

15th Dublin (Malahide)

Sea Scout Group

(Incorporating 9th Port of Dublin - Talbot de Malahide)

Wednesday Troop



Bronze Helmsman Badge

V1.0 - 03/01/2018

The following are the skills a Scout needs in order to receive their Bronze Helmsman Badge:

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Session Breakdown

Session 1

Topics to be covered:

- Ropework
 - Demonstrate and know the uses of the following:
 - Bowline
 - Sheer lashing
- Water Safety
 - Explain the importance of the care and use of a lifejacket or buoyancy aid and
 - Show how to check that a lifejacket or buoyancy aid is fit to use (buckles, straps, whistle, etc)
- Basic Sea Survival
 - List the correct personal clothing and equipment for a full day's water activity
- Water Activities
 - Identify equipment to be carried in a small craft for a day's water activity

Session 2

Topics to be covered:

- Navigation
 - Coastal Navigation
 - Understand longitude and latitude, and identify a position
 - Explain the main features and symbols on a chart
 - Identify the main terms used to denote direction from your boat
- Rules of the road at sea
 - Discover the basic rules regarding rights of way for the crafts used by your Troop
- Signalling
 - Discover the most common danger signals in use
- Nautical history and Traditions
 - Discover what an "Ensign" is and where it is flown
 - Show how to raise and lower a National Flag or Ensign
 - Show how to carry a National Flag or Ensign

Session 3

Topics to be covered:

- Anchorage
 - Know the different types of anchors and where they are best used
- Nautical Terminology
 - Discover what is meant by the following terms:
 - Amidship

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- Bridge
- Aft
- Maritime environment and community
 - Consider the different ways that you can support your local rescue service
- Boat maintenance and repairs
 - Participate with your Watch or Troop on at least three occasions with the maintenance or repair of Troop equipment
- Parts of a boat
 - Understand what the following terms refer to:
 - Gunwale
 - Gudgeon
 - Pintle
 - Thwart
 - Tiller
 - Transom

Session 4

Topics to be covered:

- Marine motors and basic maintenance
 - Be aware of the basic principles of a marine engine and the difference between 2 and 4 stroke
- Weather
 - On at least two occasions get a weather forecast before a water activity or meeting:
 - Which forecast gives the most information for the area?
 - Which parts of forecasts are most important for each activity?
 - Was the forecast right and did the weather affect your activity
- Currents, tides and wind
 - Obtain information on tide times for your normal boating waters
- Local knowledge
 - Appreciate how local factors can have considerable effect on weather and tidal forces
- Recap

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Ropework

Be able to demonstrate and know the uses for the following:

1. Bowline

BOWLINE (PRONOUNCED 'BO-LIN')

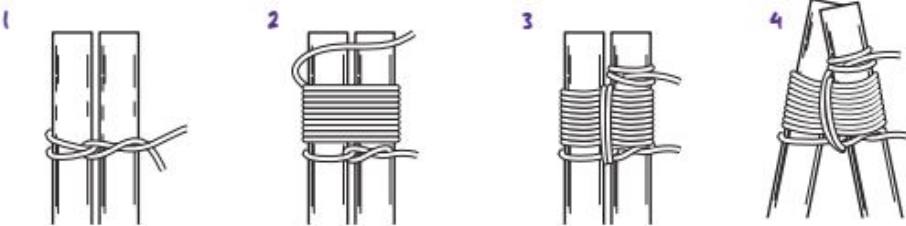
This vital knot is used to make a non-slip loop in the end of a rope. It is invaluable in rescue situations – learn it so that you can tie it with your eyes closed, or even with one hand. It is often remembered by the phrase, 'the rabbit comes out of its hole, round the tree and down the hole again!'



2. Sheer/Straight Lashing

SHEER LASHING

There are two types of sheer lashing. The first is used to join together two spars to make a longer length, for example, when making a flagpole. The second type is used to create sheer legs, where the spars are lashed together at one end and opened to form an inverted V-shaped support.

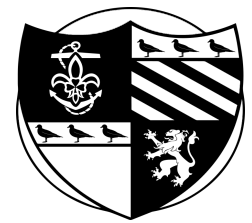


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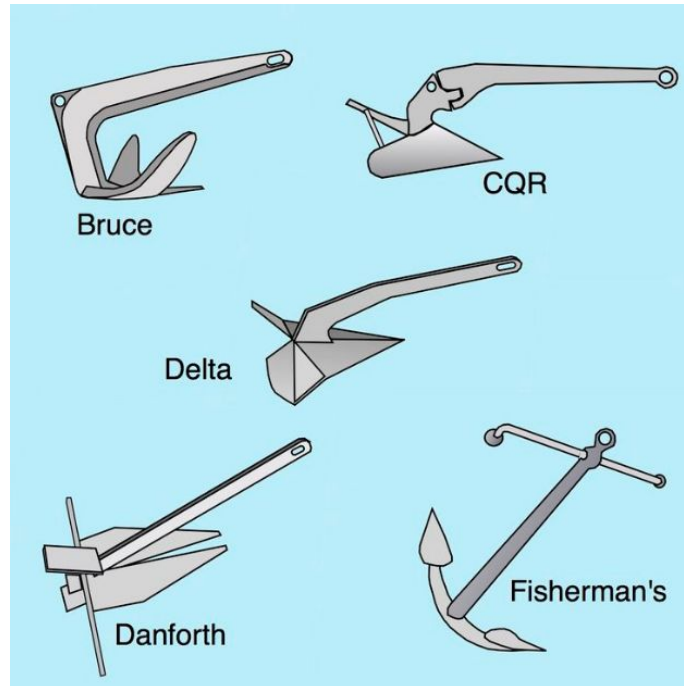
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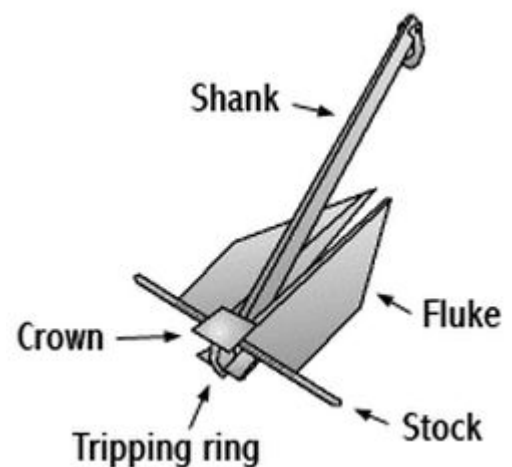
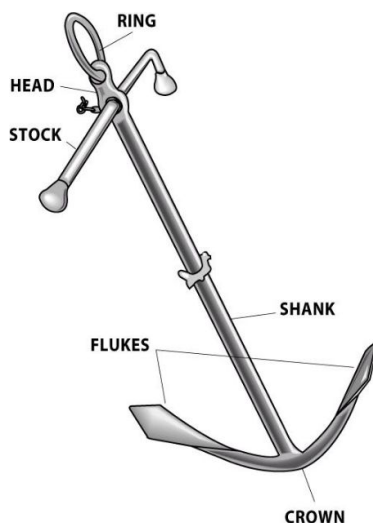


Anchorage

- Be able to identify different types of anchors and where they're best used.
 - a. Fisherman's Anchor
 - b. CQR (Coastal Quick Release)
 - c. Danforth
 - d. Grapnel



- Be able to identify the parts of an anchor.



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Water Safety

- Explain the importance of the care and use of a lifejacket or buoyancy aid.

Care of a Lifejacket / Buoyancy aid:

-

1. While in Use: -

- Check it before using
- Wear it
- Don't use the whistle unless in distress
- Don't inflate until you are in the water
- The Best way to carry one is to wear it properly

2. After use: -

- Rinse in fresh water
- Hang up to dry. Damp jackets lying will develop mildew
- Don't use them as a changing mat or sit on them
- Make sure they are fully deflated
- Check that nothing is missing or damaged

- Show how to check that a lifejacket or buoyancy aid is fit for purpose (buckles, straps, whistle etc)

Regular checking of a Lifejacket or Buoyancy aid

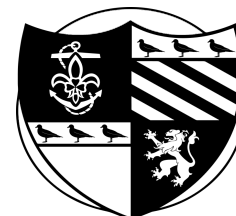
- Check buckles, zips and straps for wear or damage
- Check distress whistle and inflation valve (do they work - test)
- Check that they are clean
- Any defective jacket should be destroyed

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Basic Sea Survival

- List the correct personal clothing and equipment for a full day's water activity.

The equipment required for a small boat going out for a half day's activity in normal boating waters is:-

- 2 oars, spurs or paddles
- Bailers
- Anchor and rope
- Bow and stern lines (painters)
- Tow-line
- Ignition key*
- Kill-cord*
- Battery*
- Small fire extinguisher
- Fenders
- Lifejackets or Buoyancy aids
- Emergency fuel tank (small)

The additional equipment required in a small boat for a day's activity:-

- Horn or whistle
- White light (torch)
- Compass and chart
- Lifebuoy or heaving line
- Distress flares
- Fire blanket
- First aid kit
- Tool kit and engine spares
- Means of summoning help

A VHF radio or other means of summoning help is needed and in particular when you leave your normal boating water. Mobile phones might not get a signal.

Water Activity

- Identify equipment to be carried in a small craft for a day's water activity.

Basic personal clothing to wear

- Swimming costume or togs
- T-Shirt
- Shorts
- Runners (good grip)
- Sweatshirt or Jumper
- Socks
- Gloves
- Tracksuit bottoms
- Waterproof coat & trousers
- Hat



Personal equipment to bring

- Complete change of clothes
- Towel
- Coat
- Warm drink



Safety equipment to wear

- Buoyancy aid or lifejacket
- Canoeing:- Helmet & spray-deck

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Navigation (Coastal or inland waters)

1. Understand Longitude and Latitude.

YOUTH PROGRAMME

SCOUTING IRELAND

Longitude and Latitude

Aim: Understand longitude and latitude, and identify a position

In land navigation, we use the National Grid to define position. In sea navigation **Latitude** and **Longitude** are used

The lines of **Latitude**, or "parallels", run around the Earth, parallel to the Equator. They are designated by their angular distance (as measured from the Earth's centre) up to 90° North or South of the Equator. The latitude scale is on the east and west sides of a chart. Each degree is divided into sixty minutes.

The lines of **Longitude**, or "meridians", run North/South, from pole to pole. They are designated by their angular distance up to 180° East or West of the meridian which runs through Greenwich, near London. The longitude scale is on the top and bottom margins of a chart.

Coastal Navigation

Latitude is also used to measure distance. The distance on the surface of the earth represented by one minute of Latitude is known as a Nautical Mile or Sea Mile, which is divided into 10 Cables (one cable = approximately 200 metres). Six Sea Miles is about 7 Land Miles. The latitude scale on either side of the chart is used as a distance scale. In the diagram below, the divider is measuring a distance of 3 nautical miles. Never use the longitude scale to measure distance!

Identifying a position

Grab a chart or map and use this information to estimate the coordinates of a given position. There will be more on this in the Silver Helmsman badge

SCOUTS

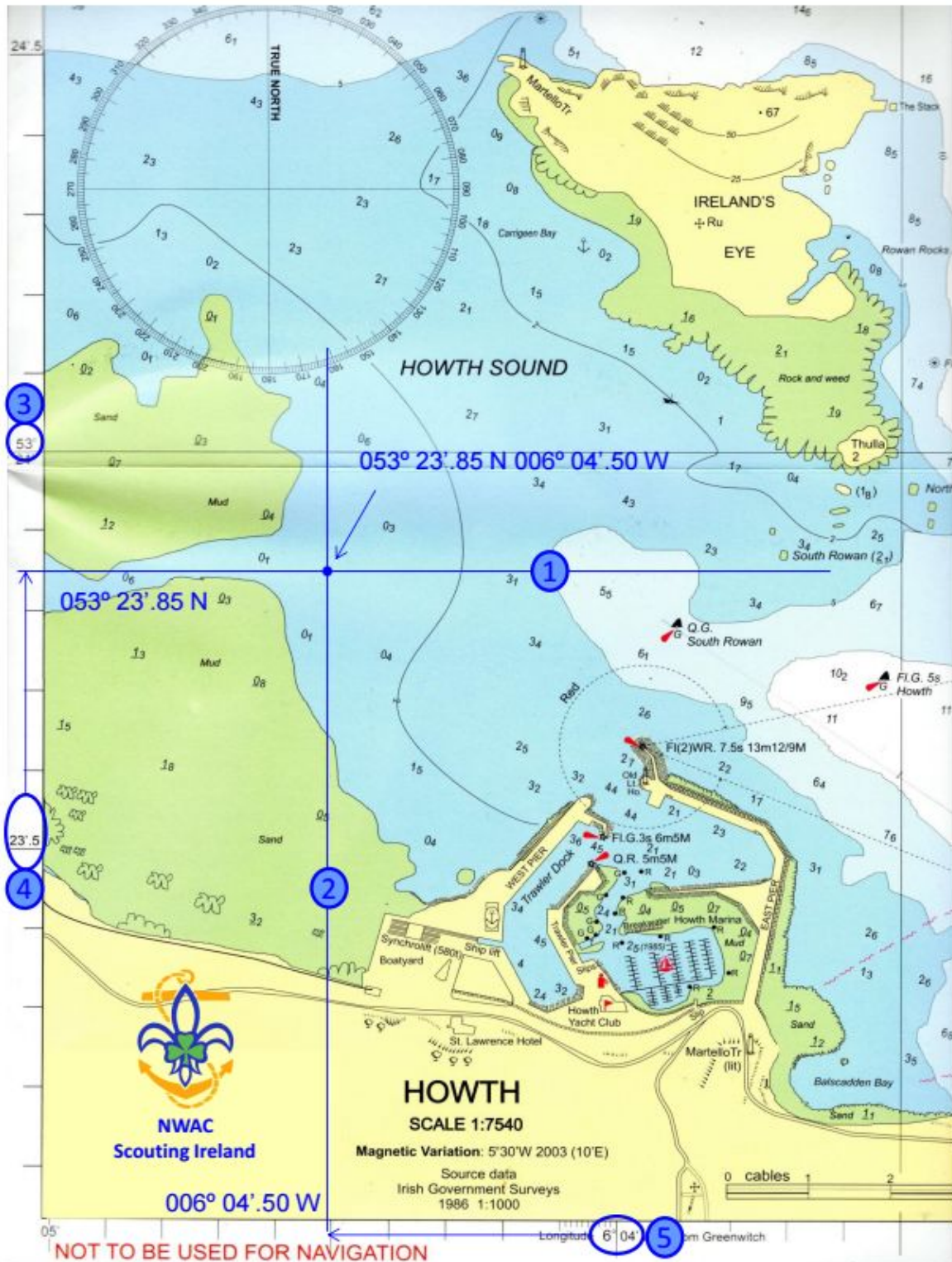
2. Be able to identify a position give some co-ordinates.

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The Scout Den, St. James Terrace, Malahide, Co.Dublin

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Referencing a position on a chart is achieved by applying the following steps.

1. Using the Portland plotter draw a pencil line from the point to be plotted to the vertical edge of the chart.
2. Now draw a line from the point to the horizontal scale.
3. Look at the side of the chart for the line of latitude. You will find the number of degrees north or south of the equator, in this example it is 53° north of the equator.
4. Using the nearest defined minute calculate the minute that the line intersects. In this case $23'.85$. We can now say the point is on the line of latitude $053^{\circ} 23'.85$ N.
5. Following a similar process we can calculate the intersection point on the line of longitude. In this case we determine that $006^{\circ} 04'.50$ W.

We now have the reference for the point. It is $053^{\circ} 23'.85$ N $006^{\circ} 04'.50$ W.

Points to note:

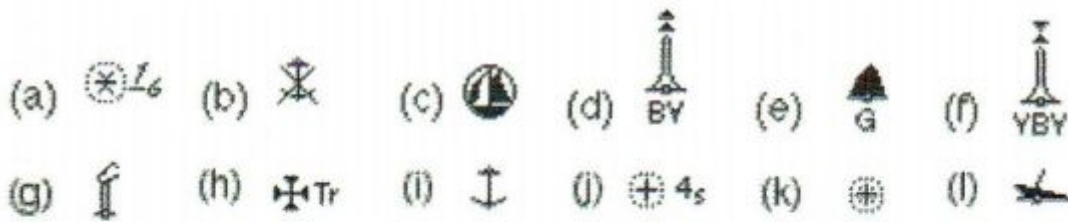
- As Ireland is West of Greenwich the numbers on the longitude scale increase from right to left.
 - Leading zeros in the degrees are not dropped i.e. 006° not 6° or even 06° .
3. Explain the main features and symbols on a chart.

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- (a) Rock which covers and uncovers. 1.6M above water at Lowest Astronomical tide.
- (b) Anchoring prohibited
- (c) Yacht harbour, marina (Note: Symbol in purple on chart)
- (d) Cardinal buoy – North
- (e) Conical buoy (Note: Conical – Green, Can buoy Red)
- (f) Cardinal buoy – West
- (g) Chimney
- (h) Church with a tower
- (i) Anchorage area
- (j) Dangerous underwater rock of known depth 4.5 meters
- (k) Rock awash at Chart Datum
- (l) Wreck partially showing at Chart Datum

Rules of the road at sea

Know the basic rules regarding rights of way for crafts used by your troop.

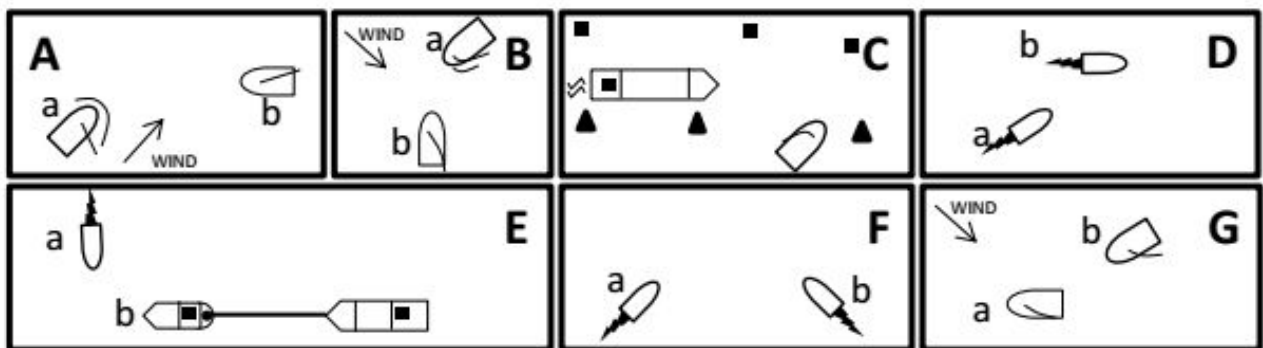
1. Two boats converging on the same course - Port to Port.
2. Overtaking.
3. Power gives way to sail.
4. Paddlers give way to vessels under oars.

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- (a) Both vessels are on the port tack (both booms are out to starboard), therefore the windward vessel A must give way.
- (b) B gives way to A as A has the wind on its starboard side.
- (c) Sailing vessel must give way to vessel under power in the channel.
- (d) A is overtaking B, B keeps a steady course and A must clearly alter course.
- (e) A must avoid B as B has restricted ability to manoeuvre.
- (f) B is on starboard side of A, therefore A must give way to B.
- (g) Both boats are on the same tack but B is overtaking, and must stay clear. Or if B passes the overtaking line, he must still stay clear because he is the windward boat. B's best manoeuvre would be to steer sharply to port, passing astern of A, and then resuming his course.

Signalling

- Discover the most common danger signals in use.
 - Flares, Cardinal Bouys, Sound Signals

TIP



Distress Flares

- Red Hand Flare
- Red Parachute Flare
- Orange Smoke

Signal Flare

- White Flare

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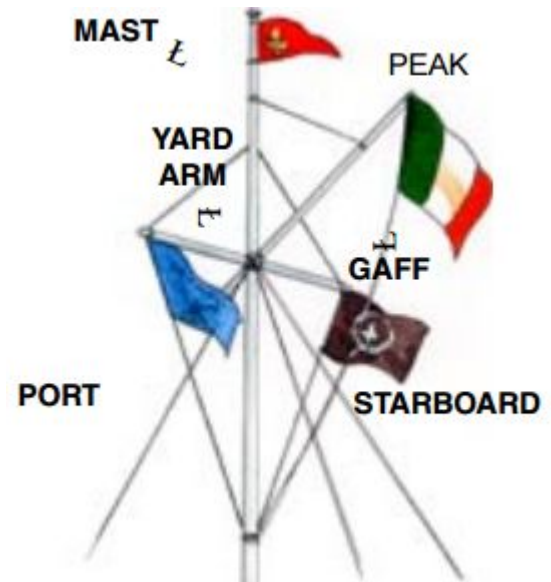
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Nautical History and Traditions

1. Discover what an Ensign is and where it is flown.
 - a. A National Flag at sea is called an Ensign. In some Countries the Ensign may be different to the National Flag. The Ensign of Ireland is the Tricolour, the same as the National Flag on land.
 - b. A special Ensign may be flown in place of the National Flag - both should not be flown together in the same vessel.
2. How to raise/lower a flag.
 - a. Meetings and events may start and finish with a simple flag break ceremony. The Troop is called to "Alert" by the Skipper, who then gives the order "Colours". The Duty WL steps forward and hoists the Ensign. The Leaders salute as the flag is raised. The Duty WL secures the halyard, takes a step back, salutes the flag and returns to position. If other flags are used in addition to the Ensign (eg. Scout pennant, Troop flag or Duty Watch pennant) they should be hoisted together by other members of the Duty Watch.
 - b. For flag down, the reverse of the above happens, except that the person lowering the flag, after securing the halyard, returns to position without saluting.
3. How to carry a flag.
 - a. A flag should not be allowed to touch the ground, trail in water or become entangled in trees or other obstacles. When not in use, the flag should be folded and put away. The usual method is to fold it into a reasonable small rectangle and then roll it up. Some Troops may fold the flag into

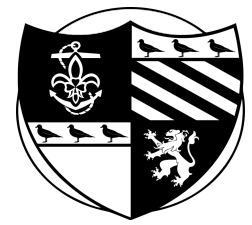


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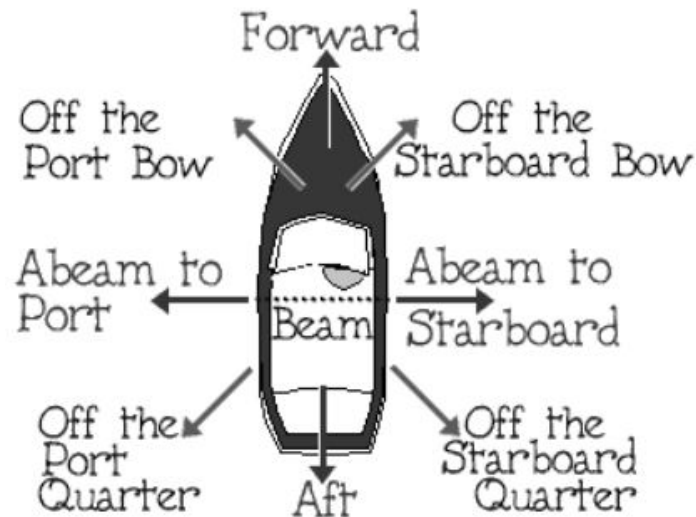


quarters and then fold it into a small triangle.

Nautical Terminology

Be able to identify the main terms used to denote direction from your boat.

1. Amidship
 - a. in or toward the middle part of a ship or aircraft; midway between the ends.
2. Bridge
 - a. The bridge of a ship is the room or platform from which the ship can be commanded.
3. Aft
 - a. in or behind the stern of a ship.



Boat Maintenance and Repairs

- Partake in at least 3 boat maintenance activities

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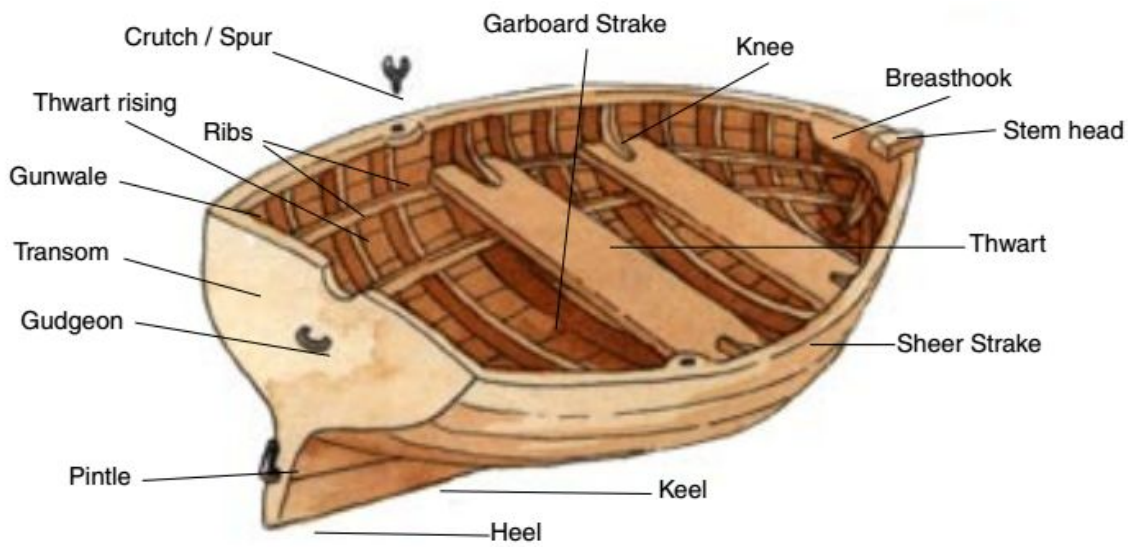
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Parts of a Boat

Be able to identify the following parts of a boat.

1. Gunwale
2. Gudgeon
3. Pintle
4. Thwart
5. Tiller
6. Transom



Marine Motors and Basic Maintenance

- Be aware of the basic principles of a marine engine.
- Know the difference between a 2 and 4 stroke engine.

A **2 stroke engine** is so-called because its basic process has two parts:

1. Fuel/air enters the engine and mixes
2. Ignition takes place and fumes go out an exhaust

- A 2 stroke engine is usually more powerful than a 4 stroke
- It is a lot louder
- It is a more simple design and easier to fix

A **4 stroke engine** is so-called because its basic process has four distinct parts:

1. Fuel goes and air enters the engine
2. They mix
3. Ignition takes place
4. Fumes go out an exhaust

- A 4 stroke engine is usually more economical
- It makes less noise
- It has more parts than a 2 stroke

Weather

- On at least 2 occasions get the weather forecast before a water activity.
- What are the most important parts of the forecast.

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- Was the forecast right and how did it affect your activity.

Currents, Tides and Wind

- Obtain tide times for your normal boating waters.
 - www.sailing.ie/tides
 - www.irishtimes.com/weather/tides
 - www.tide-forecast.com

Local Knowledge

- Appreciate how local factors can have considerable effect on weather and tidal forces
- Know your areas water classifications.
- Obtain some local information for hazards in your normal boating waters



Cruising Waters

Regular safe operating areas include the Inner Estuary, Marina and Outer Estuary until the mouth of the inlet.

Activities beyond this point require a passage plan filed with the Boatmaster in addition to the normal boating log entry to ensure all craft and crew are well prepared and well equipped for the continued safe boating practices at Malahide Sea Scouts.

