhaustion, heat stroke, and fish hook snags. Learn how to perform rescue breathing.
2. Show the following swimming competency:
 - Be able to swim 50 yards: Freestyle, Backstroke, with proper form
 - Swim 25 yards: Breaststroke and Sidestroke
 - Tread water for 2 minutes, then retrieve a toy from 5 ft. depth and return to side of pool
3. Know what a barometer, thermometer, and hygrometer are, and what they tell about the weather.
4. Find out what is unique about the water life in you locality that is different from the water life in some other area(s).
5. Become familiar with semaphore flag signaling and International Code flags. Learn to send the emergency SOS signal using semaphore flags. Spell your name in International Code flags.
6. Learn and understand the Conservation Pledge. Discover some effects of man's interference with the natural water cycle in your area.
7. List five (5) varieties of water life that are edible and find out where each is found. Discover some products that we get from water life other than food. Know how they are used.
8. Show that you can tie a square knot, two half hitches, a clove hitch, bowline, and sheet bend. Know how they are used.
9. Learn about some aids to navigation and what they stand for such as buoys, beacons, radio direction finders (RDF), lighthouses, etc.
10. Practice getting in and out of a small craft (canoe, kayak or rowboat) safely.

TEN BASIC WATER SKILLS LEVEL V

LEADERS GUIDE SHEETS

HEALTH AND SAFETY

Help the girls earn the First Aid badge.

SWIMMING

In addition to a certified lifesaver and watchers, you will need a Red Cross instructor to certify your girls. Use your instructor to help with the additional swimming requirements at this level.

WEATHER

Tide is the daily rising and falling of the sea, caused by the moon, and to a lesser extent by the sun.

Current is the flow of water in a given direction

A current may flow in the same direction (such as a river current), while the tide flows “in” and “out” according to the moon phases.

A rip-tide is a current in the ocean which goes in a different direction from the rest of the water. It is dangerous to swimmers.

Avoid turning broadside to a strong current.

It will be easy to tow or canoe with the current, but it will be more difficult against the current. Currents may force the boat onto rocks or far from shore.

Small Craft Advisory is a red pennant flown alone. It indicates that winds and seas, or sea conditions alone are considered hazardous to small craft. You must not go out. IF you are out, you must return immediately.

PROGRAM LINKS:

Junior Girl Scout badge - Weather Watch #5, #6

WATER LIFE

Consider driftwood, coral shells, pearls, mother of pearl, scrimshaw, sea fans, etc. as substances. You may produce a water subject mural, sculpture, mosaic, or scrapbook as a group.

COMMUNICATION

HINT - To avoid frustration while learning to send and receive a code, have the receiver acknowledge EACH LETTER after it is sent, rather than after each word.

C O N S E R V A T I O N

The "Human Vacuum Cleaner" Procedure can be done as follows: Walk in a line, side by side, about an arm's length apart, with trash bags, picking up anything that was not put there by nature.

You could ask an organization if there is a project that you could do in your area.

F I S H I N G

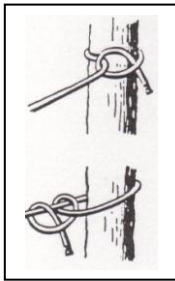
Have fun with this. Choose from several varieties of edible water life. You might make a meal or have a progressive dinner. Consider watercress salad; rice wrapped in seaweed; shrimp or crab cocktail; calamari; steamed clams, fish sticks; etc.

PROGRAM LINKS:

Junior Girl Scout badge - Water Wonders #8

L I N E R O P E A N D K N O T S

T W O H A L F H I T C H E S



- To attach a rope to a pole, mooring, or ring. To finish, push them together and snug them by pulling on the standing part.

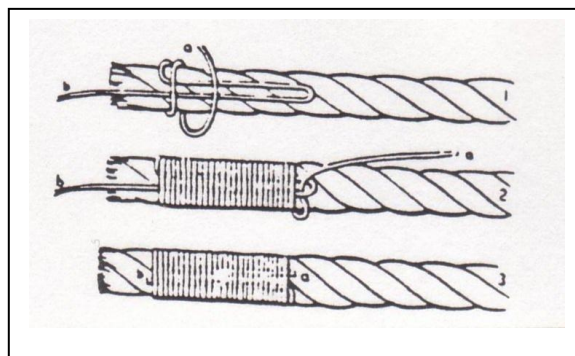
F I G U R E E I G H T

- Used only at the end of a rope as a stopper or to prevent slipping through an opening. (It is more efficient than an overhand knot and is easier to untie.)



W A Y S T O K E E P T H E E N D O F A R O P E F R O M F R A Y I N G

1. Whipping (See diagram below)



2. For ropes

made of synthetic

fibers like nylon, one can fuse the strands by applying enough heat to the raw ends.

3. For a more permanent and satisfying treatment on a natural fiber rope, you can use a back splice. It creates a small lump on the rope that may be undesirable for some specific uses. (See diagram).

PROGRAM LINKS:

Junior Girl Scout badge - Water Fun #7

N A V I G A T I O N

Charts and Piloting

In order to travel anywhere safely in a boat, a skipper must have knowledge of the depths of the water, the shoals and the channels. He or she must also know the location of aids to navigation and landmarks, and where ports and harbors can be found.

At any given position, the skipper can generally measure the depth, and see some landmarks; but for true safety he has to know the depth ahead, the actual location of those aids to navigation which he can presently see, and where more aids are located relative to the course he plans to follow. For the best route to his destination, he must know where it lies with respect to his present position, and the dangers to navigation which may be along the way.

All of this information can be determined only from charts, one of the most essential and important items of equipment for piloting a boat. It would take a skillful boatman indeed to cruise any distance into strange waters without the necessary charts, even if he were equipped with all the other devices – and it would be foolhardy of him to attempt it. The skipper must not only have the required charts; he must know how to use them.

W A T E R S P O R T S

Maneuver means: Using oars or paddles, move your craft forward and backwards in a straight line for at least ten (10) feet, and turn to the right and left upon command and proceed in another direction.

You might want to set up a course for a relay race to practice these skills.

TEN BASIC WATER SKILLS LEVEL V

GIRL WORKSHEET




1. Complete the requirements for the First Aid badge.
2. Be able to show the following swimming competency:
 - Be able to swim 50 yards: Freestyle, Backstroke, Breaststroke & Sidestroke, with proper form
 - Swim 25 yards: Butterfly
3. Know what hazards tides and currents present. Know what a “small craft advisory” is and which signal indicates that small craft must be removed from the water.
4. Discover at least two (2) art forms that use, as their medium, substances which come from water environments, OR discover at least two (2) art forms that have water life as their subject.
5. Try sending and receiving messages by using any of the following:
 - Buzzer, drum, flashing lights (Morse)
 - Morse Code flag signaling
 - Semaphore flags
 - International Code flags
6. Find out how little it takes to damage the oceans, lakes, or rivers by doing a clean-up project by, in, or near the water.
7. Clean, cook, and serve some from of fish or other food that comes from the sea, lakes, or rivers.
8. Demonstrate tying and the uses for a:
 - Square knot
 - Half hitches
 - Clove hitch
 - Bowline
 - Sheet bend
 - Figure eightDiscover one or two ways to keep the ends of a rope from fraying.
9. Discover the difference between a map and a chart. Using a navigation chart for the area of your choice:
 - Find information regarding dangers
 - Find the depth of an area of water

- Locate the compass rose
 - Locate the distance scale
 - What are some of the basic symbols and abbreviations that you find?
10. Be able to maneuver safely: any small craft, such as a canoe, kayak or rowboat.

Semaphore Teaching Aid

				THE SEMAPHORE ALPHABET							
CHARACTER	HAND FLAGS	CHARACTER	HAND FLAGS	CHARACTER	HAND FLAGS	CHARACTER	HAND FLAGS	CHARACTER	HAND FLAGS	CHARACTER	HAND FLAGS
A		F		K		O		S		X	
B		G		L		P		T		Y	
C		H		M		Q		U		Z	
ANSWERING SIGN		I		N		R		V		ATTENTION	
D		J						W		BREAK	
E											
OR ERASE SIGN											

INTERNATIONAL CODE FLAGS TEACHING AID

INTERNATIONAL FLAGS AND PENNANTS			ALPHABET FLAGS	NUMERAL PENNANTS
A lfa  <i>Speed Trial</i>	K ilo  <i>Stop Instantly</i>	U niform  <i>Standing into danger</i>	1 	
B ravo  <i>Explosives</i>	L ima  <i>Stop, Something to Communicate</i>	V ictor  <i>Require Assistance</i>	2 	
C harlie  <i>Yes</i>	M ike  <i>Doctor on Board</i>	W his- key  <i>Require Medical Assistance</i>	3 	
D elta  <i>Keep Clear</i>	N ovem- ber  <i>No</i>	X ray  <i>Stop Your Intention</i>	4 	
E cho  <i>Altering Course to Starboard</i>	O scar  <i>Man Overboard</i>	Y ankee  <i>Carrying Mails</i>	5 	
F oxtrot  <i>Disabled</i>	P apa  <i>About to Sail (Lights out)</i>	Z ulu  <i>Shore Stations</i>	6 	
G olf  <i>Want a Pilot</i>	Q uebec  <i>Request Pratique</i>	REPEATERS 1st Repeat 	7 	
H otel  <i>Pilot on Board</i>	R omeo  <i>Way is off my ship</i>	2nd Repeat 	8 	
I ndia  <i>Altering Course to Port</i>	S ierra  <i>Going full speed astern</i>	3rd Repeat 	9 	
J uliet  <i>Semaphore</i>	T ango  <i>Do not pass ahead of me</i>	 CODE <i>Code and Answering Pennant (Decimal Point)</i>	0 	

NOTE: J flag should be spelled Juliett.

**SPELL YOUR NAME IN INTERNATIONAL
CODE FLAGS**

REFERENCE LIST AND RESOURCES

GSUSA, *Safety-Wise*

American Red Cross First Aid Book

GSUSA, Brownie Girl Scout Try-Its

GSUSA, Junior Girl Scout Badge Book

GSUSA, Cadette and Senior Interest Awards

Boy Scout Field Book, Merit Badge Booklets

GS-MWVC, Camping Skills Training Manuals, Level I, II, III (knots)

Piloting, Seamanship and Small Boat Handling by Charles F. Chapman, M.E.
The Hearst Corporation, New York, NY

California Department of Fish and Game:

www.dfg.ca.gov/

Chart Issuing Agencies

Coast and Geodetic Survey
Environmental Science Services Administration
Washington, D.C. 20235

U.S. Naval Oceanographic Office
Washington, D.C. 20390

U.S. Army Engineer District, Lake Survey
630 Federal Building
Detroit, Michigan 48226

Weather Information

U.S. Weather Service has free publications locally available at the Federal Building in Westwood.

The daily Los Angeles Times also has information on moon phases, tides, surf and sea conditions, ultraviolet index, air quality as well as weather conditions on it's Weather page.

Aquariums and Tide Pools

Cabrillo Marine Aquarium
3720 Stephen White Drive
San Pedro, CA
310/548-8397

The aquarium offers a variety of fun and educational opportunities such as whale watching, special events, art workshops and a sea club. Visit their web site at www.cabrilloaq.org. Closed Mondays and major holidays.

Orange County Marine Institute
24200 Dana Point Harbor Drive
Dana Point, CA
949/496-2274

Features sea-life exhibits and is next to the Tallship Pilgrim, a full-size replica. A variety of programs are offered, from musicals and dramatic plays to research and educational programs. Reservations required.

Roundhouse Marine Lab & Aquarium
At the end of the Manhattan Beach Pier
310/379-8117

Stop by and experience the wonders of local marine life. Inside are eight primary aquaria, each displaying a brilliant selection of marine fish and invertebrates. Sleep with the Sharks and Sea Story Time are also available.

Aquarium of the Pacific
100 Aquarium Way
Long Beach, CA
888/826-7257

The aquarium offers educational programs for children of all ages that look at aquatic habitats, marine mammals and much more! Group rates are available for parties of 10 girls or more. They offer a unique program for Girl Scout groups called the Pacific Explorer Program. Check out their web site for more information at www.aquariumofpacific.org

Muth Interpretive Center of Upper Newport Bay
2301 University Drive
Newport Beach, CA
949/923-2290

The Interpretive Center's unique earth sheltered architecture keeps it hidden from view at street level, while simultaneously creating a feast for the eye once visitors reach the

main entrance. The center's mission statement is: "To promote and support the protection and preservation of California Coastal Wetlands through environmental education". Visit them at www.newportbay.org or www.ocparks.com/unbic

Birch Aquarium at Scripps Institution of Oceanography
2300 Expedition Way
La Jolla, CA
858/534-FISH

The complex contains more than 60 tanks, a demonstration tide pool, and an interactive museum. The outdoor tide-pool plaza offers a panoramic view of the La Jolla coast. A wave machine creates natural water motion for the abundance of local marine animals that inhabit the pool. This tide-pool gives visitors the opportunity for a close-up look at sea urchins, sea cucumbers, sea stars, and much more.

They are open from 9am-5pm daily (closed Thanksgiving Day, Christmas Day, New Year's Day). Adults (18+) \$10.00, Sr. (60+) \$8.50, Youth (3-17) \$6.50, 2 & under are free. 3-hour courtesy parking. Visit the aquarium at www.aquarium.ucsd.edu

Fishing locations

On Tuesdays in the "Outdoors" section of the Los Angeles Times there is a Fish Report which includes information on what kind of fish are being caught in various locations and where trout is being stocked. An expanded fish report can be obtained at www.latimes.com/outdoors

Newport Pier
Balboa Pier
Seal Beach Pier
Huntington Beach Pier

No fishing license required to fish off of the piers. License is required to fish in any freshwater or saltwater location for anyone 16 years of age and older. Freshwater 1-day license is \$10.50, 2-day license is \$16.55, annual license (January 1 through December 31) is \$32.50. For an annual license good both in fresh and salt water, the cost is \$36.60. Fishing licenses are available at Big 5 sporting goods stores. Be sure to check on daily fish limits.

Frank G. Bonelli Regional Park
120 Via Verde Park Rd., San Dimas 91775 909/599-8411
250 acre lake for fishing, swimming, water skiing, wind surfing, and sailing. HOURS: sunrise – 10pm (March 1-October 31) sunrise – 7pm (November 1 – February 28).
Vehicle entry fee applies. Thomas Bros. Guide Map # Page 600 D-6

Santa Fe Dam Recreation Area
15501 E. Arrow Hwy., Irwindale 91706 626/334-1065

70 acre lake for fishing, swimming, and sailing. Lake stocked with bass, trout, and catfish. HOURS: 6:30am-8pm. Vehicle entry fee applies. Thomas Bros. Guide Map # Page 600 D-6

Prado Regional Park

16700 S. Euclid Ave., Chino 91710 909/597-4260

Fishing, camping, picnics. Lake stocked with catfish and trout. Fees: Vehicle \$5.00 excluding holidays and special events. \$7.00 holidays.

Hansen Dam Park Recreation Area

11770 Foothill Blvd., Lake View Terrace 91342 818/896-6215

Fishing lake and picnic area. Open Monday through Sunday 7am-10:30pm.

Additional Lake Fishing

Alondra Park Lake 38850 W. Manhattan Beach Blvd., Lawndale 90260

Balboa Park Lake 6335 Woodley Ave. or 6300 Balboa Blvd., Van Nuys 91406

Belvedere Park Lake 4800 3rd St., Los Angeles 90022

Cerritos Park Lake 19700 S. Bloomfield Ave., Cerritos 90701

Debs Lake 4235 Monterey Rd., Los Angeles 90033

Downey Wilderness Park 10999 Little Lake Rd., Downey 90240

Echo Park Lake 1632 Bellevue Ave. or 751 Echo Park Blvd., Los Angeles 90026

El Dorado Park Lakes 7550 E. Spring St., Long Beach 90815

Ervin "Magic" Johnson Park Lake 905 E. El Segundo Blvd., Los Angeles 90059

Harbor Lake 25820 Vermont Ave., Harbor City 90710

Hollenbeck Lake 415 S. St. Louis St., Los Angeles 90033

John Ford Park Lake 8000 Park Lane, Bell Gardens 9022201

Ken Hahn State Recreation Area 4100 S. La Cienega Blvd., Los Angeles 90056

La Mirada Park Lake 13701 S. Adelfa, La Mirada 90638

Legg Lake 823 Lexington Rd., South El Monte 91733

Lincoln Park Lake 3501 Valley Blvd., Los Angeles 90031

McArthur Lake 653 S. Alvarado St., Los Angeles 90057

Mile Square Regional Park 16801 Euclid St., Fountain Valley 92648

Peck Road Park Lake 5401 N. Peck Rd., Arcadia 91006

Reseda Park Lake 18411 Victory Blvd., Reseda 91335

Private fishing locations

Mt. Baldy Trout Pools, 909/765-9246

No license required. No limit. Open every Saturday, Sunday and National Holidays (closed Thanksgiving and Christmas) 9am-4:40pm. Prices: Your pole, \$1.00 per pole, Their equipment, \$2.00 per pole. 9" fish, \$1.95 up to 18" fish, \$14.95. (All fish are cleaned and packaged in ice)

