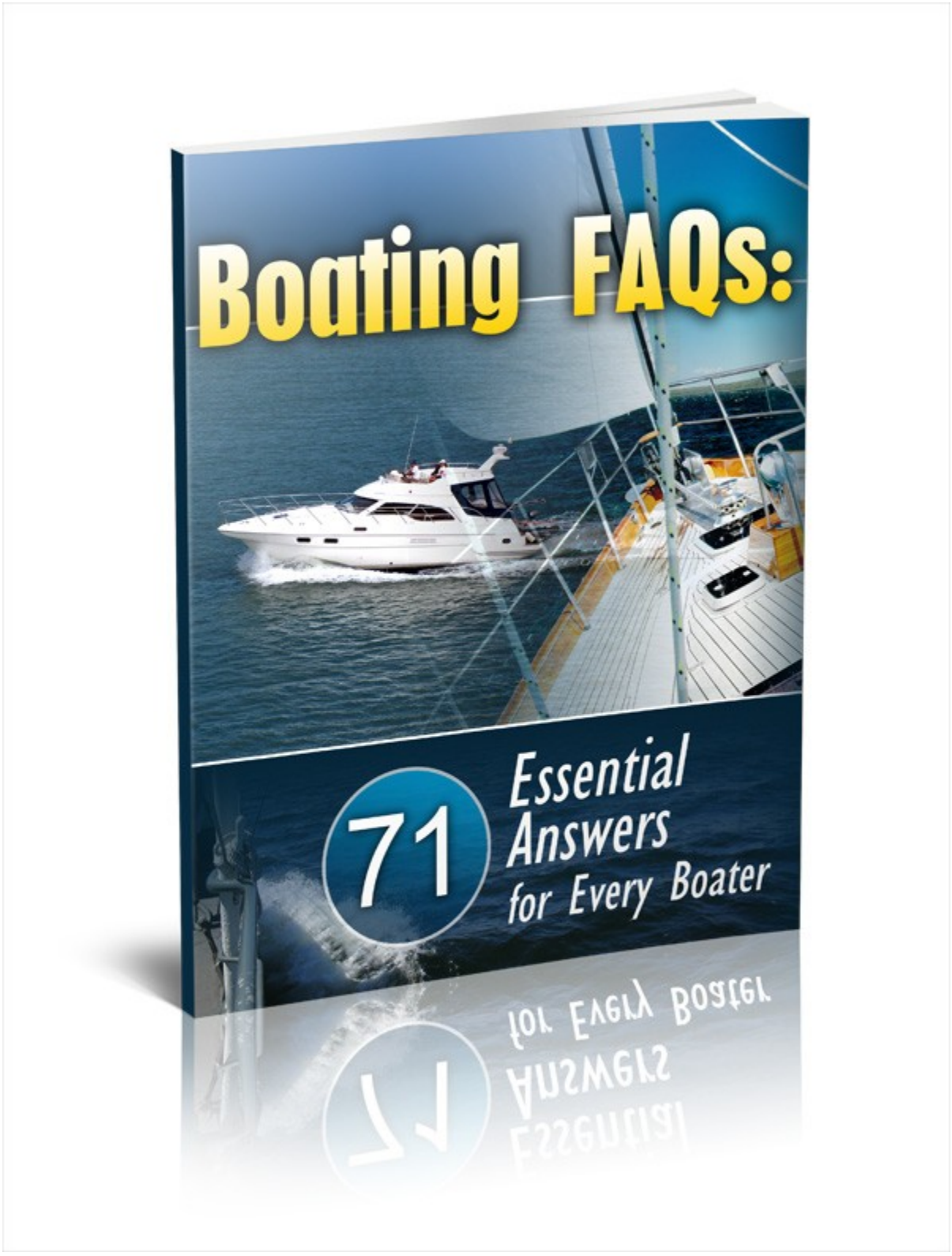

Boating Frequently Asked Questions

71 Essential Answers for Every Boater

By Bruce Stott
Gulf Islands Cruising School Ltd.

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"Essential reading for the novice boater - be it sailboat or motorboat. This booklet will compliment basic Operators' certificate and other boating information that every novice should be familiar with to safely enjoy our B.C. waters"

Glenn Rogers - Parksville, B.C.

About the Author

Bruce Stott first sailed with his cousin in the mid 1950's. In the early 1960's he attended the Junior sailing program at Royal Victoria Yacht Club in Victoria BC.

In 1970 he began instructing adult dinghy programs at the Calgary Junior Sailing School in Calgary Alberta. In 1971 he was certified as a Learn to Sail Advisor and qualified to teach up to Bronze Level 5. The Calgary Junior Sailing School was purchased by the City of Calgary Parks and Recreation and he served as a Senior Instructor through 1979 teaching approximately 3,500 adults how to sail.

In 1980 Bruce and Fran moved to Sidney BC and opened Gulf Islands Cruising School Ltd. which they operate to this day. As well as teaching, they operated a power and sail bareboat charter company for a number of years. In July 1981 he was certified as a Canadian Yachting Association Basic Cruising Instructor and in October 1981 achieved Advanced Cruising Instructor certification. Cruising Instructor Evaluator was achieved in April 1983 with responsibility to teach and examine new Cruising Instructors.

When the Learn to Powerboat Standards were introduced in 1991, Bruce was one of the first Power Instructor Evaluators certified.

In 1988 he obtained:
- Charter Boat Operator Certificate, Camosun College

- Transport Canada - Master of Small Passenger Craft, 40 Ton, 40 Passengers

- CYA Coastal Yachtmaster Certification

- Communications Canada, Examiner Class V, & Radiotelephone Operator's Restricted Certificate, Maritime Compulsory.

In addition, he is employed by West Coast Powerboat Handling as the Senior Instructor and is accredited by Transport Canada to deliver the Marine Emergency Duties, A3 and the Small Vessel Operator Proficiency courses to operators of Non-Pleasure (Commercial) vessels. He has taught in locations throughout BC and as far east as Marathon ON.

He has taught aboard sailing vessels up to 56' and motor yachts up to 86'.

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Our Products and Services

Gulf Islands Cruising School Ltd. provides instruction in cruising sailboat and powerboat operation. Lately, the demand from clients has been for private instruction aboard their own vessels. Topics covered include vessel checkout, safety equipment, systems operation and maintenance, vessel docking and undocking, maneuvering in confined waters, mooring and anchoring, person overboard recovery, navigation and use of electronic navigation aids.

The home-study Coastal Navigation course is a popular course, particularly for clients who do not live locally. Successful completion of the exam leads to Canadian Yachting Association Coastal Navigation certification.

We also teach and examine for the Pleasure Craft Operator Card (PCOC) and the Restricted Radiotelephone Operator's Certificate, ROC(M).

www.cruising.bc.ca
www.unlimited-articles.com
www.cruising.bc.ca/boating_forum/index.php

Introduction

A variety of Frequently Asked Question's based on the experience of the author and questions received from new and experienced boaters. Thank you to all those who contributed questions. Information included will enhance safe boating practices.

Canadians may find up-to-date information in Transport Canada's Safe Boating Guide. Specific regulations pertaining to your country may be obtained by contacting your local Coast Guard.

> Although I have been boating all my life, the book still provides a useful reminder of the essentials of boating. This book includes knowledge that any boater must have for safe boating. The book is readable and informative.
>
> Well done!
>
> Frank Langer
> Nanaimo, BC

Boating Terms

Here are some basic boating terms which may be of assistance:

- Port - The left side when facing the bow.
- Starboard - The right side when facing the bow.
- Windward - The direction from which the wind is coming.
- Leeward - The direction in which the wind is going, side away from the wind
- Amidships - the mid point of the boat between bow and stern, or from side to side.
- Abeam - A direction to either side of the boat at right angles to a line from bow to stern.
- Ahead - in front of the boat.
- Astern - behind the boat.
- Underway - when the boat is not moored, anchored or aground. It is floating free from the earth.
- Leeway - the motion of the boat to leeward.
- No way - when the boat is not moving.
- Making way - when the boat is moving.

Navigation

Charts

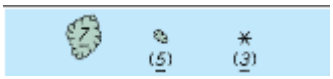
While a map gives information about the land, a chart gives information about the water and the sea bottom.

On a marine chart, the colors have significance. White is deep water, light blue is shallow water, dark blue is really shallow and green is land that covers and uncovers with the tide. The dry land is a light tan color. Remember to operate your boat in the white area, anchor your boat in the light blue and go for a walk on the tan.

Chart Symbols

1. What is the difference between a cross, a snowflake and a cross with 4 dots?

These are rocks of differing heights which are explained on the following page:



Rock which covers and uncovers with tide, with height above chart datum

Rock awash at chart datum

Underwater rock of unknown depth, dangerous to surface navigation

Marina

Custom Office

No anchorage area

Kelp - a type of seaweed, is nature's warning of shallow water. Kelp usually is found in waters of less then 9 metres(30 feet). The reason is not enough sunlight penetrates deeper water to enable the kelp to start growing.

Submarine cable Do not anchor in the area and possibly snag the cable with your anchor.

2. What do the letters in the water mean?

The letters describe the type of bottom, useful when you are selecting an anchorage. The composition of the bottom is given with the main ingredient listed first. Therefore, MSSh is primarily Mud, some Sand and a little Shell.

Mud	M	Clay	Cy, Cl	Stones	St
Sand	S	Weeds	Wds	Ooze	Oz

Shells Sh Rock R Boulders Bo
These symbols are contained in *Symbols, Abbreviations, Terms, Chart 1,* available from any chart dealer. It is also available online in either html or PDF format See Appendix 1 http://www.charts.gc.ca/publications/chart1-carte1/index-eng.asp

3. How can one determine "upstream" and "downstream" in deciding to leave markers on port or starboard?

There are six definitions for the "upstream direction". This is the direction taken by a vessel when proceeding from seaward, upstream in a river, towards the headwaters of a lake, into a harbour, or with the flood current direction. In general, the upstream direction is clockwise around North America or in a northerly direction on the Pacific Coast.

My seventh rule is "Look at the chart" The chart will always show you the location of the hazard and the safe water. There are at least two locations near Sidney where if you assume you know what the Aids to Navigation are indicating, you can easily go aground.

When a vessel is proceeding in the upstream direction, starboard hand aids (Red) must be kept to starboard and port hand aids (Green) must be kept to port. The basic rule is Red, Right Returning. This rule applies in Area B which includes North and South America, Japan, the Republic of Korea and the Philippines. The rest of the world is Area A and the colors are reversed.

4. What is an Aid to Navigation versus a Navigation Aid?

An Aid to Navigation is located outside the vessel. Examples are buoys, day beacons, ranges and lighthouses. A Navigation Aid is aboard your vessel such as compass, depth sounder, timepiece, radar, GPS, and binoculars.

Tides and Currents

5. What's the difference between tide tables and current tables?

Tide is the vertical motion of the water caused mainly by the gravitational effects of the sun and the moon. When there is no vertical motion this is referred to as stand. Current, or more correctly, tidal stream is the horizontal flow of the water. The current coming in from the sea is called a flood current while the current flowing out to sea is the ebb current. When there is no horizontal movement it is referred to as slack, slack water or the turn.

"Commonly used expressions like "flood tide" and "ebb tide" should be avoided, as they confuse the horizontal motions of tidal currents with the vertical displacements of the tide" *Oceanography of the British Columbia Coast* – Richard

E Thomson Published by Department of Fisheries and Oceans.
It is critical to understand that the time of low water stand and the time of the turn to flood do not normally occur at the same time. In the Sidney area, the difference of the time of low water stand and the turn to flood in Sidney Channel can be 1 hour and 40 minutes or greater. Likewise the time of high water stand and the turn to ebb do not correspond.

6. How do tide and current affect my navigation?

You need to know the height of the tide, whether it is rising or falling and by what amount. With this knowledge, you can determine the minimum depth under your vessel and make an informed decision. Many times we have seen boaters who did not check the tide and they wake up with their vessel aground. Years ago we were docked at Sidney Spit Marine Park for the night. Upon checking the tide, we discovered that by 0930 we would be aground. We arose early, had breakfast, moved the boat to the anchorage and then did the dishes and got underway.

Tides are so important to the safety of your boat and crew. I witnessed two boats rafted at anchor in Montague Harbour. At the time of anchoring the tide, being high, provided adequate depth. By 7 a.m. the boats were hard aground when the tide fell overnight. They had anchors out from their mastheads. Logs served as props under the hulls keeping the boats from toppling over. By rough calculation they were likely aground between 3 and 4 a.m. and could not expect the tide to float them off for several hours.

Currents are important when planning your direction of travel and time of departure. By reading the current tables the night before, you can plan your departure to take advantage of a favorable current. There is no point getting up early so you can battle an opposing current for most of the morning. Knowing the direction of the current is of major importance if you are sailing in the summer when the winds are light.

Even on a power vessel the currents can play a large factor. On one trip from Sidney to Victoria and return, the current was ebbing with us in the morning and flooding with us for the return in the afternoon. The client owned a Meridian 38' twin engine powerboat. The normal cruise speed is 12.1 knots. When we were out in Sidney Channel, the owner noted our ground speed was 14.2 knots. This was an increase of over 17% saving fuel and travel time.

By careful planning to take maximum advantage of the currents, you can minimize your impact on the environment and also your wallet.

Regulations and Licensing

7. Do I need a license to operate a boat?

Since September, 2009, every operator of a power-driven vessel in Canada is required to carry proof of proficiency with them. Proof may take three forms:

1. proof of having successfully completed a boating safety course in Canada prior to April 1, 1999;
2. a pleasure craft operator card issued following the successful completion of a Transport Canada accredited test;
3. a completed rental-boat safety checklist. The checklist will be provided by the boat rental company and covers such items as safety equipment, vessel operation and local hazards. A staff member will go through the list with you prior to departure, both of you will sign and you will be given a copy to show to any enforcement officer.

In addition to Proof of Proficiency, a number of insurance companies have required a minimum number of hours of instruction or CYA certification before the boat owners are allowed to operate on their own.

8. Besides the Pleasure Craft Operators Certificate, are there any other certifications required by law in Canada for pleasure craft sail and power boaters?

Proof of Proficiency is the only legal requirement to operate a pleasure vessel, of any size. You will also need photo ID so the Enforcement Officer may verify your identity. For other countries, check your local regulations.

9. What are the minimum legal requirements to operate a vessel commercially in Canada - eg. fishing guide, tour boat operator or taking paid passengers?

Commercial vessels are now referred to as Non-Pleasure Vessels.

Operating a non-pleasure vessel falls under Transport Canada regulations. The requirements vary if you are:
Carrying passengers or only cargo,
Carrying more than 12 passengers,
Operating a vessel of over 5 Gross Tons, approximately 8.5 metres in length,
Operating in sheltered water

Two of the certificates you may need are Marine Emergencies Duties (MED) and

Small Vessel Operator Proficiency (SVOP).

The MED A3 is a Basic Safety Course for Operators and Crews of:

-Small Non-Pleasure vessels of not more that 150 GT,
-not more than 12 passengers,
-without berthed accommodation,
-operating not more that 25 nautical miles from shore, in any waters.

If you are a fishing guide, crew boat or water taxi operator, or operate a non-pleasure vessel for an employer, you need to have this certificate.

GT is Gross Tonnage which is a measure of the internal volume of the vessel and is not related to the weight of the vessel.

SVOP is a 26 hour Transport Canada accredited course for operators of Small Non-Pleasure Vessels. The course meets the requirements of a stand-alone course which addresses the need for minimum training of operators of commercial (non-pleasure) vessels, other than tugs and fishing vessels,

- up to 5 gross tonnage engaged on a near coastal, class 2 or a sheltered waters voyage,
- and for fishing vessels up to 15 gross tonnage or 12 meters overall length engaged on a near coastal, class 2 (including an inland voyage on Lake Superior or Lake Huron)
- or a sheltered waters voyage.

Most operators will require both a MED certificate and SVOP.

In the Gulf Islands, the RCMP is patrolling and checking that operators and vessels are properly equipped and have the correct certifications.

If you are considering advertising skippered charters and have any questions relating to what certificates you may need, contact your Local Transport Canada office. In the United States, contact the US Coast Guard.

Master/Operator Requirements http://www.tc.gc.ca/eng/marinesafety/tp-tp13813-booklet-part2-336.htm

	Vessel	Near Coastal 1	Near Coastal 2		Sheltered Waters
			> 2 nautical miles from shore	< 2 nautical miles from shore	
Passenger-Carrying Vessels (<12 passengers)	> 5 GT	Master 150 GT (Domestic) (if endorsed for limited, contiguous waters)	Limited Master < 60 GT	Limited Master < 60 GT	Limited Master < 60 GT
	≤ 5 GT and > 8m		SVOP	SVOP	SVOP
	> 6 passengers and ≤; 8 m		SVOP	SVOP	SVOP
	≤ 6 passengers and ≤ 8 m		SVOP	SVOP	PCOC
Workboats	> 5 GT	Master 150 GT (Domestic) (if endorsed for limited, contiguous waters)	Limited Master < 60 GT	Limited Master < 60 GT	Limited Master < 60 GT
	≤ 5 GT and > 8m (except tugs)		SVOP	SVOP	SVOP
	≤ 8m (except tugs)		SVOP	PCOC	
	Tugs		Limited Master < 60 GT	Limited Master < 60 GT	Limited Master < 60 GT

This table is for the convenience of users. As listed on Transport Canada's Web site as of 20 March 2010. If any discrepancy is found between the *Marine Personnel Regulations* and the table, the Regulations shall prevail.

SVOP - Small Vessel Operator Proficiency training certificate
PCOC - Pleasure Craft Operator Card
GT - gross tonnage
m - metres
> - greater than
< - less than
≤ - less than or equal to Implementation dates for the table are as follows:

Workboat (including tugs)
≤ 10 GT Nov 7, 2010

Passenger-carrying vessel
≤ 5 GT or ≥ 8m Nov 7, 2009

10. How do I know the non-pleasure vessel I am hiring is properly certified?

When a small non-pleasure vessel had passed the inspection, Transport Canada will issue a decal which will be displayed on the outside of the vessel.
The operator of the vessel is required to carry copies of their SVOP, MED, ROC and First Aid certificates. Any qualified operator should be able to produce these certificates if asked.

11. Where do I place the vessel license numbers?

As near as possible to the bow, in contrasting color to the background, in block letters of minimum height of 3".

12. What is the format of the license number?

Previously the license number was in the following format:
nnlnnnnnn where n=number and l=letter
the first two digits tell you the city and the letter tells you the province.
14K 123456 14 means the boat was licensed in the Victoria office
K is the province of British Columbia

Service Canada is now the agency which issues pleasure vessel licenses. The new format is similar to the United States system where the first two letters are the province or state.

BC 123456 would be a British Columbia vessel
WA 123456 would be a Washington State vessel.

If you are operating a non-pleasure vessel you would apply to Transport Canada and obtain a "C" license. The format is C 123456 BC where the province code is at the end.

13. What do I do if an Enforcement Officer wants to board my boat?

You shall invite them aboard. Under the *Small Vessel Regulations, Part VII*, *#46,"*An Enforcement Officer may, in order to verify and ensure compliance with these Regulations
(a) go on board a vessel;
(b) examine a vessel and its equipment;
(c) require that the owner or the master or other person who is in charge or appears to be in charge of the vessel produce, forthwith,

(i) personal identification, and
(ii) any license, document or plate required by these Regulations; and
(d) ask any pertinent questions of, and demand all reasonable assistance from, the owner or the master or other person who is in charge or appears to be in charge, of the vessel.
#47 an enforcement officer may, in order to ensure compliance with these Regulations or in the interests of public safety, direct or prohibit the movement of vessels or direct the operator of a vessel to stop it.

14. What laws apply to boating?

In Canada, The Canada Shipping Act - 2001 and the Criminal Code are the main governing legislation. Boaters should be aware of:
The Small Vessel Regulations, - relate to required equipment,
The Collision Regulations - govern how to avoid collisions,
Competency of Operators of Pleasure Craft Regulations,
Vessel Operation Restriction Regulations, speed limits and other restrictions,
The Contraventions Regulations - lists the fines for infractions.

See Appendix I for links to these Regulations.

15. What papers are important to have on board to prove ownership, registration, competency, etc.?

You will need photo ID, proof of competency, (a Pleasure Craft Operator Card is one form,) and the license or registration certificate for the vessel. If you have a VHF radio, you should also have your Radio Operator's Certificate, ROC(M).

16. What are the main Collision Regulations?
Regulations for the Prevention of Collisions
There are 46 Rules and 4 Annexes contained in these Regulations. Every boater should be familiar with the content of the Regulations.

Following are a few of the Rules:
Rule 5 Lookout – *Every vessel shall at all time maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.* This means if you vessel is equipped with radar, it shall be on and be observed.

Rule 7 Risk of Collision – *Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If the is any doubt such risk shall be deemed to exist.* When you detect a vessel approaching, you must use all means available, visual bearing, compass bearings

and radar, to determine if there is a risk of collision. If you are not sure, you must assume there is a risk of collision.
Rule 8 Action to avoid Collision – *Any action taken to avoid collision shall, if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of good seamanship.* Any alteration or course or speed shall be readily apparent to another vessel. Remember – make it big and make it early.

Section II – Conduct of Vessels in Sight of One Another
Rule 12 – Sailing Vessels
a) *When two sailing vessels are approaching one another, so as to involve risk of*

collision, one of them shall keep out of the way of the other as follows:

i. *when each has the wind on a different side, the vessel which has the wind on the port side shall keep out of the way of the other,* Port tack gives way to Starboard tack
ii. *when both vessels have the wind on the same, the vessel which is to windward shall keep out of the way of the vessel which is to leeward*
iii. *if a vessel with the wind on the port side sees a vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or on the starboard side, she shall keep out of the way of the other.*

b) *For the purpose of the Rule the windward side shall be deemed to be the side opposite to that on which the mainsail is carried.* One easy way to remember is to ask yourself which side of the mainsail are you looking at. If it is the port side you are on Port tack.

The following three Rules are the same as the Rules on the highway.

Rule 13 Overtaking-International
a) *Notwithstanding anything contained in the Rules of Part B, Sections I and II, any vessel overtaking any other vessel shall keep out of the way of the vessel being overtaken.* Keep clear of the vessel you are overtaking.

Rule 14 Head-on Situation
When two power-driven vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other. This is the narrow road rule.

Rule 15 Crossing Situation-International
(a) When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel. This is the person on the right rule.

Rule 16 Action by Give-way Vessel
Every vessel which is directed to keep out of the way of another vessel shall, so far as possible, take early and substantial action to keep well clear.

Rule 17 Action by Stand-on Vessel
(a) (i) Where one of two vessels is to keep out of the way of the other shall, so far as possible, take early and substantial action to keep clear.

(ii)The latter vessel may however take action to avoid collision by her manoeuvre alone, as soon as it becomes apparent to her that the vessel required

to keep out of the way is not taking appropriate action in compliance with these Rules.

17. What do the various horn/sound signals mean?

Rule 32 Definitions
a) *the word "whistle" means any sound signalling appliance capable of producing the prescribed blasts and which complies with the specifications in Annex II to the Regulations.*
b) *The term "short blast" means a blast of about on second's duration*
c) The term "prolonged blast" means a blast of from four to six seconds' duration

Rule 34 Manoeuvring and Warning Signals-International
(a) *When vessels are in sight of one another, a power-driven vessel underway, when manoeuvring as authorized or required by these Rules, shall indicate that manoeuvre by the following signals on her whistle:*
- *one short blast to mean"I am altering my course to starboard"*
- *two short blasts to mean "I am altering my course to port"*
- *three short blasts to mean "I am operating astern propulsion"*

Rule 35 Sound Signals in Restricted Visibility-International
The following signals shall be sounded at intervals of not more than 2 minutes.

In or near an area of restricted visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:

(a) A power-driven vessel making way through the water shall sound one prolonged blast

(b) A power-driven underway but stopped and making no way through the water shall sound two prolonged blasts in succession with an interval of about 2 seconds between them

(c) A vessel not under command, a vessel restricted in her ability to

manoeuvre, a vessel constrained by her draught, a sailing vessel, a vessel engaged in fishing, and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraph (a) or (b) of this Rule, sound three blasts in succession, namely one prolonged followed by two short blasts

Chartering and Instructing

18. What do I need to bareboat charter a vessel?

Bareboat charter means you are renting a boat without a skipper or crew, similar to renting a car. The charterer must have the qualifications to operate the boat safely. Some charter companies ask that a second person also be qualified in case the primary skipper is unable to operate the boat.

Most charter companies will look favorably at your experience. As a former charter fleet operator, I was looking for experience as an owner or operator of a similar sized vessel to the one they are wanting to charter. How many days have you spent operating your vessel, how many nights have you spent at anchor and what waters have you cruised are all questions you may be asked. Some charter companies consider that Basic, Intermediate and Coastal Navigation are required to charter. The American Sailing Association calls the Intermediate Standard "Bareboat Chartering".

Can you answer "YES" to the following questions?

- Am I confident handling a boat of this size in tidal waters?
- Have I the navigational skills to safely pilot a boat?
- Do I have copies of any certification showing my qualifications?

19. Do you have any suggestions for an itinerary to cruise the Gulf Islands departing from Sidney, BC?

First day - the quaint settlement of Fulford Harbour on Saltspring Island or anchor at Portland Island.

Second day - Bedwell Harbour on South Pender Island. If you are lucky the Dall Porpoises may play around the bow of the boat as you cross Boundary Pass. Either stay at Beaumont Marine Park on a mooring or at anchor or docked at Poets Cove Resort. Time for a shower and a swim in the outdoor pool.

Third day - cruise to Montague Harbour Marine Park on Galiano Island. If the winds are light or you want a short day, you could stay the night at Otter Bay Marina on North Pender Island.

Fourth day - Ganges Harbour on Saltspring Island. Ganges is the largest town in the Gulf Islands. Be sure to check out the Craft Fair and all the shops. If you have a sweet tooth stop at "Glad's Candy & Ice Cream Shop".

Fifth day - anchor in Glenthorne Passage on Prevost Island.

Sixth day - dock at Fulford Harbour on Saltspring Island or anchor in Royal Cove on Portland Island, whichever one you missed on the first day.

Seventh day - return to the Marina.

20. What is the process for becoming a cruising or powerboat Instructor?

You must be a proficient boater and love to share your knowledge with others.
Basic Cruising Instructor
Prerequisites

1. Be age 18 or older:
2. Have the CYA Basic Cruising Standard;
3. Have the CYA Coastal Navigation Standard;
4. Have 2 or more years sailing experience;
5. Have Red Cross or St. John Ambulance Standard First Aid Certificate or nationally recognized equivalent and a current nationally recognized certificate in CPR level A or higher;
6. Have a PCOC card;
7. Have a VHF Restricted Operator's Certificate (Maritime) with DSC endorsement;
8. Demonstrate characteristics and motivations worthy of being at CYA LTC/P Instructor;
9. Demonstrate a willingness to support the goals of the CYA LTC/P program.

Note: It is important candidates be current in their sailing skills and knowledge prior to entry into Instructor clinics. The sailing evaluation demands above average basic sailing skills and there is no time during the clinic for remedial work.

You must attend a Basic Cruising Instructor Clinic and successfully complete all portions.

Basic Powerboat Instructor

1. Be age 18 or older:
2. Have the CYA Basic Outboard Standard;
3. Have 2 or more years boating experience;
4. Have Red Cross or St. John Ambulance Standard First Aid Certificate or

nationally recognized equivalent and a current nationally recognized certificate in CPR level A or higher;
5. Have a PCOC card;
6. Have a VHF Restricted Operator's Certificate (Maritime) with DSC endorsement;
7. Demonstrate characteristics and motivations worthy of being at CYA LTC/P Instructor;
8. Demonstrate a willingness to support the goals of the CYA LTC/P program.

Safety

21. Why do I need to have a float plan?

A float or sail plan is a document left with a responsible person ashore. This document contains details of the vessel, who is aboard, route of travel and arrival and departure times. In the event you do not arrive on time, this information may be passed to your local police or Coast Guard.

22. How do I file a float plan?

A sample sail plan is given on page 70 of the Safe Boating Guide. The Guide may be obtained at most marine retailers and marinas. It is also available online as noted in Appendix 1.

The sail plan should include the following information:
- Owner information
- Vessel Information including Name ,license number, colour, distinguishing features, cellular or satellite phone, MMSI number
- Safety Equipment on board
- Trip details – date and time of departure, route, estimated date and time of arrival, number of persons on board
- Search & Rescue Telephone

The float plan should be left with a responsible person with directions to call Search & Rescue if you have not returned at the appointed time.

23. Are there standards for required equipment?

Yes, in Canada the floatation equipment, flares and fire extinguisher must meet Canadian standards (consult Transport Canada). Likewise in the United States, the same equipment must meet US Coast Guard standards.

24. What Safety equipment do I require on my vessel?

The requirements vary by country, size of vessel and whether it is a pleasure vessel or not. In Canada the requirements for pleasure vessels are listed in the "Safe Boating Guide". See Appendix 1. My memory aid is "Five F's". The items may be grouped into the following Five categories:

Fire	Fire extinguisher
Flood	Bailer, manual pump
Flares	Pyrotechnics
Flotation	Life jacket or personal flotation device, floating line, life ring with line attached, reboarding device to allow a person to board the boat from the water.
Fog	Navigation lights, waterproof flashlight, sound signals, manual propelling device, anchor and line

25. What is the use of a heaving line?

A heaving line has many uses. It may be used to assist in recovering a person overboard, passing line to a dock attendant or passing a line to a disabled vessel so they may be taken under tow. My personal preference is a throw bag which contains the line. To use the throw bag, the mouth of the bag is opened and the end of the line retrieved. Often the end has either a spliced loop or a bowline. Holding the end of the line, you throw the bag and the line feeds out as the bag flies through the air. If you are standing, you may throw the bag underhand, keeping your elbow locked. If you are sitting in a kayak, you may throw the bag sidearm.

26. What should be included in a pre-departure checklist?

Safety equipment – Do you have all the equipment required by law? Is it serviceable and easily accessible? Flares less than four years old? Fire extinguisher serviced within the year?

Put on PFD's (Personal Floatation Devices) or Lifejackets. Ensure proper sizes for all persons. Are they in good condition?

Weather – Check the forecast and monitor the weather throughout your trip.

Float plan – File a plan with a responsible telling them where you are going and when you will return.

Carry a First Aid Kit, basic tools and spare parts.

Navigation aids – do you have all the charts and publication required?

Fuel – plan on using 1/3 of the fuel to get to your destination, 1/3 to return and 1/3 in reserve.

Fluid levels – check all engine fluids, water, holding and fuel tanks

Engine – check all hoses, lines and belts

Vessel condition – Are all systems maintained and operational? I have had a number of instances teaching on other people's vessels where we found stiff gear shift, frozen steering, inoperative bilge pumps and leaks. It is usually far easier to fix a problem when you are secured alongside in a marina.

If you are launching a boat, make sure the drainage plug is in place.

Conduct a safety briefing for your guests so they can assist you in an emergency.

27. Weather Forecast

The Marine forecasts are broadcast by the Canadian Coast Guard on the Continuous Marine Broadcast on VHF weather channels. The forecasts are updated at 0400, 1000, 1600 and 2200.

The forecasts indicates what the weather conditions should be for the next 24 hours. Area forecasts give more detail for local areas such as Juan de Fuca Strait and Georgia Strait. The forecast winds are the direction from which the wind is coming and the wind speed is in knots.

Sometimes in the forecast you will hear the terms "backing" and "veering". A backing wind is moving anti-clockwise while a veering wind will move clockwise. Therefore, if the forecast states "Winds southwest 10 veering to northwest 10 - 15" means the wind will shift through the west.

There are four weather alerts you should recognize:

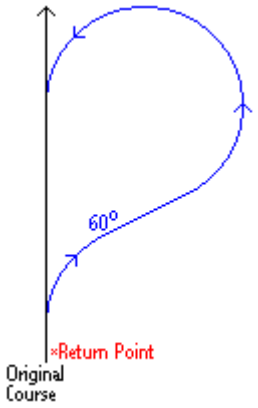
Strong Wind Warning indicates forecast winds of 20 to 33 knots. This was formerly called a Small Craft Warning.

Gale Warning indicates forecast winds of 34 to 47 knots.

Storm Warning indicates forecast winds of 48 to 63 knots.

Hurricane Force Wind Warning indicates winds of over 64 knots are forecast.

28. What is the recommended man overboard recovery procedure when under power?



If the person is easily visible, an Anderson turn is appropriate. This is a simple circle back to the victim.

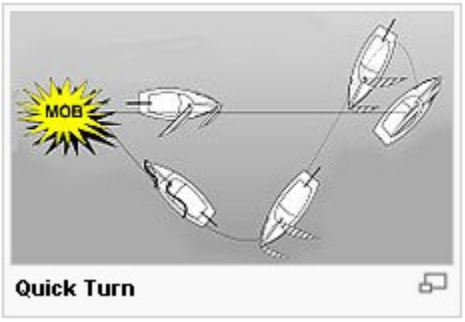
If at night or in poor visibility and the victim has gone out of sight, use a Williamson Turn.

In response to a man overboard, put the rudder toward the person *e.g.*, if the person fell over the starboard side, put the rudder over to starboard.

- After deviating from the original course by about 60 degrees, put the rudder to the opposite side.
- When heading about 20 degrees short of the reciprocal, put the rudder amidships so that vessel will turn onto the reciprocal course. Look for the bubbles from your wake in the water and steer into the middle of the bubbles.

There is currently some debate about approaching the victim. If you have the vessel to windward of the victim, the vessel will drift down onto the victim. With a small vessel, their legs may go under the hull and make it very difficult to bring them aboard. If you approach the victim from downwind, they will be facing you and you should have better control of your vessel. Use a heaving line to make contact with the victim and bring them to the vessel. As they come alongside, stop your engine.

29. What is recommended under sail?



Call loudly "man overboard"

1. Assign a person to keep the victim in sight and clearly point towards him or her.
2. Hit the MOB button on the GPS
3. Start the engine and leave it in idle
4. Change course to a beam reach and hold for 15 seconds
5. Head into the wind and tack, leave the jib fluttering
6. Veer off until the boat is at a broad reach
7. Turn up wind until the vessel is pointing at the victim, at this point the vessel should be on a close reach.
8. Slacken the main sail until the vessel comes to a stop with the victim in the lee side of the boat
9. Hoist the victim on board with a sling, the spinnaker halyard can be very helpful if it is available.

Diagrams obtained from Wikipedia

30. Should I wear my PFD while aboard my boat?

I have recently viewed a new DVD Cold Water Boot Camp which clearly shows why everyone needs to be wearing a PFD or lifejacket while aboard a boat. If you think you do not need to wear your PFD because you are a good swimmer, viewing this video will likely cause you to change your mind.

You may view a short version by download or the DVD is available by contacting the producer.

31. What is the difference between a Life Jacket and a Personal Flotation Device (PFD)?

Lifejackets are designed to turn an unconscious person to a face-up position. There are three types, SOLAS, Standard and Small Vessel. They are intended for use in an abandon ship situation. The only approved colours are Yellow, Red and Orange. They are not comfortable for continuous wear.

Personal Floatation Devices are more comfortable to wear, however they are not designed to turn an unconscious person onto their back. They come in a variety of colours and styles, both inherent and inflatable flotation. Some of the styles include vest, jackets, coveralls and inflatable collars.

32. What fabrics best protect from hypothermia in the water? Is wool better than cotton, if one prefers natural fibers?

"When you are in the water it really depends on the thickness of the clothing for insulation. When you get out of the water things are different. Wool will provide more protection and it is easier to get the water out of it and dry it (as long as it is not cold enough for the water to quickly freeze). Cotton will basically never dry out and provides poor insulation when wet." Dr. Gord Giesbrecht

33. What are the dangers of a lee shore?

A lee shore is the shore that is located on the lee side, downwind, of your vessel. The danger is if you lose your engine and cannot anchor, you will end up aground on the lee shore. For example, when sailing from Victoria to San Francisco, the Washington, Oregon and California shores are lee shores to the prevailing westerlies. Most people will sail from 65 to 150 miles off-shore to give themselves the sea room they feel is required. If they encounter a storm from the west and need to run down-wind, there will be miles of sea room before they get near the shore.

34. Why is it important to operate the blower motor before starting the engine?

Gasoline fumes are heavier than air and will settle into the bilge and create an explosion hazard. By running the blower, you will remove these fumes from your vessel. Under the *Canada shipping Act, Small Vessel Regulations, Part VI, #39*

*"**No person shall start up a gasoline-powered small vessel unless the engine space blower has been operated for a period of not less than 4 minutes immediately before the start-up.*** This is also a ticketable offence under *The Contraventions Act.* To be safe, sniff the exhaust from the blower. If there is a strong smell of gasoline, **Do Not Start** your engine. Open your engine compartment and investigate to determine the source of the fumes.

Previously, I was at a fuel dock when a vessel refueled. They ran the blower, but did not check for fumes. When the engine was started, there was an explosion and fire. Fortunately, they were able to extinguish the fire and only one person suffered burns to his arm. Upon investigation, the source of the gas was the clamps on the fill hose at the fuel tank were loose. The boat had just been serviced and it appeared that the fill hose had been changed and the hose clamps had not been tightened upon installation. Gasoline was visible on the top of the tank and in the bilge. The people on the boat were extremely lucky.

Tools and Spares

35. What tools should I carry in my tool kit?

A basic tool kit includes the following:
Adjustable wrench,
Vise grips,
Pliers,
Knife,
Socket set,
A set of Allen keys, both standard and metric,
A hacksaw,
A multi-bit screwdriver,
Hammer,
Multimeter

36. What parts should I carry?

This is a partial list which must be added to for your specific vessel.

Fuses to replace every fuse onboard. Check every instrument's power supply cable for an in-line fuse holder.
Spare bulbs for every light, including your navigation lights,
Electrical and duct tape,
Spare flexible wire – be sure to use marine grade wire which is tinned to prevent corrosion,
wooden bungs to fit every through-hull fitting,
fuel and oil filters,
engine, transmission, steering, and trim tab oils,
water pump impellers and/or a spare pump,
spare propeller, nuts and washers – make sure you have a socket or wrench that fits the nut,
spare belts for the engine,
if you have a gas engine, spare spark plugs, points and distributor cap,
an assortment of stainless hardware such as bolts, nuts, screws, cotter pins and split rings.

A good practice if you are planning a long trip is to purchase all the spare parts you may need. Before departure install all the spares and put the used parts in storage as your spares. There are a number of advantages to this procedure:

1. You now know how to install the part,
2. If you have any difficulty, your mechanic is nearby
3. You know you have the correct tools you will need
4. You have verified that the factory shipped you the correct part. There is nothing like being hundreds of miles from home awaiting a part and then finding out that the wrong part has been shipped.

37. What is the proper way of setting an anchor?

Anchoring Basics

Anchoring is a method of using your boat's anchor to secure the boat for a short time, such as lunch or perhaps overnight.

The objective is to lower the anchor to the bottom, lay out the anchor rode with slack and when you have the required amount of rode deployed secure the rode and let the anchor set into the bottom.

38. How do I Choose an Anchorage?

When choosing an anchorage there are four criteria you should observe.

1. Shelter from wind and waves - you want to be anchored in a protected area away from any other traffic.

2. Good holding bottom - composition of the sea bed that will give your anchor a firm hold. We are fortunate in the Pacific Northwest that many harbours have bottoms composed of mud, sand, shells and clay.

3. Adequate depth at low water - over the years I have seen a number of boaters who forgot to check the range of the tide overnight. It is a real shock to wake up falling out of your bunk because you have gone aground.

4. Swing room - refers to the requirement for your vessel to be able to swing 360 degrees around the anchor and not contact any hazards or other boats.

39. What is Scope when anchoring?

Scope is the ratio of the amount of anchor rode you are using divided by the distance from the bottom to your anchor roller. Always remember to allow for the height of the tide during your stay.

If you are using a line & chain combination the following ratios are considered the minimum for safety:

Lunch stop - 3:1
Overnight - 5:1
Open anchorage - 7:1

Let us look at an example. The harbour chart indicates a depth of 20 feet at Lowest Normal Tide. When we arrive the tide has a height of 3' and will be rising to a height of 7' overnight. The anchor roller is located 3' above waterline.

Therefore the maximum depth overnight will be
20' charted depth + 7' of tide = 27'
Height of anchor roller above water = 3'
Total distance= 30'

If we are stopping overnight and want a scope of 5:1 we will need to use 30' x 5 = 150' of rode.

The only way to determine the amount of rode you are using is to have the anchor rode marked. There are plastic markers available which are woven into the strands of the anchor line, colored coded and marked with the length.

If you are using an all chain rode, you can spray paint the chain. A sample code I have used is Red at 5 metres, White at 7 metres and Blue at 10 metres. The pattern then repeats and at 20 metres paint two Blue bands and every 10 metres

I add another Blue band.

40. What is the swing circle for anchoring?

Swinging circle is the area your vessel may occupy as it swings to its anchor. For practical purposes you may assume the radius of the circle is equal to the length of the anchor rode you have deployed. Once your anchor is set, you have claim to the area of your swinging circle. If another vessel anchors within your circle, you are within your rights to ask them to move to avoid any possible contact between the vessels.

41. What is The Anchoring Process?

How to avoid yelling!

Here is a simple step by step process that will allow you and your crew to anchor confidently and quietly.

1. Select your anchorage using the criteria in "Choosing Your Anchorage" above.

2. Check the chart for any hazards and circle around your selected anchoring watching your depth sounder.

3. Discuss with your crew your anchoring plan so everyone knows where you plan to anchor.

4. Proceed to your desired anchoring location, heading into the wind or current, whichever is stronger.

5. Have your crew lower the anchor until it is just in the water. The crew can observe the wave around the anchor and observe when the vessel has stopped.

6. Go astern with your engine(s) to stop the vessel.

7. When the crew observes there is no wave around the anchor, that is the signal to lower away.

8. At this time your vessel will be moving astern as the crew pays out the anchor rode. It is important that there be no tension in the anchor rode as this will cause the anchor to drag across the bottom.

9. You may need to go to neutral to reduce the vessel's speed.

10. When the crew has let out the correct amount of rode, they secure the anchor rode by cleating the line or stopping the winch.

11. When the anchor bites into the bottom, tension will come on the rode and the bow of the vessel will swing and point towards the anchor.

12. The crew will observe the anchor rode coming taut and the angle of the rode to the water surface will decrease.

13. Operate astern propulsion while everyone aboard observes a range or transit, two objects ashore that are in line. If the objects remain in line then the vessel is not moving and the anchor is set.

14. To confirm that the anchor is well set, you may want to slowly increase engine RPMs while observing the range. It is better to find out the anchor is not holding at 4:00 pm than at 4:00 am!

15. Once you are satisfied that the anchor is holding, slowly idle down and go to Neutral. You will observe the range moving as the anchor rode pulls the vessel forward.

42. How do I use a stern Line?

In a crowded anchorage, you may want to limit your swing. One way to do this is to take a stern line to shore. Make sure that other boats around you are doing the same thing or you will have other vessels swinging into you.

Usually the vessel is anchored and a crew member takes the dinghy to shore carrying the end of a stern line. The line is secured around a tree or large rock. In some of the Marine Parks, eye bolts have been secured in the rocky shoreline and are often marked with a blaze of paint or red survey tape. In this case, the preferred method is to run the line from the vessel, through the eye bolt and back to the vessel. In the morning it is just a matter of releasing one end of the line from the vessel and pulling the line back.

An easy way to store the line is to use a garden hose reel. A former owner of one of the charter vessels gave me this tip. He bought a plastic hose reel, removed all the hose fittings and then took the reel to a local chandler and had it filled with a polypropylene line.

The challenge is estimating your distance from shore so you have the correct scope. Often with students, we would end up with more scope that required. We would set the anchor and when the student had taken the stern line to shore, they would come to the end of the line before they returned to the vessel. It was then a matter of letting out more anchor rode until the stern line could be

brought back to the vessel.

A trip line can be used to recover the anchor from a foul bottom. The trip line is secured to the anchor so that the anchor can be pulled out backwards. The trip line must at least equal the depth at high water. The upper end can be tied to a float which will mark the position of your anchor. To recover the anchor, row out in your dinghy and pull up on the trip line. The trip line may also be secured to the anchor rode itself leaving some slack in the line. To recover the anchor take in the rode until you can reach the trip line. Untie it from your rode, slack the rode and pull in the trip line.

43. Under what circumstances is it safe to sleep on an anchored or moored boat without someone staying awake to keep watch?

The first few nights you are anchored overnight, you likely will not sleep well. I can remember the early days when I would be awake a number of times during the night to check. In the dark, the shore always looks closed than it was during daylight hours.

If you are in a sheltered anchorage and you have the confidence that your anchor is properly set and the winds are light, you may sleep through the night. On more that one occasion when the winds were strong, I have stood an anchor watch through the night, or until the winds died down. You might decide to split the watch between members of your crew with each person taking two hours on watch. Fortunately, in the Gulf Islands in the summer, it is rare that it is windy during the night.

44. How do I use a mooring buoy in the Marine Parks?

Approach the mooring with your bow facing into the wind or current, whichever is stronger. Bring the boat to a stop with the buoy just off your bow. When picking up a mooring with your boat hook, it is usually easier to insert your boat hook through the ring on the top of the buoy rather than trying to hook the ring from the outside. The ring is attached to the mooring chain which should slide up the pipe in the middle of the buoy so you may lift the ring up to your deck to attach your lines. Some chains will not pull through the pipe due to mussels or weed on the chain.

VHF Radio

45. What licenses are required to operate a VHF radio legally in Canada?

The Restricted Operator's Certificate, Maritime, ROC(M) is the minimum standard for Canadians to operate a VHF Radio. This certificate will also allow you to

operate a Medium Frequency(MF) or High Frequency(HF) Marine band radios on a *voluntary* fitted vessel. This certificate is valid for life. If you are taking your boat out of Canada, the boat needs a Ship Station License.

46. As long as you never transmit, is it legal to monitor Channel 16 or Channel 11 from a handheld radio on land?

Technically, according to my contact at Industry Canada, you should not have a Marine VHF radio on land. They are for use only on the water.

47. Why might I need a handheld VHF radio?

A handheld VHF is useful as a backup to the main radio or for use in your dinghy. In an emergency, you might lose power or the antenna of your main radio. I carry a Standard Horizon HX850s whenever I am on the water. This radio is waterproof, floats and has a 12 channel GPS so you can transmit a Distress call using the Digital Selective Calling feature. The HX851 is now available and it includes the ability to store 200 waypoints.

48. What are the correct phrases for VHF Radio Procedures?

ACKNOWLEDGE Let me know that you have received and understood this message.

AFFIRMATIVE Yes, or permission granted.

BREAK To indicate the separation between portions of the message. (To be used where there is no clear distinction between the text and other portions of the message.)

CHANNEL Change to channel ..... before proceeding.

CONFIRM My version is _____. Is that correct?

CORRECTION An error has been made in this transmission (message indicated). The correct version is _____.

GO AHEAD Proceed with your message.

HOW DO YOU READ? How well do you receive me?

I SAY AGAIN Self-explanatory (use instead of "I repeat").

NEGATIVE No, or that is not correct, or I do not agree.

OVER My transmission is ended and I expect a response from you.

OUT Conversation is ended and no response is expected.

READBACK Repeat all of this message back to me exactly as received after I

have given OVER. (Do not use the word “repeat”.)

ROGER I have received all of your last transmission.

STANDBY I must pause for a few seconds or minutes, please wait.

SAY AGAIN Self-explanatory. (Do not use the word “repeat”.)

THAT IS CORRECT Self-explanatory.

49. What do the terms "Mayday", "Pan Pan" and "Security" mean and when is it appropriate to use them?

These are the three priority words used in Marine communications.

The three signals are:

Distress	Word used "Mayday"
Urgency	Word used "Pan Pan"
Safety	Word used "Sécurité"

The Distress signal indicates that the station sending the signal is:
(1) Threatened by *grave and imminent danger* and requires immediate assistance, or
(2) Aware that a ship, aircraft or other vehicle is threatened by *grave and imminent danger* and requires immediate assistance.

Example - Vessel on fire, sinking, aground

The Urgency Signal is *Pan Pan* spoken three times. The Urgency signal indicates that the station calling has a very urgent message to transmit concerning the *safety of a ship, aircraft or other vehicle or the safety of a person.*

Example - vessel broken down, out of fuel and in no immediate danger

The Safety Signal is the word "Sécurité" spoken three times. The safety signal indicates that the station calling is about to transmit a message containing an important navigational or meteorological warning.

Example - BC Ferries entering Active Pass, a large log at the harbour entrance, a tug which has lost its tow, Coast Guard Radio announcing a change in the forecast to a storm warning.

50. What is the Phonetic Alphabet for VHF radio?

The words of the International Telecommunication Union (ITU) phonetic alphabet should be learned thoroughly. When it is necessary to spell out words, the following table should be used.

Letter	Word	Pronounced as
A	Alfa	AL FAH
B	Bravo	BRAH VOH
C	Charlie	CHAR LEE or SHAR LEE
D	Delta	DELL TAH
E	Echo	ECK OH
F	Foxtrot	FOKS TROT
G	Golf	GOLF
H	Hotel	HOH TELL
I	India	IN DEE AH
J	Juliett	JEW LEE ETT
K	Kilo	KEY LOH
L	Lima	LEE MAH
M	Mike	MIKE
N	November	NO VEM BER
O	Oscar	OSS CAH
P	Papa	PAH PAH
Q	Quebec	KEH BECK
R	Romeo	ROW ME OH
S	Sierra	SEE AIR RAH
T	Tango	TANG GO
U	Uniform	YOU NEE FORM or OO NEE FORM
V	Victor	VIK TAH
W	Whiskey	WISS KEY
X	X-ray	ECKS RAY
Y	Yankee	YANG KEY
Z	Zulu	ZOO LOO

Example: To report a missing child with the surname Schmidt: SIERRA, CHARLIE, HOTEL, MIKE, INDIA, DELTA, TANGO

To order the Radio Course

http://www.cruising.bc.ca/vhf.htm

51. What do I need to know to Navigate?

Electronics

Required navigational equipment is a little different for large and small boats but all marine navigation is dependent upon knowing these five things:
- Direction
- Speed
- Time
- Distance and
- Depth.

Since you need to know these five things, you require navigational gear that will give accurate information about all five of them regardless of the size of boat.

A compass is a necessity and we aren't discussing one of those freebies that come in breakfast cereal. You need a big and steady compass that can be easily read even in adverse weather conditions. A compass gives direction which is the first information that you need for navigation.

If you wear a digital watch (water proof and shock proof,) and one with a stop watch function, you can determine the next three pieces of required information for navigation. If you know any two of the next three factors (speed, time and distance) the third can be easily calculated using the Sixty D Street formula covered in the Home Study Coastal Navigation Course .

Essentially you can cover 4 of the 5 required pieces of navigational information with a compass, a digital watch and a knotmeter which will give you speed and distance traveled.

A simple depth finder can cover the 5th requirement but if you can, find and buy a good GPS/Chart Plotter/Depth Sounder unit. These units aren't all that inexpensive but when you consider the value of human life they aren't all that expensive either.

You should always carry paper charts covering your planned route. As anyone who operates a personal computers knows all too well, electronics can breakdown and it's always at the worst possible moment. A compass and a paper chart will still be there even if the entire electrical system on your powerboat fails.

52. Do I require a depth sounder?

Although not required, a depth sounder can be helpful to determine the water depth for anchoring and if it is safe to stay overnight alongside a dock. A depth sounder can also assist you in determining your location. Unless you purchase a scanning sonar, a depth sounder will likely not prevent you from running aground. By the time the sounder shows shallow water, you are probably already aground. The sounder only reads the depth directly under your vessel.

53. Which should I purchase first, radar or GPS?

My personal first choice would be Radar. In restricted visibility or at night, radar will show me where I am and other vessels around me. Many pleasure boaters will purchase a GPS Chart plotter first as they will rarely be underway in restricted visibility or at night. Most of the new electronic systems allow you to use one display to show various information. You can purchase the display and the GPS and later plug in a radar unit. These integrated systems allow you to display the various information in split screen mode such as radar on the top and chart plotter on the bottom of the screen. Many systems also allow you to do "Radar Overlay" where the radar display is overlaid on top of the chart image making it very easy to understand the radar image.

Just remember that no electronic aid can replace basic navigational skills. When all else fails, you can rely on your eyes and a paper chart.

Boat Handling

54. How do I steer a boat with a tiller?

The first time you try steering a boat with a tiller it likely feels awkward and confusing. When you move the tiller the boat turns the opposite way.

One memory aid is when moving forward point the tiller towards what you want to avoid. When moving backwards point the aft end of the tiller the way you want the boat to turn.

This applies to tiller steered outboard motors also.

55. Can you explain the basic handling of a sailing dinghy?

There are three basic controls on a sailing dinghy. They are steering, sail trim and weight. All these controls inter-relate and it may be confusing for the beginner.

To learn what each control does, only adjust one at a time. For example, remain

in the same place in the boat, keep the tiller centered and adjust your sail or sails. See what happens. Start with the wind on the side of your boat (abeam). Let the sails out until they start to shake (luffing) and observe what happens. The boat slows down. Bring the sails in until they just stop luffing. Notice the boat start to pick up speed. Now bring the sails in as far as you can. What happens to the speed and the angle of tilt (heel) of the boat?

Bring in the sails until they have just stopped luffing. Now use the tiller to turn the boat one way and then the other. What happens to the speed and the heel?

Return to a position with the wind abeam, sails just stopped luffing and the tiller centered. Now try moving yourself from side to side and forward and back. What happens to the heel? Does the boat turn? Which way?

By only changing one control at a time, you will obtain a better understanding of the effect each control has on the performance of your dinghy.

56. I just purchased my first power boat. How do I dock it safely?

This depends on the type of engine you have. For most beginners with power boats, usually the engine is an outboard or an inboard/outboard. They both can be handled the same way. For this question, I will assume you have a single engined vessel of about 30'.

For your first day on the water, choose a day with light winds. This will make learning to handle your boat easier.

Basic principles:
1. Neutral is your best friend. Many beginners approach the dock with too much speed. Use neutral to allow the boat to coast. Only have enough speed to maintain control.

2. When maneuvering in a marina or other close quarters situation, Remember Wheel first, then Gear. If you turn the wheel first and then place the engine in gear, the boat will immediately move the direction you desire. Many times I have seen beginners put the engine in gear and then frantically turning the wheel as the vessel moves the incorrect way.

3. The boat will move the direction the steering wheel is turned. If the wheel is to Starboard the bow will swing to starboard in forward gear and the stern will swing to starboard in reverse. Another memory aid is the motor pushes the stern in forward gear and pulls the stern in reverse.

4. Unlike a car which steers from the front, a boat steers from the stern. When

you turn your boat, the stern swings out to the opposite side. Many times new boaters have been seen leaving the dock, turning the wheel away from the dock and dragging the stern along the dock.

Undocking - In most cases, it will be easier to back away from the dock. Turn the wheel away from the dock and go into reverse (astern). The stern will move away from the dock, and in most cases, the bow will not hit the dock as you back away. If you think the bow is getting too close to the dock, turn the wheel to mid-ships. If you are on a dock with vessels tied ahead and astern of you and you do not have much room to maneuver, you might start by turning the wheel towards the dock and going ahead (forward gear) for a couple of seconds. The bow will swing towards the dock and the stern will swing out. Go to neutral, turn the wheel away from the dock and go astern. If there is very little room, you might need to repeat this process a number of times. A handy tip is for your crew to have an extra fender in their hand. If you get too close to anything, the crew can place the fender between your boat and the other object.

a. Once clear of the marina, you should take some time to learn your vessel. The first step is to determine your turning circle. Place the wheel hard over and steer the boat in a full circle at idle throttle. Then reverse the wheel and complete the circle in the other direction. Observe the size of the circles. If you like, you may repeat this exercise at a slightly higher speed. The diameter of the circle should increase.

b. The next step is to find out how far the boat will coast when in neutral. Turn the boat into the wind, bring the boat up to about 3 knots, note an object ashore beside you, throttle to idle and shift into neutral. Note how far the boat travels before it stops. Now turn the boat around and do the same thing with the wind on your stern. The boat will travel farther.

c. The third step is to perform an emergency stop. Accelerate to about 3 knots, throttle to idle, shift to neutral, pause and then shift into astern. Increase the throttle until the boat stops.

d. Now try backing the boat in a figure 8 pattern to develop a sense of how the boat backs.

e. Next you will learn how to turn the vessel around in confined waters. Bring the boat to a stop in open water. Put your wheel hard to starboard and go ahead for a short period until the boat starts to turn. As soon as the boat starts to move forward, go to neutral. Now turn your wheel hard to port and engage astern. The forward motion will stop and the stern will swing to port, increasing your turn. Go to neutral and repeat the process. With practice, you can turn the boat around almost in it's own length.

f. The next step is to use an imaginary dock. Find an open dock and plan to bring your boat parallel to the dock about 5' away. Approach the dock at a shallow angle at slow speed. Shift into neutral and when the bow is about 5' off the dock, turn your wheel towards the dock and shift into astern briefly. The stern will swing towards the dock and the boat should stop. Repeat this exercise until you can bring the boat parallel on a consistent basis. Next is to use the real dock. Repeat the maneuver, except this time wait till the bow is closer to the dock before going astern. If the bow ends up too far off the dock, repeat the process waiting until the bow is closer to the dock before going astern. Most people the first few times are nervous and go astern too soon and the boat ends up parallel to the dock , however too far for the crew to step ashore.

I have sometimes used a piece of kelp or a small stick floating off-shore as a practice dock to give the students confidence.

If your boat is a single engined inboard, either power or sail, handling is quite different.

The first thing you will notice when you go astern is the stern will swing to one side before the boat starts moving backwards. Because the propeller shaft is at an angle, the propeller produces an effect known as P-effect, which is sometimes called paddle wheel effect.

On a vessel with a right hand propeller, the propeller rotates clockwise in forward gear. The P-effect will move the stern to starboard in forward and to port in reverse. Most sailboats, except those with Volvo diesels, have right hand propellers. Most single engined powerboats have left hand propellers so the stern will swing to starboard in reverse. Therefore the easiest side to dock a sailboat is on the port side while most powerboats are easier to dock on the starboard side.

Leaving the dock when the vessel is alongside on the preferred side: If this is a powerboat and you are tied starboard side to the dock, going astern will move the stern into the dock. Therefore, you will need to turn the wheel towards the dock and go ahead for a moment to kick the stern away from the dock. Then center your wheel and back away. For most sailboats, tied portside to the dock, reverse the procedure.

Once you are clear of the dock and other vessels, perform the same drill as in (a) above. This time you should notice a difference in the size of the circles. The circle will be smaller when you are turning opposite to the direction your propeller rotates. For a powerboat, the circle to starboard should be smaller and for a sailboat, the circle to port should be smaller.

Complete the exercises (b) through (d) above. To do a pivot turn with an inboard

engine, we will take advantage of the P-effect. Turn your wheel the same direction your propeller rotates in forward. Now go ahead briefly and the vessel will start to turn. Shift to neutral before the boat starts moving forward and then engine astern. **Important,** do not change your wheel. Then engage astern and the boat will continue to pivot. For example, a sailboat with a right hand propeller - turn the wheel to starboard and go ahead, the boat will start turning to starboard. Shift to neutral and a slight pause before engaging astern. The forward motion will stop and the stern will continue to swing to port due to the P-effect. Shift into neutral and repeat.

When docking a single engined boat, if possible choose to dock on the preferred side. For example, the starboard side on a powerboat. Approach the dock at a shallow angle, and just before you think the bow might touch the dock, you would go astern. The boat will stop, the stern will swing to the dock and the bow will swing away.

If there is wind or current, stop the boat clear of the dock and observe which way the boat wants to move. Then you will be able to plan better to make a safe approach.

Key points to remember:
Minimum speed to maintain control,
Have a crew member holding an extra fender,
If possible dock into the wind or current, whichever is stronger,
If your approach doesn't feel right, abort the docking, circle around and try again.

If you are moving to a new vessel, it may be worthwhile to hire an instructor for a few hours to increase your confidence and safety.

Remember Murphy's law - the day you do a perfect docking, no one will be around to observe it.

57. Which way will the stern move if I back a twin screw vessel on port shaft only?

Nearly every twin engine vessel has the engines installed so the propellers rotate outwards in forward gear. The port shaft rotates counter-clockwise and the starboard rotates clockwise. Because the prop shaft is angled to the water flow the propeller blades have a different angle to the water and develop an asymmetric thrust. The net effect is the stern will move the way the propeller is rotating. The port shaft will be rotating clockwise, to starboard, therefore the stern will swing to starboard.

58. How do I handle twin engines?

For many people, moving from a single engine to a twin engined vessel is a big step. If you are used to an outboard or inboard-outboard, it will take a mental shift when learning twin engines with shaft drive.

The first difference you will notice is operating astern propulsion is not as effective as on vessels with legs. The rudder is not effective when going astern until you have the boat moving and water flowing across the rudder.

Rule 1 for beginners:
Neutral is your best friend - especially as the size and weight of the vessel increases it is important to keep the speed of the vessel at the minimum required to retain control. Speed is your enemy and when you go into gear only stay in gear 1 - 2 seconds. This will prevent the vessel from gathering speed which gives you less time to react and think. Usually the objective is to coast the vessel to its berth. When you have 65,000 lbs. under you, that is a lot of momentum.
Rule 2
To start we will have our engines at idle and the rudders centered. Mostly we will use only the gear levers to steer the boat. There are a number of memory aids to assist you in operating the controls.

1. Pretend the two gear levers are the handlebars of a bicycle. If you want to turn to port, move the gear levers the same as you would with a bike. In this case Starboard engine forward and Port engine astern.

2. Stand at the helm and grasp the gear levers, one in each hand. If you lock your elbows and simply rotate your upper body so you are facing the direction you want the boat to move, you automatically move the correct lever in the correct direction.

3. Imagine parentheses (curved brackets) alongside the gear levers. For example, if we use **o** to represent the gear levers and the parentheses would indicate the direction the boat would move. (**o o**)

If we move the port lever forward, the boat would move forward and the bow would turn to starboard.

Most of the time when docking or undocking you would have your rudders centered and the engines at idle. You handle the boat by moving only the gear levers.

To execute a slow turn to starboard, you would move the port gear lever forward. To make the turn tighter, you would move the starboard lever astern (reverse).

For further information on many aspects of boat handling, visit our E-lessons

page.

59. Why do things work this way?

Nearly all twin inboard engined vessels have the transmissions set so the propellers are turning outwards when operating ahead, in forward gear. When looking from the stern towards the bow the Starboard prop will rotate clockwise, Right hand, and the Port propeller will rotate counterclockwise, Left hand.

Because the prop shaft is angled there is a sideways thrust which is most noticeable when you go astern. This is called P-effect or commonly called prop-walk. If you consider the prop as a wheel at the stern, when the port prop operates astern and rotates clockwise, it will move the stern of the vessel to Starboard. Because the propeller is off-center it generates a twisting motion to the vessel which also moves the stern to Starboard.

If you wish to dock starboard side to the dock, approach at a shallow angle. You want the boat to coast up to the dock so use neutral to control your speed. Just before you think that the hull is about to hit the dock, put the port engine astern briefly. The boat should stop, the bow swings out and the stern swings up to the wharf.

Points to remember:
1. Rudders amidship, centered
2. Engines at idle
3. Control your speed by using neutral. Around the marina or near other vessels, neutral is your best friend.
4. Steer the vessel by using the gear levers only. (See the above notes) For those people who have experience driving skid steer loaders or army tanks, you have an advantage.

60. When would I use the rudders?

Up to this point, we have the rudders centered. By turning your wheel in the direction of the turn, you can have the vessel turning quicker. For a turn to port:
1. Put your wheel hard to port,
2. Starboard engine ahead and port engine astern.

For a turn to starboard you would reverse the wheel and engines.

Sometime when backing into a slip, the wind will push you away from the float so your crew is unable to step ashore with the stern line. If the float were on your starboard side and you are a couple of feet off the float, a technique is to use the wheel. Put your wheel away from the float, in this case to port, and then go ahead on the dockside, starboard engine. The stern will swing toward the float. To

stop the forward motion, you could place the port engine astern at the same time.

61. How do I walk a boat sideways?

Sometimes you need to move a boat sideways and the boat does not have bow and stern thrusters.

There are a number of ways to accomplish this maneuver. This is one way I have taught and used successfully on vessels ranging from a Bayliner 3818 to a Ferretti 55.

Assume you wish to dock on your starboard side and your boat is 10 feet away and parallel to the dock. Put your wheel hard to port and momentarily place the starboard engine in forward and the port engine in reverse. Because of the rudders, the stern will take a large swing to starboard, towards the dock. Both engines to neutral and then starboard in reverse and port forward. What you are accomplishing is to bring the bow back in line with the stern and parallel to the dock. Shift to neutral on both engines and repeat the sequence. The boat will move to starboard and towards the dock.

You may need to adjust the amount of time you stay in gear on each engine so the boat does not move forward or aft. When you have the rhythm correct, the boat will slide nicely sideways.

Always remember to place your rudders in the direction opposite to the way you want the boat to move.

Miscellaneous

62. How far do I need to give the ferries clearance?

I try to keep as far away from the ferries as possible. If I am meeting a ferry in a channel, I will keep over to my starboard side. Near Swartz Bay terminal there may be four ferries arriving or departing. By listening to VHF channel 11, which is the Marine Communications and Traffic Services channel for Victoria Traffic, you will hear the vessels announcing their departures. A good practice is to tune your radio to Channel 11 and then select Dual Watch (DW on some radios). This allows your radio to scan between both Channel 16 and Channel 11.

If you are not sure of the ferry's intentions, you may call the vessel on Channel 11. If you cannot read the ferry's name, an example call could be:
"BC Ferry southbound off Beaver Point, this is the sailing vessel Daisy 1.5 miles off your port bow, on Channel 11, Over." A quick call can easily clarify the situation.

63. Does it matter the order I take bearings?

When taking bearings from a moving vessel, it is important to take the bearings quickly so that there is little change in position. Bearings that are taken off to the side of the vessel will change more quickly than bearings that are ahead or astern. Therefore, take the bearings to either side of the vessel together to minimize the position error.

64. What is the difference between wash and wake?

Wash is the disturbed water caused by the propeller or jet drive. Wake is the disturbed water caused by the motion of the vessel's hull passing through the water. Be aware you, the vessel operator, are responsible for any damage caused by your wake.

65. What knots do I need to know?

There are eight knots, bend,and hitches every boater should know. First some definitions:
A knot – tied in a single piece of line
A bend – used to tie two lines together
A hitch – used to tie a line to another object

Knots – Reef – used to tie the ends of a line together, tying up a sail or package
Bowline – forms a non-slip loop in a line
Figure of eight – stops a line from slipping through a block or pulley

Bends – Sheet bend – Joining a small line to a larger line
Double sheet bend – more secure that the sheet bend

Hitches – Clove Hitch – to tie a line to a rail, good for hanging your fenders
Round Turn and 2 half hitches – for securing the vessel to the dock
Rolling Hitch – allows you to apply load along the length of the line
useful to take strain on another line.

In addition it is vitally important that every boater know how to secure or belay a line to a cleat. Some boaters refer to this as a cleat hitch. For detailed videos on how to tie the above, please refer to the Web site below:

http://www.animatedknots.com/indexboating.php?LogoImage=LogoGulfIslandsCruising.jpg

66. What is flag etiquette?

The flag for the country of origin is flown from the stern staff on a powerboat and traditionally 1/3 of the way up the luff of the mainsail. Today most sailboats also use the stern staff. The size of the flag should equal 1” of flag length for each foot of vessel length.

When visiting a foreign country, a smaller version of the flag of the country you are visiting is flown from the starboard side of the mast.

Traditionally your yacht club burgee was flown from the masthead. Today with wind direction indicators and radio antennas on the mast, the club burgee is often flown at the starboard spreader. On a power vessel the club burgee is flown from the bow staff.

67. What is the best thing to do if you experience a "knockdown" in sailing?

A knockdown is when a strong gust of wind pushes a sailboat over onto its side. Your response should be to immediately ease the sheets, the lines that control the sail. This will spill the wind from the sails and allow the boat to return upright.

68. Is there a rule of thumb for how big a log you must absolutely not hit with a GRP (glass reinforced plastic) hull to avoid damage?

Not that I know, nothing bigger than what you can throw with one hand. However, even a small stick can damage your propeller if you strike it at speed. The "Avoidance Technique" should be used to avoid anything floating in the water.

This technique consists of turning away from the object in the water, which you would do instinctively. As the object approaches your bow you turn hard towards it which swings your stern and your propeller(s) away. Normally you should be steering with your left hand and your right hand should be on the throttle. If you cannot avoid hitting the object, throttle to idle to avoid a high speed impact with the propellers.

69. In a sailboat, if you are caught in an adverse tidal current at or near your hull speed, what should you do? If the depth allows it and you are not in a busy channel, is it safe to anchor to hold position and wait out the current?

Absolutely. I had an occasion in a sailing race where we were sailing in an opposing current in light wind and I noticed by observing a range ashore that we were not making any progress. I suggested to the skipper that we anchor and she agreed. I asked the crew to lower the anchor over the side of the bow and

not to use the anchor roller because of the noise it would make. I did not want to alert any of the other racers to what we were doing. We were sailing under spinnaker at the time. Because we had a slight bit of speed, the anchor rode angled off our port bow. The crew then sat in the cockpit eating lunch. The fun part was when we started to move up through the fleet and we had at least one boat call over to ask what we were doing. They did not realize that we were not moving forward, just the rest of the fleet was being swept backward by the flood current.

70. What size of waves can I expect at various wind speeds?

The size of the waves in open water are dependent on a number of factors:

Wind speed,

Fetch - the distance over which the wind has blown

Duration - how long has the wind been blowing

For example to have average wave heights of 2.5 feet, you would need a wind speed of 15 knots. a fetch of 34 nautical miles for a duration of 6 hours. Likewise for average wave heights of 5 feet, you would require a wind sped of 20 knots blowing over a fetch of 75 miles for 10 hours.

For more detailed information, consult a reference book such as *Oceanography of the British Columbia Coast by Richard Thomson*

71. What are the first steps to take in an Emergency?

1. Springing a leak
Find the source of the water and plug the hole, shut off the through-hull, start your bilge pumps, head for shore, everyone into PFD's.

2. Propeller fouled
Usually caused by running over a line. Put engine into neutral to prevent further damage. Shut engine off and on an inboard you may be able to reverse the shaft by hand and unwind the line. With an outboard leg, tilt the leg up and remove the line.

3. Anchor Dragging
Usually caused by failing to allow for a rising tide. First step, let out more anchor line. If the anchor still drags, it is likely covered with weeds. Start your engine, move forward and recover the anchor and clear the weed, then re-anchor.

4. Engine failure
Try to re-start, steer towards the side of the channel, lower your anchor using the entire rode. If the anchor does not reach the bottom, it will act as a sea anchor and slow down your drift.

5. Running aground
Go to neutral to prevent the boat from going further aground. Check your crew for injury. Check for leaks and do not move the boat until you are sure the hull is intact.

6. Collision with another vessel
Check everyone aboard for injuries unless the boat is sinking. If sinking, send a Distress message and prepare to abandon ship. Everyone dons a lifejacket or PFD. Launch your dinghy or liferaft.

7. Capsize
Check everyone is safe and wearing flotation. Try to climb onto the hull of the vessel to minimize the effects of hypothermia and to make yourself more visible to rescuers.

8. Steering failure
Throttle to idle and place transmission in neutral. Lower and anchor to stabilize the vessel while you determine the problem. Many vessels with inboard engines have an emergency steering system which connects directly to the rudder.

9. Abandon ship
Causes may include fire, explosion and sinking. If you have time, everyone into PFD's or Lifejackets, launch your dinghy or liferaft, send a distress call and fire a distress flare. Abandon ship from the windward side so the vessel will drift away from you.

BONUS - Bruce's Boating Tips
These tips are offered for your enlightenment. Most are suitable for the beginning boat owner and others may be of general interest. Please comment on any of these tips or submit suggestions for your own favourite tips. Neither Gulf Islands Cruising School Ltd. or the author assume any liability for the following information.

 **Abandon Ship**

Never abandon ship until you have to step **UP** into your liferaft. This avoids abandoning ship too soon.

 **Casting off**

Cast off the slack lines first. Typically, there will be one or two dock lines under

tension due to wind or current. Untie these lines last.

 **Navigation**

When your position is in doubt, assume the worst case as close to the nearest hazard.
When taking bearings from a moving boat, take the bearings off each side one after the other. Because of the boat movement, the bearings to the side will change most quickly. By taking these bearings together you will improve the accuracy of your fix.

 **Sail trim**

When in doubt, let the sheet out. Let the sheet out until the sail luffs.

 **Piloting**

When the depth sounder reads less than the boat's draft, you are definitely aground.

 **Collision Regulations.**
Here are some time honored rhymes to assist you.

Not under Command
Red over red the Captain is dead. Two red lights vertically indicates boat Not Under Command(NUC).
also Two black balls or red on red, then you know her rudder's dead.

When two side lights you see ahead,
Starboard turn and show your red.
Green to green, or red to red,
Perfect safety, go ahead.
If to your starboard, red appear,
It is your duty to keep clear,
To act as judgment says is proper
To port or starboard, back or stop her;
But if upon your port is seen
A steamer's starboard light of green
There's not so much for you to do
For green to port keeps clear of you.

Another version
If to port is clearly seen
A steamer's starboard light of green
There's not so much for you to do
For green to port keeps clear of you.

If to your starboard, red appear,
It is your duty to keep clear,
To act and do as you think proper
port or starboard, back or stop her;

Masthead light
Steamers, white light on the mast,
A sailer no such light will cast.
But if she shows red over green
Then a sailer you have seen.

White lights
If moving white light you discern
Then you know you've seen her stern.
One or two white lights and stopped,
Be sure her anchor she has dropped.

Fishing
Green over white - trawling light,
Red on white - catch fish they might.
Two black cones, their points akissing,
By day you're sure that they are fishing.
A third, point up, like a cuckold,
Then your course well clear you hold.

Aground
Three black balls to heaven bound,
Shows that boat is aground.
If by night to ground she's wed,
Two white lights and red on red.

Sailing boat, sails raised & under power
A sailing craft, cone pointed down,
Her engine's pushing, driving home.

Two sailing boats meeting, wind on opposite sides:
When the wind is on your port,
Then of wisdom don't be short.
Like the dogs of the street,
You'll avoid them when you meet.

Two sailing boats, wind on same side:
If you are closer to the wind,
Of her stay clear and peace you'll find.

Sail & power meeting in confined waters
No matter if you're a big three master,
If she's got power, she is faster.
A barquentine or sleek square rigger,
If she's got power, she is bigger.
To yourself, you always say,
"She has power - keep out of the way!"

Sail & power meeting in open water: (Don't count on this one!)
When well clear, and in the offing,
The steamer's cap to you she's doffing,
To you the stand on she'll give
But keep well clear and you will live!

Weather Memory Aids

Use of the barometer

A sudden drop in pressure foretells stormy weather and rain. The sharper the drop in pressure, the more severe the winds will be.

At sea with low and falling glass
The greenhorn sleeps like a careless ass
But when the glass is high or rising
May soundly sleep the careful wise one

A sudden rise in pressure from a very low reading forecasts a severe gale.

Quick rise after low
Foretells a stronger blow

The rate of change in pressure can also indicate the duration.

Long foretold, long last
Soon coming, soon past

If you see signs of deteriorating weather for many hours, that is an indication that the weather is moving in slowly and it will therefore be with you for some time. If the weather changes very suddenly, it means that the weather system is moving quickly and will pass through quickly.

Docking Tips

1. When secured to a dock, the stern will often move away from the dock due to the angle of the stern line. Instead of bending over and pulling on the stern line, simply step on the line between the dock cleat and the boat to bring the stern gently close to the dock. The technique has been proven effective on boats up to 86 feet.

2. Another way to rig your stern line is to take it to the cleat on the side of the boat away from the dock. This gives the line a better angle to keep the stern closer to the dock.

3. When docking a boat by yourself, a handy idea is to step ashore with a mid-ship breast line. The line goes to the dock at right angles to the boat. Once this line is secured, the bow and stern cannot move very far. Very helpful when the wind is blowing the boat off the dock.

4. If you leave a little slack in the mid-ship line, it can be used as a after-midship spring line. Lead the line from a midship cleat aft to the dock. Place your wheel away from the dock and go ahead at idle. The boat's stern will be pushed against the dock making it easy to load your crew and their gear. This also works well when the wind is off the dock. When you are ready to depart, go to neutral, cast off your line and the wind will blow you clear of the dock.

Courses

POWERBOAT COURSES - http://www.cruising.bc.ca/power.htm

• Introduction to Boating - Introduces novice boaters to safe practices in preparing to leave the dock, while underway, and when returning to dock.
• Basic Outboard - At the completion of the Basic Outboard Standard you should be able to operate safely in familiar waters as skipper of a boat under 6 metres and powered by an outboard engine under 55 kW (75 hp).
• Basic Powerboat - At the completion of the Basic Power boat Standard you should be able to operate safely in local waters as skipper of a boat over 6 metres and powered by an engine over 55 kW (75 hp).
• Intermediate Powerboat - At the completion of the Intermediate Powerboat Standard you should be able to operate safely as a skipper of a power boat between 8 - 12 metres with inboard engine(s) by day in moderate wind and sea conditions.
• Coastal Navigation - A home-study hard copy course giving you the benefit of learning in your home environment. Successful completion of the course leads to Canadian Yachting Association Coastal Navigation certification.
http://www.cruising.bc.ca/coastnav.html

CRUISING SAILBOAT COURSES - http://www.cruising.bc.ca/ltc.html

• Basic Crew - At the completion of the Basic Crew Standard you should be able to act as competent crew while cruising safely in familiar waters aboard a sloop rigged keel boat of 6 - 10 metres in moderate wind and sea conditions by day.
• Basic Cruising - At the completion of the Basic Cruising Standard you should be able to cruise safely in familiar waters as both skipper and crew of a sloop rigged keel boat of 6 to 10 meters in moderate wind and sea conditions by day.
• Intermediate Cruising - At the completion of the Intermediate Cruising Standard you should be able to cruise safely in familiar waters as both skipper and crew of a sailing boat of 8 - 12 meters in moderate wind and sea conditions by day. Emphasizes on-the-water skills at a level acceptable for bare boat chartering.
• Advanced Cruising - At the completion of the Advanced Cruising Standard you should be able to act safely as skipper and crew of a sailing boat of 8 - 15 metres, operating by day and night in coastal or inland water in any weather

Appendix 1

To order the Radio Course http://www.cruising.bc.ca/vhf.htm

Symbols, Abbreviations, Terms Chart 1
http://www.charts.gc.ca/publications/chart1-carte1/index-eng.asp

The Contraventions Regulations
http://laws.justice.gc.ca/eng/sor-96-313/page-3.html#anchorsc:3

Safe Boating Guide
http://www.tc.gc.ca/eng/marinesafety/tp-tp511-menu-487.htm

Vessel Operation Restriction Regulations
http://laws.justice.gc.ca/en/SOR-2008-120/

Small Vessel Regulations
http://laws.justice.gc.ca/en/showtdm/cr/C.R.C.-c.1487

Competency of Operators of Pleasure Craft Regulations
http://laws.justice.gc.ca/en/SOR-99-53/

Boating Links

Boating Forum - http://www.cruising.bc.ca/boating_forum/index.php

Boating Bitts - http://www.boating-bitts.blogspot.com/

Family Boating - http://www.family-boating-blog.blogspot.com/

Navigation Introduction - http://www.cruising.bc.ca/coastnav.html

Boating Information - http://www.cruising.bc.ca/

Cold Water Boot Camp - http://www.coldwaterbootcamp.com

Boating Resources

E-Lessons – Types of Boats, Anchoring http://www.cruising.bc.ca/e-lessons.html
Boating ebooks - http://www.cruising.bc.ca/ebooks.html

Boating Recipes - Complimentary six day e-course
at http://www.cruising.bc.ca/easy-family-boating-recipes.html

Thank you for your interest.

