

HOW WINDY?

Knowing the wind speed is one of the most important things to check before going out on the water.

If the wind is too strong we can be blown off-course or damage our equipment and ourselves!

Understanding wind speed can help us decide whether it is safe to be out on the water.

HOW WE MEASURE WIND

The **Beaufort Scale** is a simple way to measure wind speed based on what you see happening around you. It is measured in 'Force' from 0 to 12.

Here's an easy way to remember the most common levels...

- **0 (Calm)** - The water is like glass. No wind at all.
- **1-3 (Light Breeze)** - Small ripples on the water. Good for Adventures Afloat.
- **4-5 (Moderate Breeze)** - Small waves form. Best left to Experienced Scouts.
- **6 = Small Craft Warning**
- **6-7 (Strong Breeze)** - Big waves! We're definitely staying ashore!
- **8-12 (Very Strong Winds)** - Batten down the hatches! A storm is coming!



Scan here for a nice
Beaufort Scale activity
from Kilkenny Scouts.





FORCE 0-6

FORCE	NAME	WIND SPEED IN KNOTS	APPEARANCE AT SEA	APPEARANCE ON LAND
0	CALM	<1	Mirror smooth	Smoke rises vertically
1	LIGHT AIR	1 to 3	Ripples on water	Smoke moves but not on a wind vane
2	LIGHT BREEZE	4 to 6	Pennant moves. Very small waves	Felt on face. Leaves rustle
3	GENTLE BREEZE	7 to 10	Light flag extends, Crests on small waves	Leaves and twigs move, flag extended
4	MODERATE BREEZE	11 to 16	Small waves with some white horses	Small branches moved, papers lifted
5	FRESH BREEZE	17 to 21	Small waves with some white horses	Small trees begin to sway
6	STRONG BREEZE	22 to 27	*Small craft warning* Large waves white foam crests everywhere	Large branches move, umbrellas difficult to use





BEAUFORT SCALE

FORCE 7-12



**Cub
Bosuns
Mate**

FORCE	NAME	WIND SPEED IN KNOTS	APPEARANCE AT SEA	APPEARANCE ON LAND
7	NEAR GALE	28 to 33	Sea heaps up and foam begins to streak.	Whole trees in motion.
8	GALE	34 to 40	Moderately high waves with breaking crests.	Twigs broken from trees. Cars veer on road.
9	STRONG GALE	41 to 47	High waves (6-7 m) with dense foam.	Larger branches break off trees.
10	STORM	48 to 55	Very high waves.	Trees are broken off or uprooted.
11	STRONG STORM	65 to 63	Exceptionally high waves.	More damage to most roofing surface.
12	HURRICANE	>64	Huge waves.	Considerable and widespread damage

1. Split the Cubs into teams and give each team a set of Beaufort Scale Cards below.

2. Shuffle the cards and get each team to recreate their Beaufort Scale.





Cub

Bosuns Mate

BEAUFORT SCALE

CARDS

FORCE

1

LIGHT

AIR

1 to 3

Knots

**Smoke
moves but
not wind
vane**

FORCE

2

LIGHT

BREEZE

4 to 6

Knots

**Felt on
face**

FORCE

3

GENTLE

BREEZE

7 to 10

Knots

**Leaves
and twigs
move**

FORCE

4

MODERATE

BREEZE

11 to 16

Knots

**Small
branches
move**





Cub

Bosuns Mate

BEAUFORT SCALE

CARDS

FORCE

5

**FRESH
BREEZE**

**17 to 21
Knots**

**Small
trees
sway**

FORCE

6

**STRONG
BREEZE**

**22 to 27
Knots**

**Large
branches
move**

FORCE

7

**NEAR
GALE**

**28 to 33
Knots**

**Sea foam
begins to
streak**

FORCE

8

GALE

**34 to 40
Knots**

**Moderately
high waves**





BEAUFORT SCALE

CARDS



Cub

Bosuns Mate

FORCE

9

STRONG

GALE

41 to 47

Knots

High

waves

(6-7 m)

FORCE

10

STORM

48 to 55

Knots

Very high

waves

FORCE

11

STRONG

STORM

65 to 63

Knots

Exception

ally high

waves

FORCE

12

HURRI-

CANE

>64

Knots

Huge

waves



(An-uh-mo-meter)

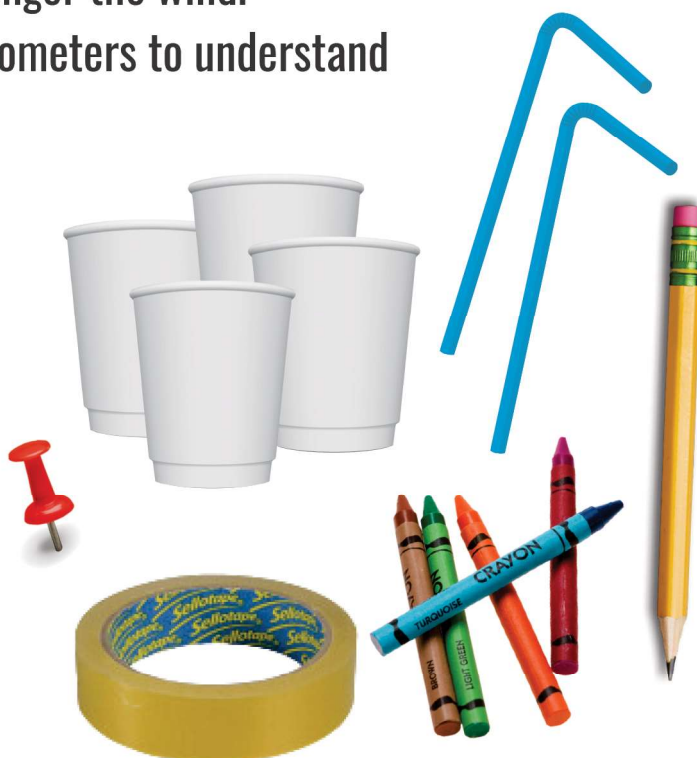
BUILDING AN ANEMOMETER

An anemometer measures wind speed. It usually has cups or blades that spin when the wind blows—the faster they spin, the stronger the wind.

Sailors and weather forecasters use anemometers to understand wind conditions and make safe decisions.

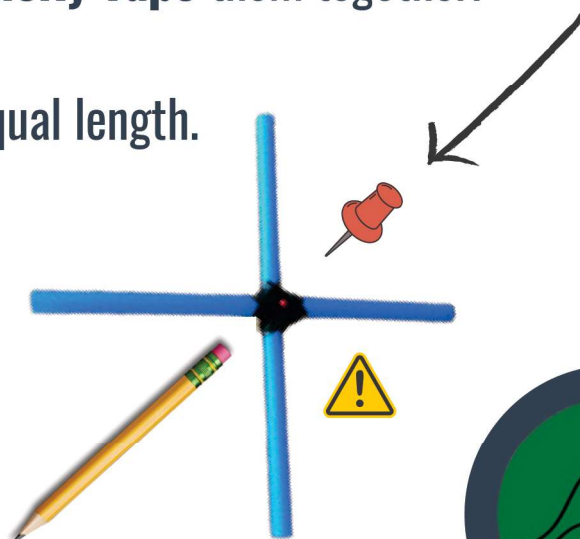
MATERIALS YOU WILL NEED

- 1.Straw x2
- 2.Paper Cup x4
- 3.Pencil with Eraser on top
- 4.Pin
- 5.Sticky Tape
- 6.Colourful Markers



INSTRUCTIONS

1. Make an X with your two **Straws** and **Sticky Tape** them together.
2. Do your best to ensure all x4 legs are equal length.
3. With help from your Scouter, push the **Pin** through the centre of your X and into the **Pencil Eraser**.





4. Design your **Paper Cups** in bright and different colours!
It will be important later to ensure at least one cup stands out...
5. **Sticky Tape** your x4 **Paper Cups** to the end of your **Straw** like in the image below.
Ensure all cups are facing the same direction!
6. Hit your **Anemometer** with a fan and see if it spins!
What do you think will happen if we set the fan to a higher speed?
Take it outside and see if it works!



EXPAND Using a Stopwatch, count how many times your favourite cup does a full rotation in 15-seconds.
Repeat the test x4 times and record your results!
How do you think this test will work outdoors?

Discuss some real-life uses
of Anemometers...





BEING SAFE AROUND THE WATER

Playing around in boats is some of the best fun and adventure you will have in Scouting! but it's important to remember that the water can be unpredictable. Learning about water safety will help keep everyone safe and create more opportunity for activity and fun!

Water safety isn't just about protecting ourselves—it's about looking out for each other, respecting the environment and being prepared for any situation!

Let's dive into the Top Advice of **Safety Afloat!**

1

Lifejackets are the bread and butter of water safety! Everytime we get onboard we must put on a lifejacket.

2

Hypothermia is when our body gets too cold it can be dangerous. Irish waters are cold so we need to be careful!

3

Understanding the **Weather** is the name of the game. From this we decide what to wear and when to go.

4

The **Buddy System** is core to water safety. Look after your pals.

5

In an **Emergency**, phone 999 or 112. Shout for help and find an adult.

WHAT WOULD WE BRING FOR A DAY TRIP AFLOAT?...



- Water
- Snacks
- First-Aid
- Warm Hat
- Sun Hat
- Waterproofs
- Clothing Layers
- Suncream
- Phone or VHF
- Compass
- Dry Bag



Making Safe
Choices



Lifeboats





KNOWING YOUR FLAGS

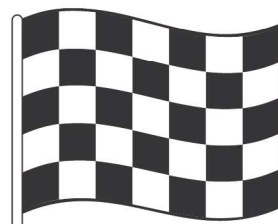
Cross out all the Wrong Answers!...



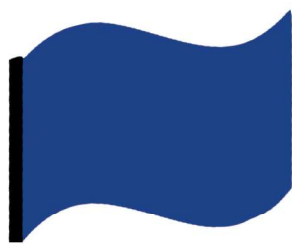
Lifeguard On Duty
No Shoes Allowed
Shark In The Water!



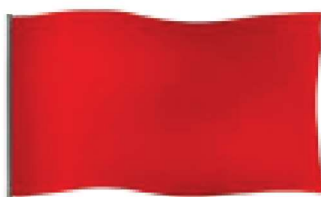
Swim Here
Tide Incoming
Irish Flag



Boards Only - No Swimmers
Camping Permitted
Lifering Buoy Here



No Dogs Allowed
Just a Blue Flag!
Rain Predicted



Ice-Cream Sold Here
Dangerous Water
Paper Boats Only

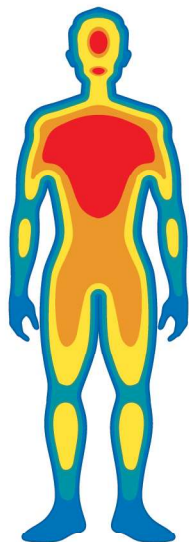


Hats Must Be Worn
Rip Currents Here
Pirates! AAARGHH





HYPOTHERMIA ITS COLD!



Normal Body
Temperature
is around
37°C

Hypothermia is when the body gets so cold, it can no longer keep itself warm.

Hypothermia can become life-threatening quickly, so it's important that we can recognise the signs and treat someone straight away!

HOW DO YOU RECOGNISE WHEN SOMEONE IS VERY COLD?

- Shivering, cold and pale skin.
- Slow or reduced level of response.
- Clumsy or irrational behaviour.
- Fatigue and unusually tired.



SIGNS AND SYMPTOMS



TAKING ACTION



1. Get them out of the cold and into shelter.
2. Remove wet clothes and cover their head.
3. Warm them up slowly:
 - Give warm drinks; not hot!
 - Avoid direct heat like a fire or hot shower.
4. Give them high energy foods like chocolate.
5. Do not leave the casualty alone.
6. Don't delay in calling the emergency services.

Prevention is the best cure. Brainstorm how you could prevent hypothermia while doing activities afloat.





WATER SAFETY CHECKLIST

Water Safety is everyone's responsibility.

✓ or ✗ to identify some of the essentials below!



Cub
Bosuns
Mate

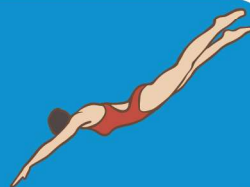
☐ If you find yourself in trouble in the water; Stay Calm, Tilt your Head Back, Call for Help. #FloatToLive



☐ Inflatables and Lilo Air Beds are perfect for the beach and definitely won't get blown out to sea!....



☐ If I dive into unknown water, I could hit a submerged rock and really hurt myself.



☐ Learning how to swim (or doggy paddle!) is an important way to stay safe around the water.



☐ If someone is in trouble in the water, I should jump in after them.



☐ In an Emergency, calling 123 will contact the Emergency Services.



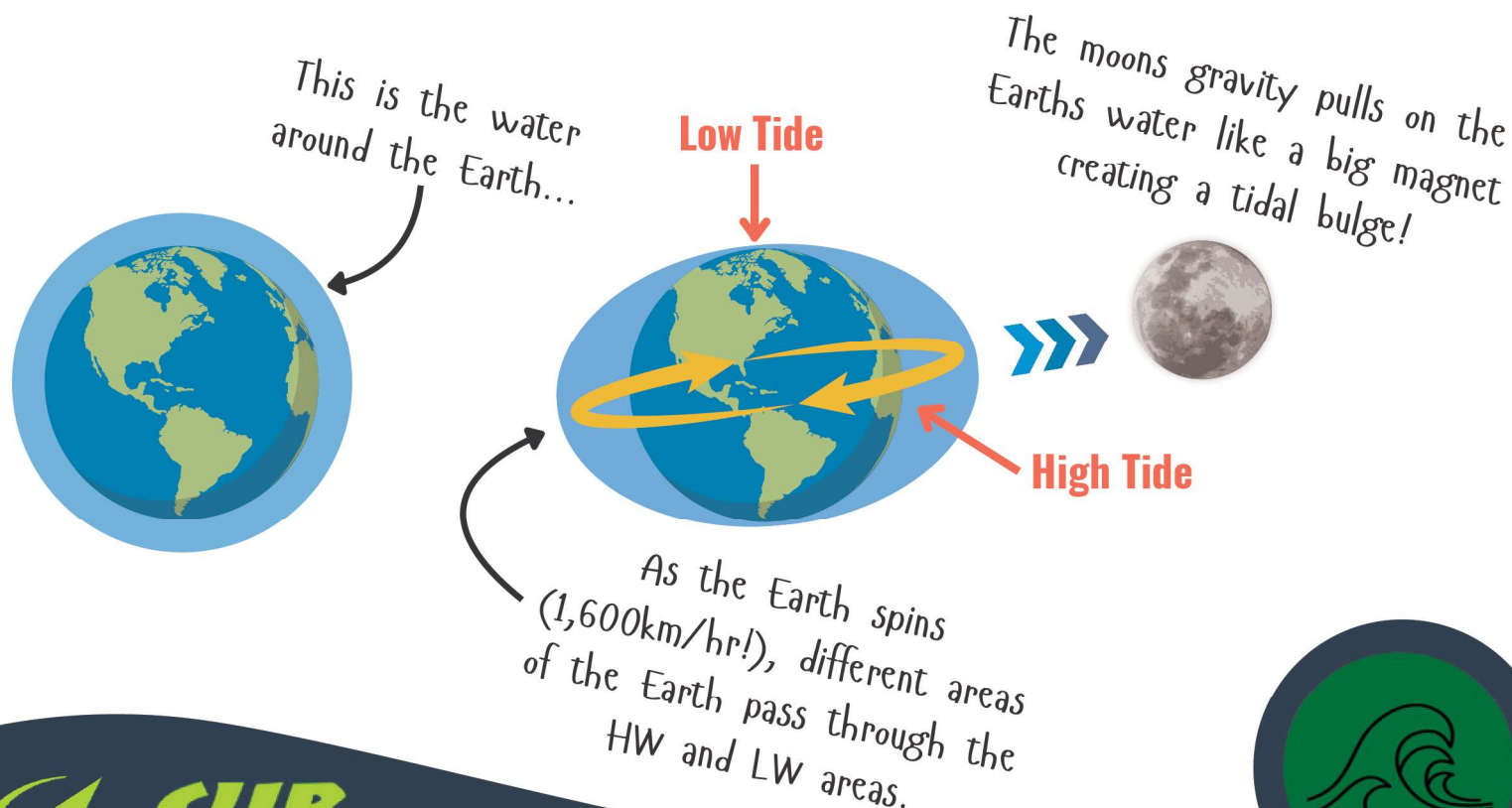
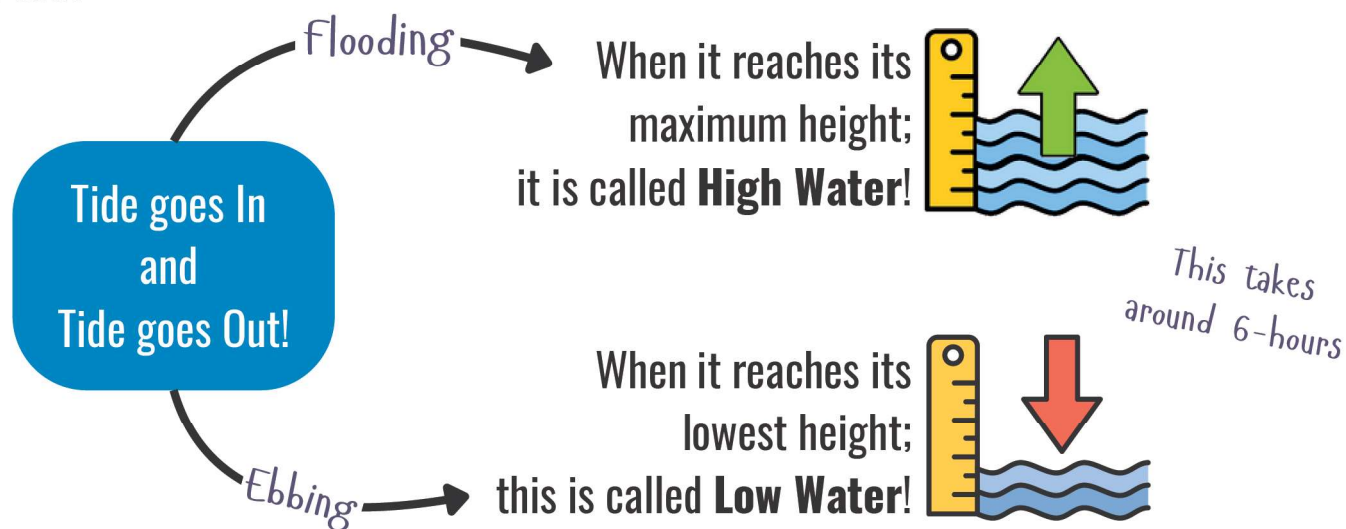
☐ Using clear Communication Signals like thumbs up for OK, waving arms for help or whistle sounds is a really good idea!





GO WITH THE FLOW

The regular and predictable rise and fall of the ocean's waters is known as Tide. They are caused mainly by the gravitational pull of the Moon, and to some extent the Sun too!





TIDE EFFECTS

HW in
the
Harbour

LW in
the
Harbour



A quick
explainer video





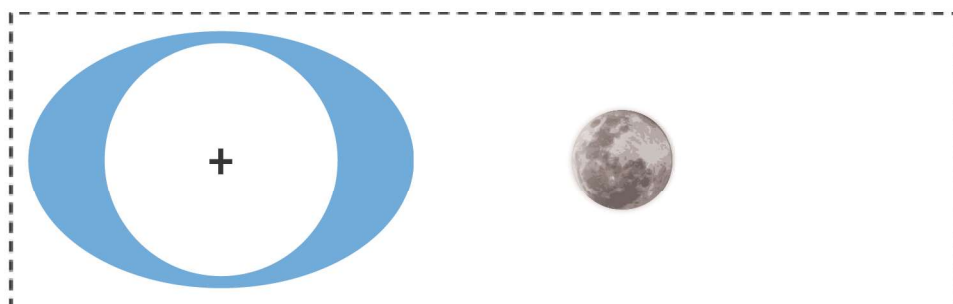
TIDAL SIMULATION CUTOUT

Cut out the three elements below, pin them together on the + and orbit the Sun and Moon around the Earth to identify the tidal effects!

1



2



3

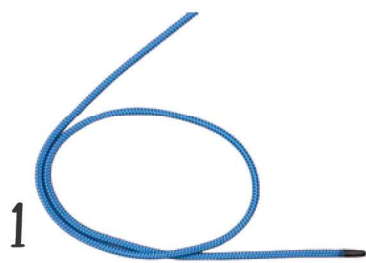




COIL A LINE SHIPSHAPE



Tidiness matters. Keeping your boat 'shipshape' plays a huge part in maintaining safe activities so ropes are easy to deploy for rescue, to drop rigging in a hurry and prevent crew getting tangled.



1
Start making a coil in your hand or on the ground



2
Continue making loops...



3



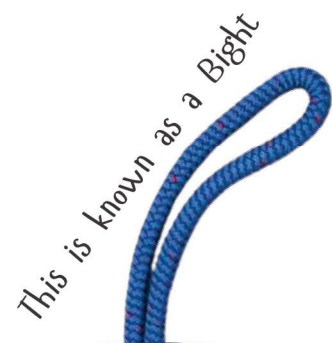
4
Wrap the end around your coil several times



5
Pass a bight through the coil.



6
Spread the bight out and bring it back down over your coil.



This is known as a Bight



 ANIMATED KNOTS™



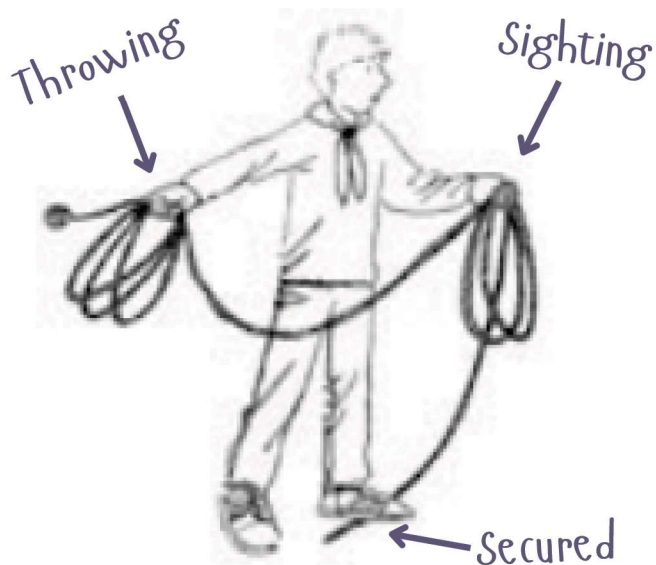
7 Pull tight.
Voilà!





HEAVE A LINE

Countless situations may arise during your boating career when being able to toss a line accurately and at distance will come in handy! or save someones life.



Top Tips for Heaving a Line

1. Ensure your line is coiled and ready.
2. Spread your feet and secure the fixed-end. (stand on it)
3. Split your coil in-half.
(x1 half in each hand)
4. Hold the weighted coil in your throwing-hand.
5. Hold the other coil in your sighting-hand with an open palm.
6. Use your sighting hand as your aim.
7. Swing your throwing arm toward your sight and back as a rehearsal.
8. Throw the line underhand and forward!

It might take some practice to ensure you throw through forward and not up!

Take time to ensure your line is coiled properly.
Always leave a line coiled ready for use...



Now learn it with
a Ringbuoy!



ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



Cub
Bosuns
Mate

NAUTICAL CHARTS

Just like when you are hiking, it is important to know where you are and learning some skills to help read a map can keep you safe and stop you from getting lost!

Maps are what we use for navigation ashore.

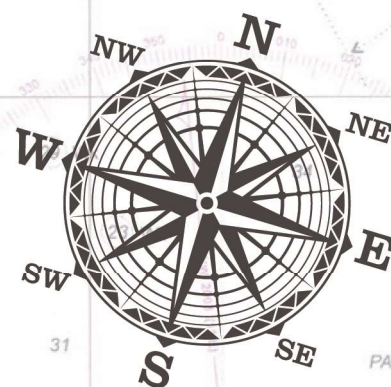
Charts are what we use for navigation afloat.

Admiralty and Imray charts are some of the most popular chartmakers.

ADMIRALTY



Imray



WHAT WILL WE FIND ON THE CHART?

Everything on the chart is there for a reason, everything is telling us something!...

1. Water Depth.
2. Sand Banks and Rocks we Cannot See from the Surface.
3. Cliff and Beaches.
4. Navigation Buoys.
5. Harbours and Marinas.
6. Church Spires and Mountain Spot Heights.

Why are these land features on the Chart??...



Here is a good
source for free
online charts



#ScoutingIrelandOnTheWater



Mate





CHARTING DEPTH WITH COLOURS

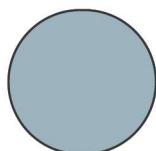


Dry Land

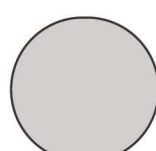


**Drying Height
<0.1m**

Land exposed at
Low Tides

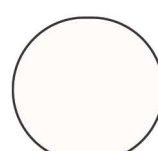


**Very Shallow
0-5m**



**Shallow Waters
5-10m**

Caution to larger
vessels.



**Deep Water
10m+**

Areas of safe
navigation.





CUBS CHARTING THE WAY



Cub
Bosuns
Mate

Finding your location on the Chart is known as **Plotting your Coordinates**.

This is with a grid-reference system using **Latitude** and **Longitude**.

Let's make up a simple grid-reference system below to identify your positions; in the exact same way you would on a mountain map!

LATITUDE

F

E

D

C

B

A



LONGITUDE

Use any map and overlay Latitude & Longitude;
we can learn proper formatting later.





COORDINATES TREASURE MAP



What will you find at the following coordinates;

F,2 =

B,9 =

H,1 =

Where are the below items?







X-Marks the spot.
Put an X at the coordinates;

D,7

G,4

C,2





BEACH CLEAN

Keeping our waters clean is the best way for us to enjoy access to our waters and protect the wildlife that live there.



Many of this can be sourced via your local Tidy Towns or Clean Coasts.

- Check the Tide (a falling tide is best).
- Dress for the Weather.
- Wear Gloves or use a Litter-Picker.
- Do Not Disturb the Local Wildlife.
- Review what Litter and Debris you have collected.
- Where do you think it came from?
- What can we do at a Local Scout Level to tackle this?
- What can we do outside our Scout Group to tackle this?



Sustainability
Afloat

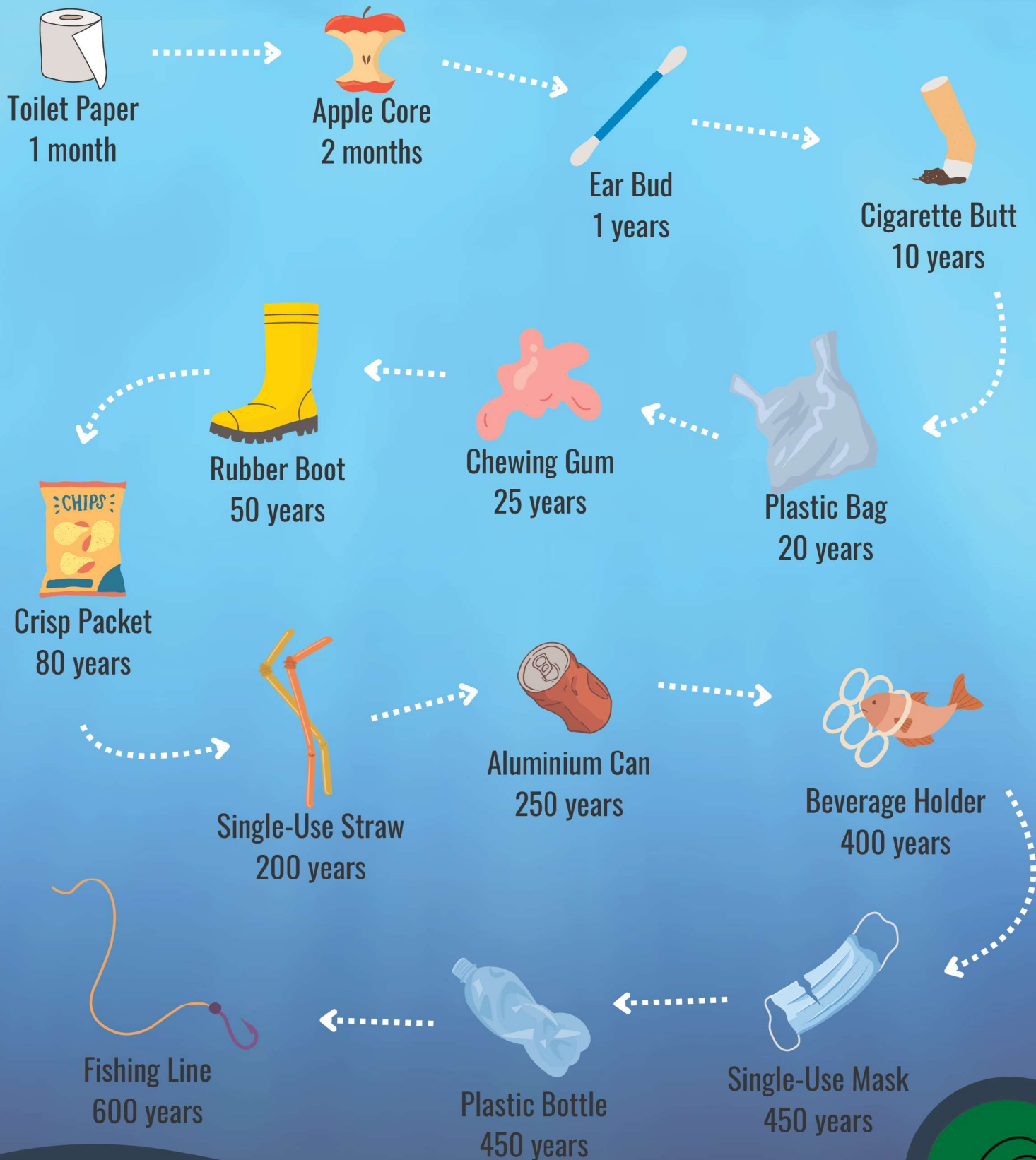


ADVENTURES AFLOAT

BIODEGRADABLE TIMELINE



Cub
Bosuns
Mate





BIODEGRADABLE MATCHUP TIMELINE



**Cub
Bosuns
Mate**

1 month

2 months

1 years

10 years

20 years

25 years

50 years

80 years

200 years

250 years

400 years

450 years

450 years

600 years



Plastic Bag



Single-Use Straw



Aluminium Can



Chewing Gum



Cigarette Butt



Apple Core



Rubber Boot



Single-Use Mask



Ear Bud



Plastic Bottle



Crisp Packet



Fishing Line



Beverage Holder



Toilet Paper



ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



National
Biodiversity
Data Centre
Documenting Ireland's Wildlife



Cub
Bosuns
Mate

REPORTING WHAT YOU FIND



Don't live near the coast?
Try a #2MinuteStreetClean!



Take some pictures of the Marine Debris you collected and share them on social media to make your community aware!

#2MinuteBeachClean
#ScoutingIrelandOnTheWater



@CleanCoasts
@ScoutingIreland
@SeaScoutingSI



SEASIDE SPOTTER



If you're looking for it, you will find our shorelines are bursting with life!

By becoming a Seaside Spotter you can learn more about species identification and submit your findings to the National Biodiversity Centre!





Biodiversity is when there is a variety of animal and plant life living in an ecosystem.



**Cub
Bosuns
Mate**

COMMON LIFE YOU MIGHT FIND

Here is a quick guide to some of the wildlife you might find around Irelands shoreline and rockpools. See if you can find them and complete their fact file!...



LIMPET

Size _____

Habitat _____

Diet _____



DOG WHELK

Size _____

Habitat _____

Diet _____



BLADDER WRACK

Size _____

Habitat _____

Diet _____



PERIWINKLE

Size _____

Habitat _____

Diet _____



MUSSEL

Size _____

Habitat _____

Diet _____



CORMORANT

Size _____

Habitat _____

Diet _____





INVITE A GUEST

Inviting a guest to speak to your Cub Pack can be an exciting way to get a different perspective of your favourite activity, learn something new or instil a new spirit of adventure!

GUESTLIST

- RNLI member
- Lifeguard
- Water Safety Ireland
- Coast Guard member
- Sailing Instructor
- Paddling Instructor
- Clean Coasts
- Coastwatch
- Marine Institute Explorers
- Local Sailing Club member
- Scouts that have done a cool expedition.
- Underwater Divers
- Fishermen



Lifeboats



Sea Scouting
Group Locator

1. Write an invitation letter
2. Research your guest
3. Brainstorm some questions
4. Be polite and engaging
5. Write a thank-you letter

For Rescue and Water Safety Experts:

- Can you tell us about the most exciting or challenging rescue you've been part of?
- What advice would you give to someone struggling in the water?
- How does your team prepare for emergencies.

For Boating and Adventure Experts:

- What is your favourite place to sail or kayak, and why?
- Can you share an adventure story from your time on the water?
- What is the most important skill to learn when starting sailing or paddling?

For Environmental and Marine Science Experts:

- What is the most interesting marine animal or plant you've studied?
- How can we help protect the ocean and its wildlife?
- What do you enjoy most about working with the marine environment?

For Cultural and Historical Experts:

- What are some cool facts about the history of our local port or coastline?
- How has life for sailors changed over time?
- Can you tell us about any famous shipwrecks or maritime events in this area?



BUOYANCY-AID VS LIFEJACKET WHICH SHOULD I USE?

A Buoyancy-Aid and Lifejacket are both types of Personal Floatation Device (PFD). There are some important differences between the two that will help us determine which might be more appropriate to use for different activities.



A lifejacket is a bladder filled with air. They are generally more compact offering better freedom of movement but they may need to be activated manually. As such they are typically recommended for more experienced users.

Intended for;

- Activities you don't intend to get wet.
- When help may be some time away.
- Will keep your face out of the water.

A buoyancy-aid is specifically that! It aids your buoyancy.

A buoyancy-aid is foam filled and is ready to go when you fall into the water.

Intended for;

- Activities you will get wet.
- When help is close at hand.
- Will not keep your head up.
- Swimming ability recommended.





PFD buoyancy levels
are measured using
Newtons (N).



**Cub
Bosun**

BUOYANCY-AID VS LIFEJACKET



For activities where
you will get wet
like, paddling,
dinghy sailing,
windsurfing.

A level of
swimming is
required and
intended for use in
sheltered waters
where help is close
at hand.



For activities where
you will get wet like,
paddling, dinghy
sailing, windsurfing
but may not be a
confident swimmer
or help may be
further away.

A buoyancy-aid
should be a snug fit.
A lifejacket should
be loose fit to allow
the air bladder
expand.



Designed for coastal
activity where IN the
water is unlikely
such as big boat
sailing or powerboat
trips.

Often used for
rowing racing as
they provide a better
freedom of
movement.

May need to be
activated manually.
Will keep your face
out of the water.



Offshore activity
where rougher
conditions may be
expected.

Typically equipped
with a hood to keep
your head and
airways out of
rolling waves and
will be self-righting
should you be
unconscious and
face down.





Someone who studies
weather is called a
meteorologist



**Cub
Bosun**

WHAT'S THE WEATHER LIKE?

Every day, meteorologists create weather forecasts to help us plan our activities, whether it's deciding if we need a raincoat, staying warm during icy conditions, or enjoying a sunny day perfect for ice cream!

Weather forecasts predict what might happen in the coming hours, days, or even weeks, and they help us prepare for changing weather conditions.

Weather includes everything happening in the atmosphere—like sunshine, clouds, rain, snow, wind, thunder and temperature.

WHY DO WE NEED A FORECAST

- 1. Safety Afloat** - avoiding dangerous conditions like strong winds and rough seas and craft and crew and match the weather.
- 2. Planning Activities** - help us determine the best times for sailing deciding when, where and for how long we can go out for.
- 3. What to Wear** - we can plan whether we should wrap up, put on some suncream or bring an extra jacket.
- 4. Environmental Alerts** - prevent risk of flooding or crop damage.

Conditions - Look out the window and we can see what the weather is now.

VS

Forecast - What will happen in the next hour?

We should never go afloat without checking the actual conditions vs the forecast.
Just because the forecast looked OK, doesn't mean it is!

Weather Types

- Sunny
- Rainy
- Cloudy
- Windy
- Snowy
- Stormy
- Foggy
- Icy



ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



Cub
Bosun

WHETHER THE WEATHER

Can you identify the types of weather below?





WHETHER THE WEATHER

Can you identify the types of weather below?

Cub
Bosun



Can you find out what
the weather will be
like tomorrow?

WEATHER FORECAST

Reading the weather forecast is the bread and butter of any activity afloat!
We have to know what the weather is doing!

What information do you think should be included on a weather forecast?

Outlook Heavy rain
and light winds

Temperature 8°C

Precipitation 95%

Wind Speed 5 Knots

Wind Gust 8 Knots

Wind Direction NNW

The Essential Data

Potential Sources



Met Eireann



Windguru



Windy



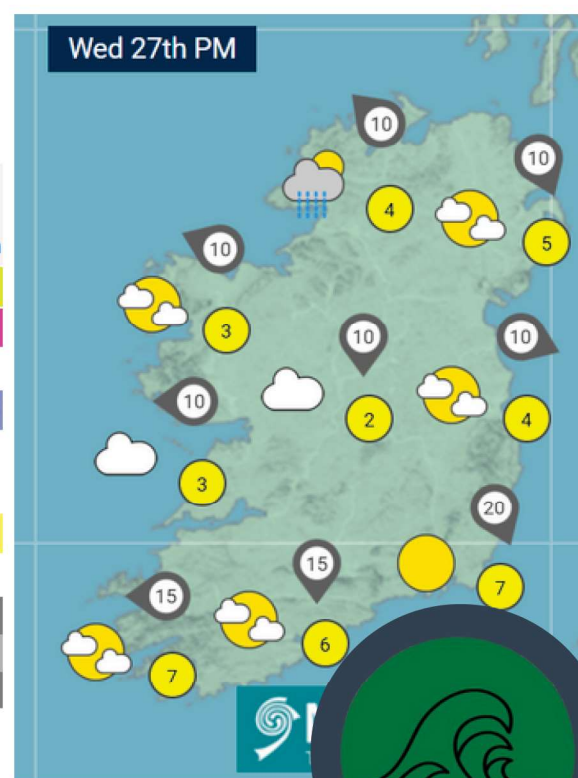
Met Office



Locals

Where & When are very important!
Make sure to check the forecast daily, it changes!

Updated: 27.11. 14:58 GMT	We 27. 12h	We 27. 14h	We 27. 16h	We 27. 18h	We 27. 20h	We 27. 22h	Th 28. 03h	Th 28. 05h	Th 28. 07h	Th 28. 09h	Th 28. 11h	Th 28. 13h	Th 28. 15h	Th 28. 17h	Th 28. 19h	Th 28. 21h	
Wind speed (knots)	4	6	5	5	5	4	2	8	13	15	18	19	20	19	20	18	
Wind gusts (knots)	7	9	8	7	8	6	3	13	23	26	30	34	35	35	36	32	
Wind direction (→)	↘	↘	→	→	→	↘	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	
Wave (m)	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.7	1	1.4	1.7	2	2.2	2.3	2.6	
Wave period (s)	3	3	4	9	8	8	8	3	3	4	5	6	6	7	7	8	
Wave direction (→)	↓	↓	←	↑	↑	↑	↑	↖	↖	↖	↖	↖	↖	↖	↖	↖	
*Temperature (°C)	4	5	2	1	0	0	2	3	8	8	9	9	9	10	10	11	
*0° isotherm (m)	950	980	980	860	960	1k	1.2k	1.8k	2.3k	2.5k	2.7k	2.7k	2.9k	2.9k	3k	3k	
Cloud cover (%)						53	92	100	99	100	99	97	98	97	96	94	
high / mid / low						28	37	37	68	39	17	11	11	53	92	96	93





HOW PREDICTABLE!

Tell your Cubs that they are going to create their own weather forecasts for tomorrow's national news!

Split into pairs or small groups and decide what information and criteria the public need to know with regards to a weather forecast.

Print the map of Ireland below (even better in A3) to help the Cubs prepare their forecast.

Draw your own weather condition symbols or cut-out the ones below.

Look outside to make some weather observations before creating your forecast.



What if the weather was the same every day? Would that matter?

What if you could choose the weather you wanted?

Is the weather important to everyone?

What can happen if the weather is not what it is expected it to be?

What is your favourite weather and why?

ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



Cub
Bosun

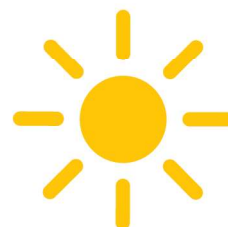
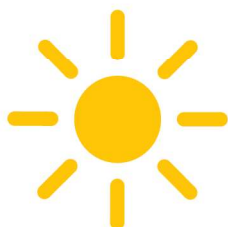
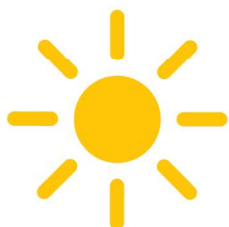




WEATHER SYMBOLS

Cut out these weather symbols and use them with the map to showcase your weather forecasts.

Sunny



Rainy



Cloudy



Windy





Watch the Weather
forecast and get an
indication of the
weeks weather.

WEATHER WATCHER

DAY 1

Weather Forecast

Actual Conditions

DAY 2

Weather Forecast

Actual Conditions

DAY 3

Weather Forecast

Actual Conditions

How did the forecast compare to the
actual Conditions?





Watch the Weather
forecast and get an
indication of the
weeks weather.

WEATHER WATCHER

DAY 4

Weather Forecast

Actual Conditions

DAY 5

Weather Forecast

Actual Conditions

DAY 6

Weather Forecast

Actual Conditions

How did the forecast compare to the
actual Conditions?

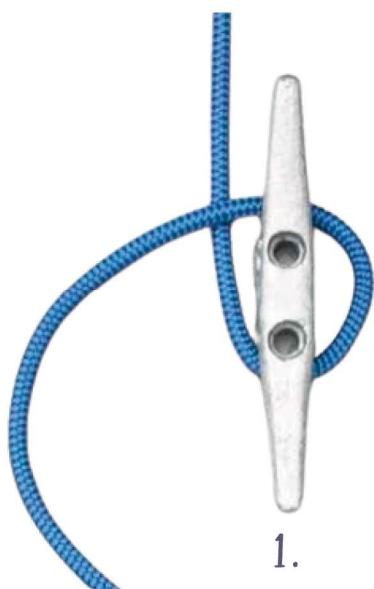




ANIMATED
KNOTS™

GET AFLOAT MAKING FAST TO A CLEAT

Being able to secure your boat is an essential seamanship skill and one you will need to know for all types of boats and through 1,000 different scenarios throughout your boating career!



1.



2.



3.



4.



5.

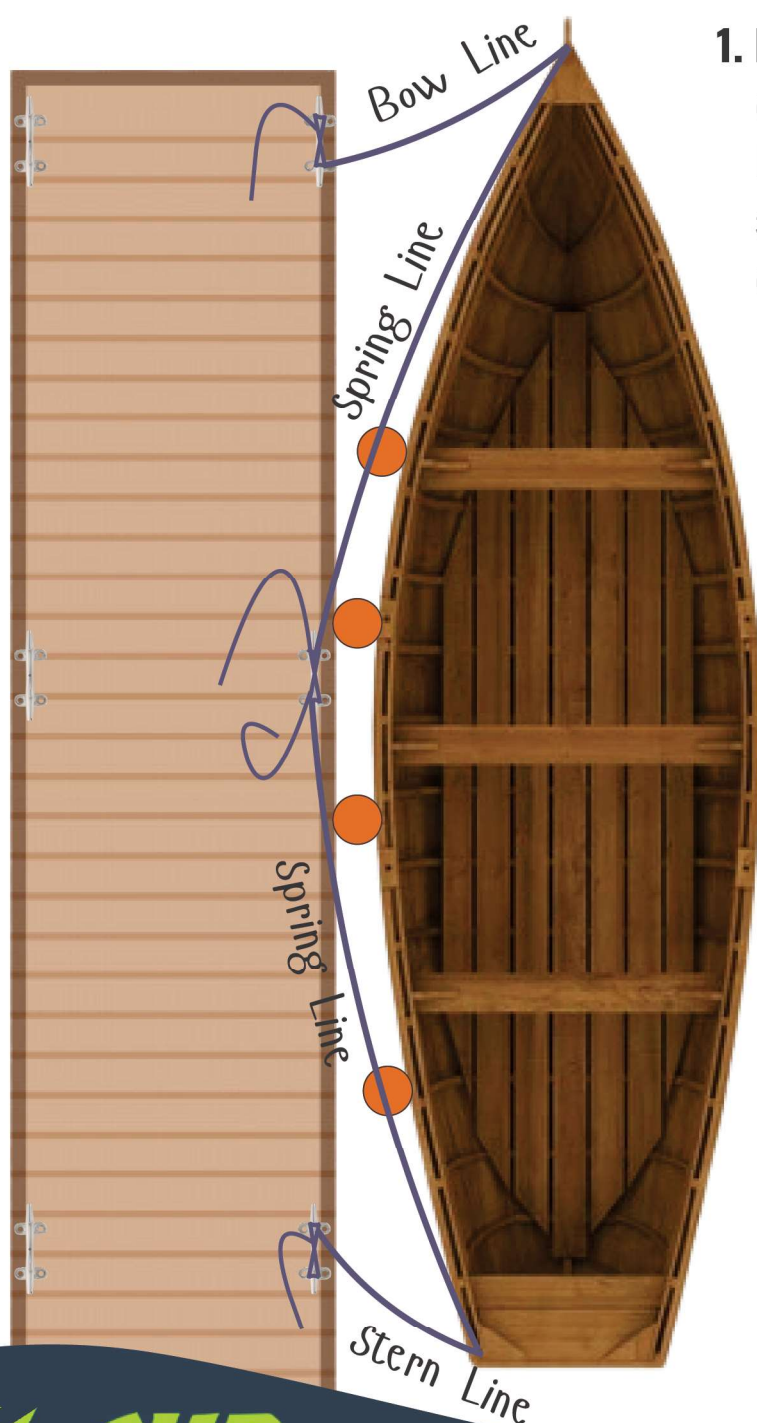


SECURING YOUR BOAT



When possible, ensure your lines are running through a fairlead. This can help direct your lines and prevent chaffing or damage to them.

Now you know how to secure a line to a cleat, let's look at securing our boat to a dock.



1. Prepare Fenders Fenders are heavy duty rubber inflatables that act as bumpers. It's really important to secure these to the side of your boat to protect your boat from damage on the dock. ●

2. Bow & Stern Line First ensure they are adequately secure to your boat! With your cleat-hitch, secure your bow line and stern line to the dock. They should be reasonably tight.

These lines will stop your bow & stern kicking out away from the dock; they will not stop the boat moving fore and aft...

3. Spring Lines The forward spring line runs from the bow and aft; this could be to the aft dock cleat or midship. The aft spring line runs from the stern and forward. These lines will prevent your boat surging forward and back.

4. Dock Lines Ensure all the lines you have secured to the dock are tidy. If they are trailing all over it could cause a hazard.



ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



Cub
Bosun

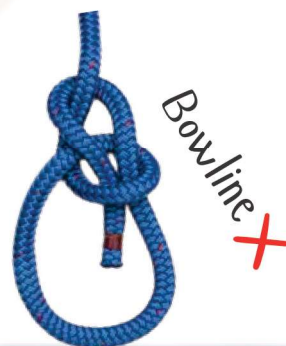
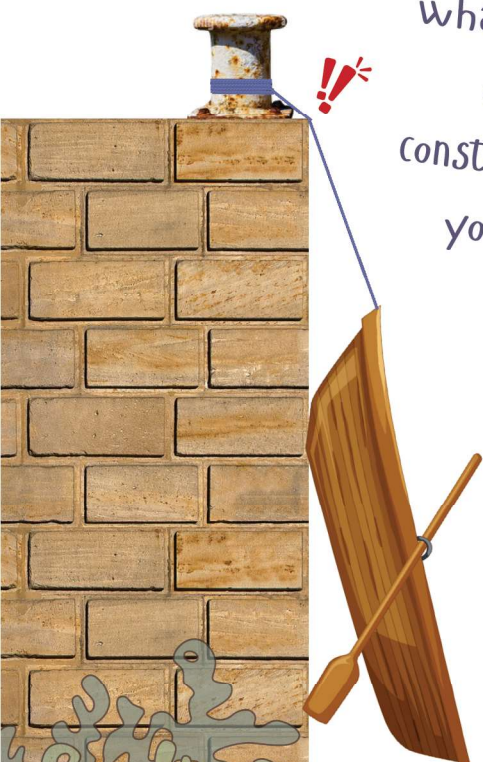
SECURING YOUR BOAT WHAT ABOUT THE TIDE!



Securing our boat to a Pontoon or Marina is great because everything will rise and fall with the tide! However, securing to a Pier, Harbour or Quay Wall we will need to be much more conscious and aware of our environment.

Getting the tide wrong can
be damaging to your boat,
and your pride!

Always check
what the tide is
doing and
constantly monitor
your boat...



Securing your boat for a
short period you may
decide to free-float it
depending on the conditions.

Always tie-off to the
Leeward (downwind) side
of the pier.



Wind Direction



ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



Cub
Bosun

GET AFLOAT BOAT PARTS

Spars

- Mast
- Boom

Foils

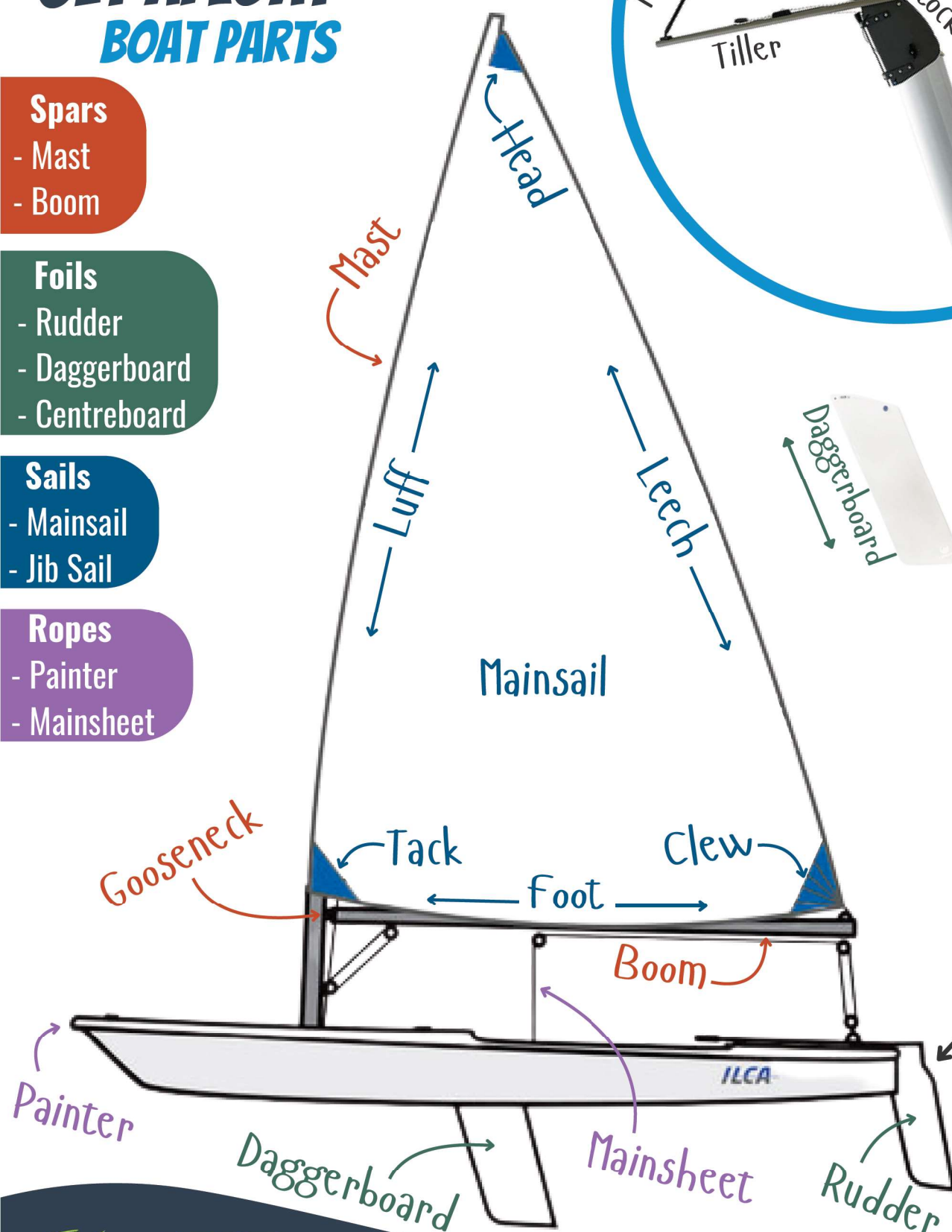
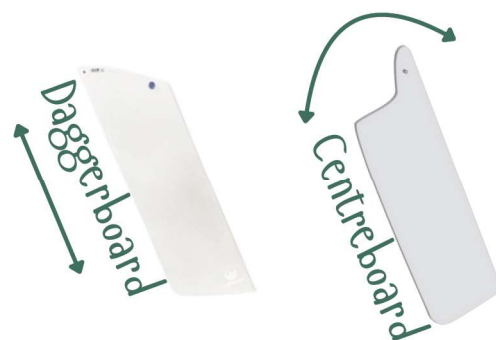
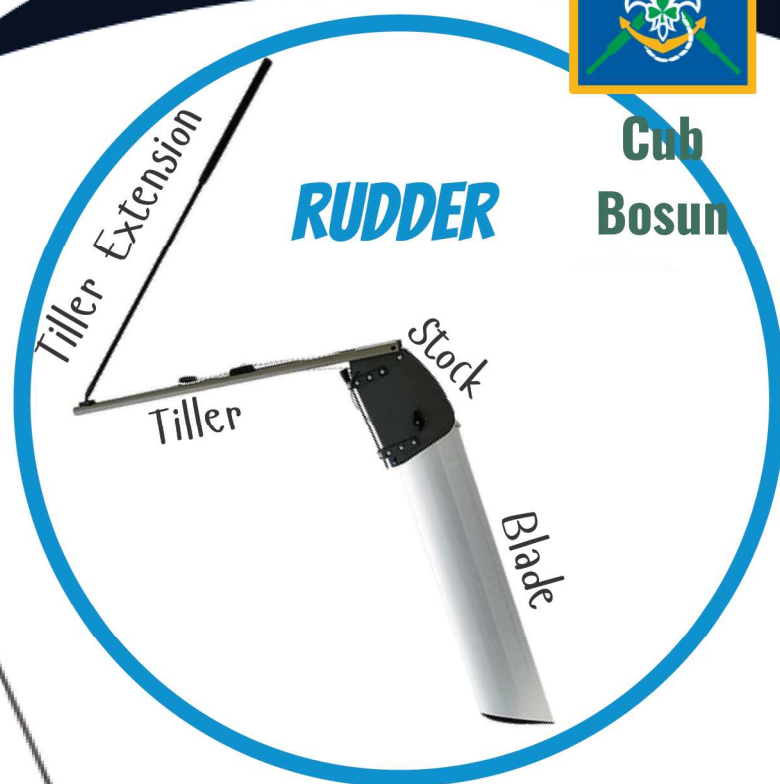
- Rudder
- Daggerboard
- Centreboard

Sails

- Mainsail
- Jib Sail

Ropes

- Painter
- Mainsheet



Always
check your
Bung is
secure!



ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



Cub
Bosun

PICTIONARY

Setup Create a number of cards with boat part pictures, or just boat part names on it. Split the Cubs into teams and everyone sitting in a row behind a line.

1. The first Cub runs across the room to grab the first card.
2. They have 1-minute to draw their boat part on a whiteboard and for their team to guess what it is.
3. After 1-minute, the other teams can start guessing too!
4. Before shouting the answer, teams should shout their own team name.
5. Each right answer scores a point.
6. The next team then sends their Cub up to grab a card and draw!

CHARADES

You could try act it out instead of drawing!

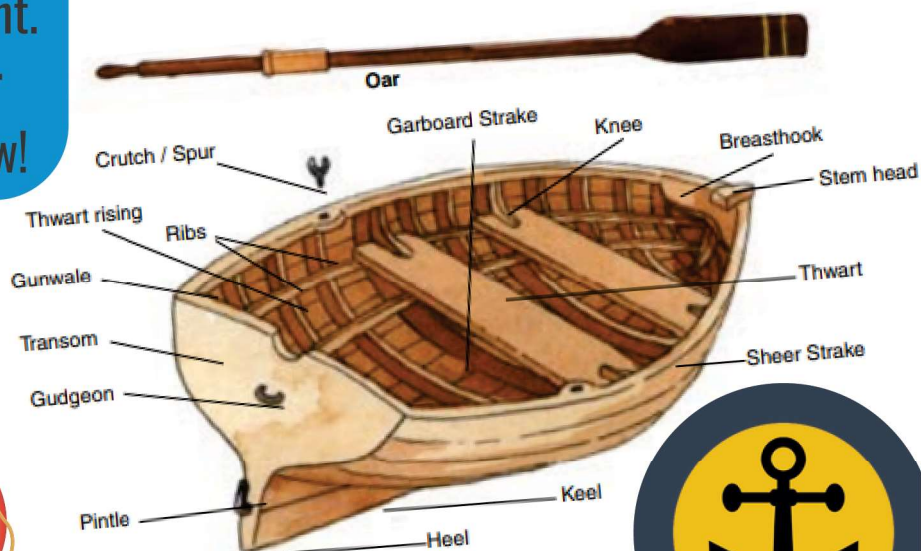


MEMORY

Setup Split the Cubs into teams. Place all sorts of boating equipment, parts, supplies and ancillaries on the floor.

1. Give the Cubs 1-minute to memorise as much as they can.
2. Cover everything with a sheet.
3. Ask the Cubs to write down as much as they can remember.
4. The first team to hand in the most accurate list wins!

Alternatively, you could remove just one item at a time and see if they can recognise and name the part.





WEIGH ANCHOR!

Anchoring is a top-skill for any good boater!

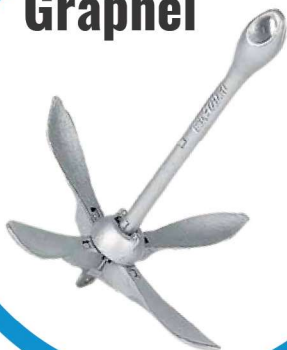
If you can master it, it can help you to explore new areas for adventure as well as being able to 'park' your boat afloat to reset yourself and take a break.

Different anchors are better at holding to different types of seabed.

Learn about the most common anchors below and be sure your boat is using the best anchor for your water!

How do you think we could find out what type of seabed we have below us?

Grapnel



Perfect for grabbing
onto rocks

Sand ✗

Mud ✗

Rock ✓

Plough



Best for soft bottoms.
Heavy but great holding.

Sand ✓

Mud ✓

Rock ✗

Danforth



Great for sandy or
muddy bottoms! Easy to
store.

Sand ✓

Mud ✓

Rock ✗



Only anchor when needed; anchors can
damage seabed habitats.





WEIGH ANCHOR!

Top tips BEFORE you Drop Anchor

Check...

-  **The Area**
- calm, safe area away from other boats.
-  **The Bottom**
- is it sandy, muddy or rocky?
-  **The Depth**
- anchor line should be at least 5x the depth.
-  **The Anchor**
- that the anchor is secured to the boat!
-  **The Hold**
- once laid, check that aren't drifting.

Making a Lead-Line
to check the depth

Knowing the water depth is
really important!

If the anchor line is too short,
what will happen?

If the anchor line is too long,
what will happen?

Should I know what the TIDE is
doing?

1. Get a long rope and tie a weight to one end.
2. Use a measuring tape to mark out 1 metre points along the rope.
3. At each point, tie a colourful string, a marker or a number.
4. Lower the weight overboard until it reaches the bottom; count how many marks are in the water and that's your depth!



KG





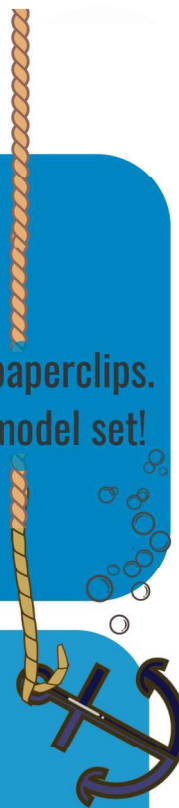
EXPLORING ANCHORS & SEABEDS

Create Mini Anchor Models and test their holding powers.

You can make mini anchors from materials like:

- Paperclips – bent and shaped to represent the arms of a grapnel anchor.
- Clay or Plasticine – molded into the shape of a plough anchor, reinforced with paperclips.
- JB Weld Epoxy Putty - from the hardware store is ideal to make your own mini model set!
- 3D Printed - available online.

Attach a piece of string to each mini anchor, so it's easy to pull...



Prepare your Seabed Containers;

Setup x3 different containers of water, each with a different “seabed” material;

1. Sand
2. Mud (modelling clay mixed with a little water can mimic a muddy seabed too).
3. Rocks or Gravel – Scatter small stones or gravel in the basin to represent rocky ground.

Each basin represents a different seabed type that boats commonly encounter

Test your Anchors in the Different Seabeds;

1. Drop anchor into one of your containers, help the anchor settle on the “seabed” and gently pull the string to see how well the anchor holds, or slips!
2. Record how the anchor performs and then try the next anchor type!
Make sure to try each anchor type in each seabed to see how well they work!
3. Take notes and discuss your finds!

Reflection Questions;

1. What surprised you about the anchors and how they held in different seabeds?
2. Why is it important to know about different seabed types before anchoring?
3. What would happen if a boat anchor didn't hold well?



COMPASS CRUSADER

A compass is an essential tool for navigation afloat and ashore.

A small magnetic needle interacts with Earth's magnetic field always pointing the needle towards North!

We might already be familiar with the Compass Cardinal Points;

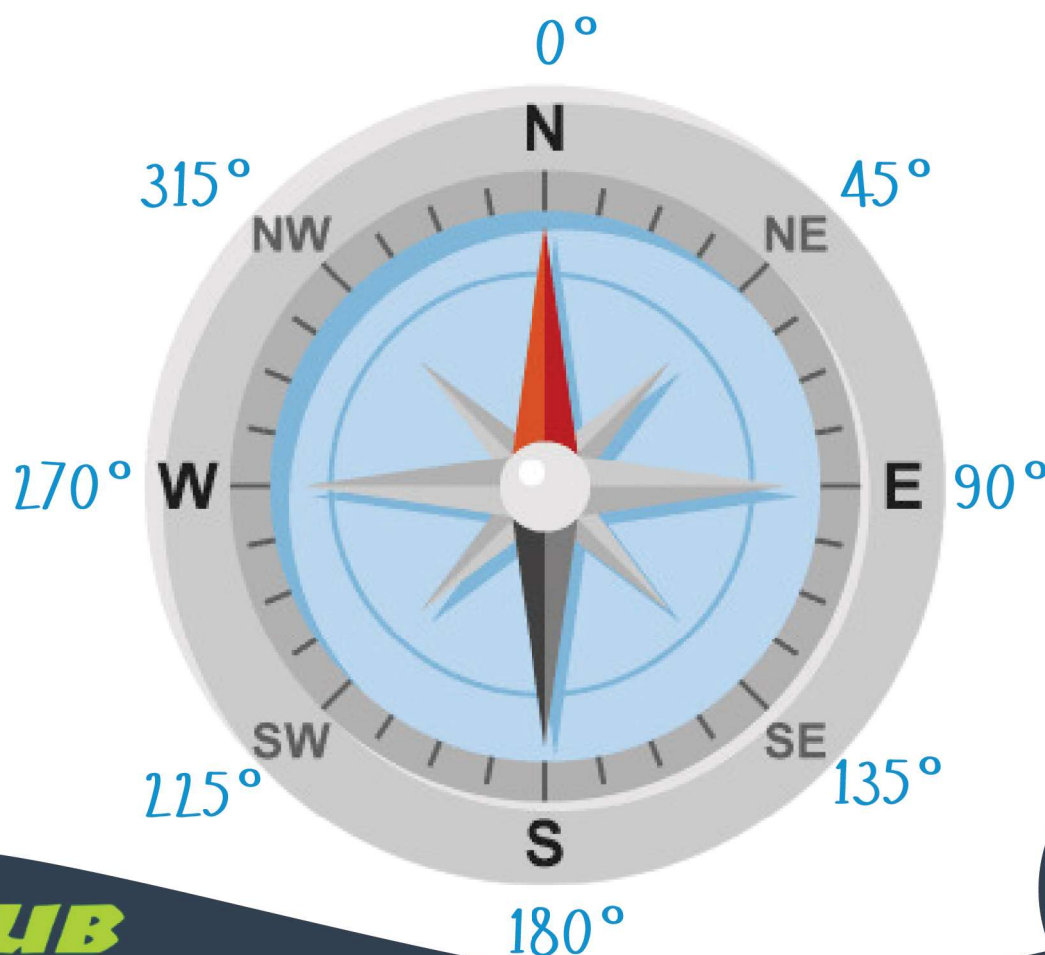
North, South, East, West.

A **Bearing** is a precise way of describing these compass points using degrees.

Bearings are more accurate than saying "Go East" or "Go South."

Instead, we could say "Walk at a bearing of 180° ".

This is especially useful for sailors, hikers and explorers who need to navigate precisely!





COMPASS CRUSADER

In teams and armed with a Compass, start by facing the first Bearing and follow the instructions...

- 0° (North): Walk 10 steps forward.
- 90° (East): Walk 10 steps forward.
- 180° (South): Walk 10 steps forward.
- 270° (West): Walk 10 steps forward.



- 0° (North): Walk 8 steps forward.
- 120° (Southeast): Walk 8 steps forward.
- 240° (Southwest): Walk 8 steps forward.



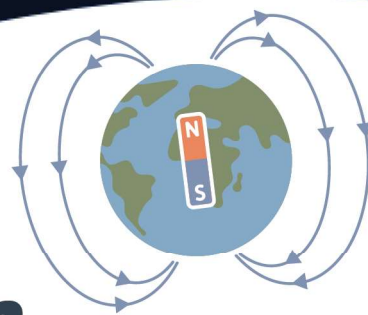
- 45° (Northeast): Walk 6 steps forward.
- 135° (Southeast): Walk 8 steps forward.
- 225° (Southwest): Walk 6 steps forward.
- 315° (Northwest): Walk 8 steps forward.



A bearing you
follow is known as
a Heading.

- 0° (North): Walk 5 steps forward.
- 144°: Walk 5 steps forward.
- 288°: Walk 5 steps forward.
- 72°: Walk 5 steps forward.
- 216°: Walk 5 steps forward.

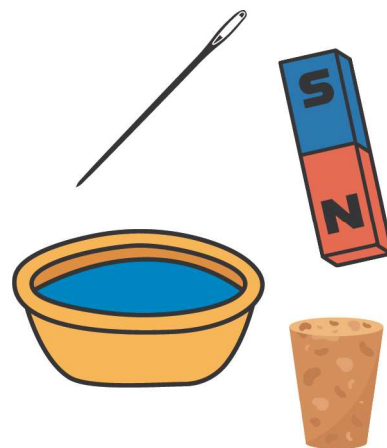




MAKE YOUR OWN COMPASS

MATERIALS YOU WILL NEED

- Needle (or paperclip)
- A Magnet
- Bowl of Water
- Cork or Foam (to float needle)



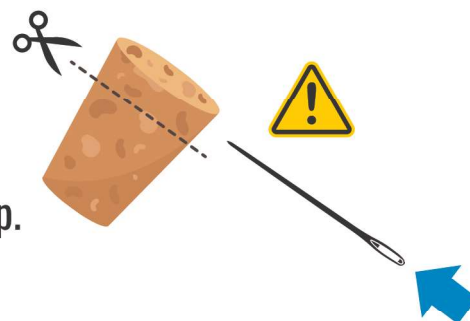
INSTRUCTIONS

Step 1 - Magnetize the Needle

- Take the needle and rub one end against the magnet. Do this for about 30-40 strokes!
- Always rub in the same direction, not back and forth.

Step 2 - Prepare the Floater

- Cut a small piece of cork (about 1–2 cm wide).
- Carefully push the needle through the cork or rest it on top.



Step 3 - Assemble the Compass

- Fill a bowl with water and gently place the cork (with the needle) on the surface.
- The cork should float freely.
- Watch as the needle slowly turns and points in a specific direction.

This is magnetic North!

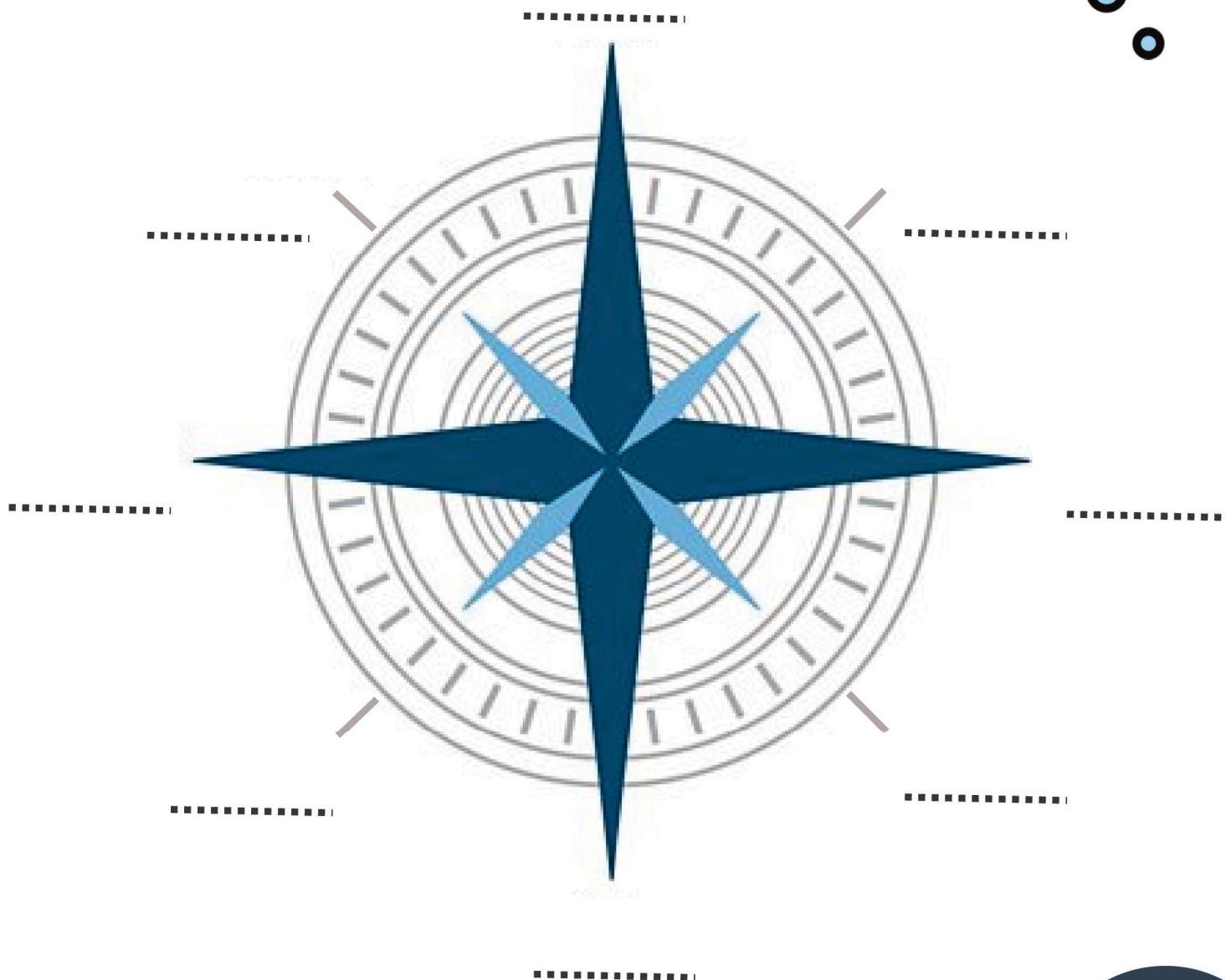
Compare your DIY compass with a real compass
and see how accurate it is!





IT ALL POINTS TO THIS!

Fill in the compass point blanks below.
Reckon you can add the Bearings too?



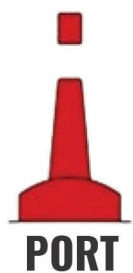


Nautical buoys are floating signposts that tell us important things like where to go, where not to go and what areas to be careful in.

They come in different colours and shapes and each one means something different! It is essential for all boaters to be familiar with these signposts to keep their boat and crew safe!

Below are the common ones we should get familiar with.

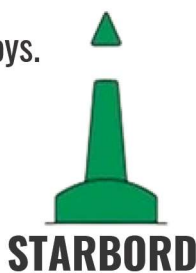
If we meet one of these buoys afloat, we should know what to do...



PORT

We stay between these buoys.

Keep the port buoy to my port side when coming into port...



STARBOARD



**SAFE
WATER**

Safe in all areas out to sea.



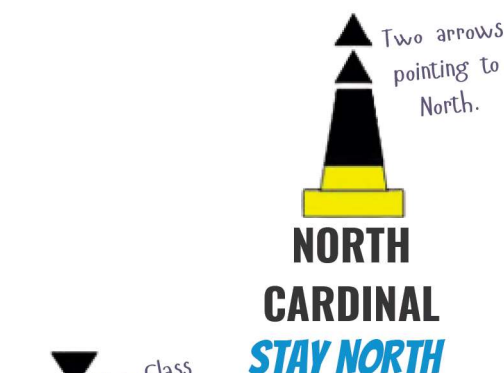
**ISOLATED
DANGER**

Avoid from all directions.



SPECIAL

- Racing buoy
- Swimming area
- Anchorage
- Oceanographic
- Underwater cables



**NORTH
CARDINAL
STAY NORTH**



**WEST
CARDINAL
STAY WEST**

When we meet one of these buoys it is very important to know which direction North is!



**EAST
CARDINAL
STAY EAST**



**SOUTH
CARDINAL
STAY SOUTH**



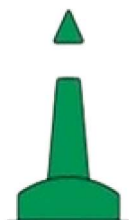
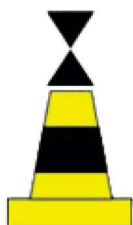
ADVENTURES AFLOAT

#ScoutingIrelandOnTheWater



**Cub
Bosun**

**TRY AND MATCH THE BUOY WITH
THE CORRECT DESCRIPTION**



Safe Water
Buoy

Stay
West



East Cardinal
Buoy

Isolated Danger
Buoy

Avoid from all
directions

South
Cardinal Buoy



Stay
North

Starboard
Buoy

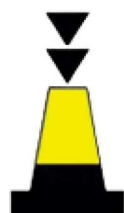


Swimming
Area

Port
Buoy

All areas
out to sea
is clear

Special
Buoy



Print and cut these out to create a more interactive session.
Use a timer to see who can match the buoys the fastest!

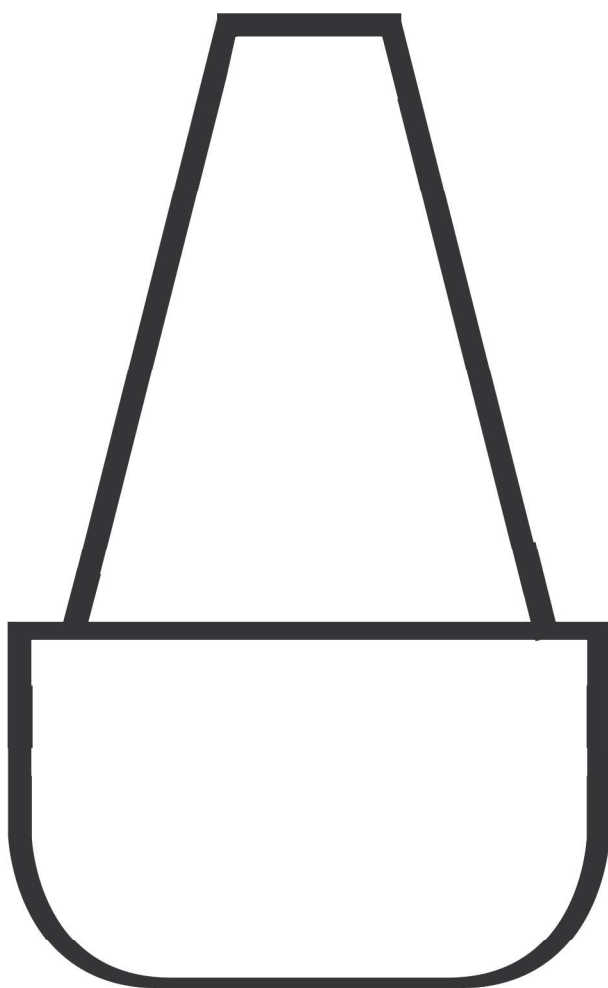




DESIGN YOUR OWN BUOY!

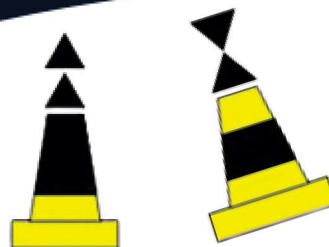


Cub
Bosun



- A) What recognisable colours will it be?
- B) How will the buoy be used to keep people safe?
- C) Will you be able to see it in the dark?



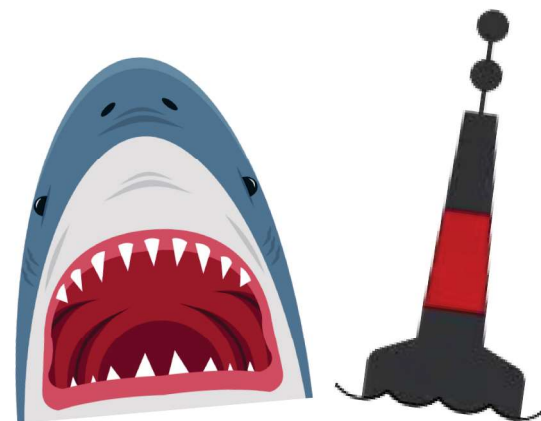


NAVIGATIONAL BUOY OBSTACLE COURSE

Setup Create a 'waterway' obstacle course by printing out a couple of buoys and arranging them throughout the floor. Create a twisting, turning maze Cubs need to navigate to get to the other side.

You could also use simple markers/ coloured card;

- Red markers for port buoys.
- Green markers for starboard buoys.
- Yellow markers for special areas.
- Black markers to mark hazardous areas.



Instructions

- In relay teams, Cubs will act as a 'boat' and race through the obstacle course to get to the other side, correctly following the buoyage avoiding danger where they might sink!
- The team with the most 'boats' across and in the fastest time wins!
- To make it more challenging, blindfold the Cubs and allow each team a Navigator to sit in the Bridge and direct Cubs through the course.

Once Cubs have mastered the maze, work together to rearrange the buoys and create a new waterway; be creative and consider a themes!

Shark-Infested Waters, Stormy Sea Rescue, Pirate Adventure.

Try it at Night Red, green, yellow Cellophane sheets taped over a torch can have a similar effect to a buoy at night. Setup a night-time obstacle course with the different colour 'buoys' and challenge the Cubs to navigate around your after-dark maze.

IF YOU'RE GOING AFLOAT

Get the Cubs to take photographs of your local buoys. Compile them into a local guide of where they are and why!





STEER CLEAR!

Cub
Bosun

