Learn to Sail

UNIT 1: BASIC SAILING CONCEPTS

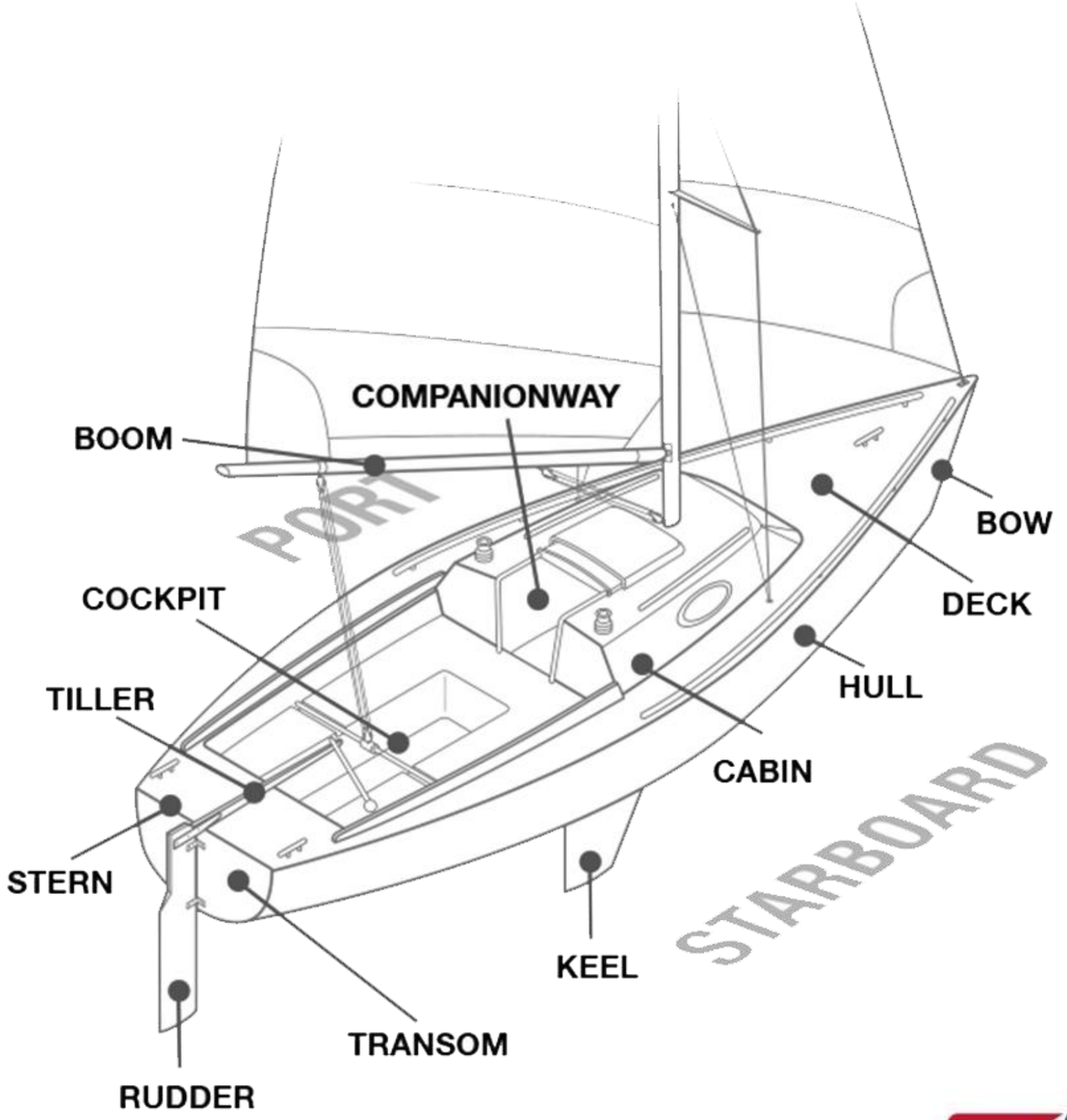
BASIC SAILING CONCEPTS

By the end of this unit, you will know

- the parts of a boat,
- the parts of a sail,
- how a sail works,
- what it means to trim a sail, and
- the different points of sail.

PARTS OF THE SAILBOAT

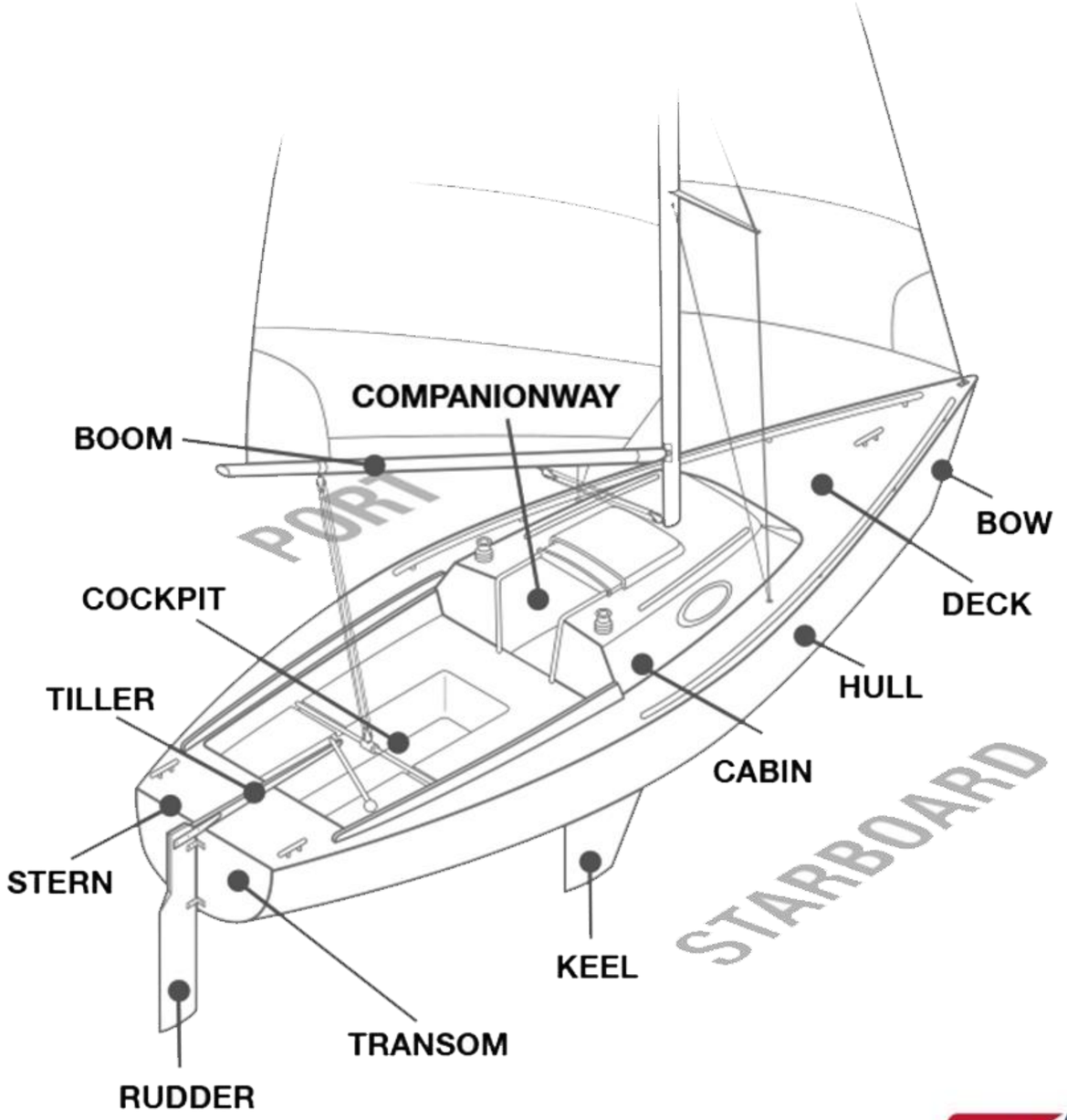
By knowing the names for the different parts of the boat, you'll be able to communicate quickly and clearly to your crew when on the water.



PARTS OF THE SAILBOAT

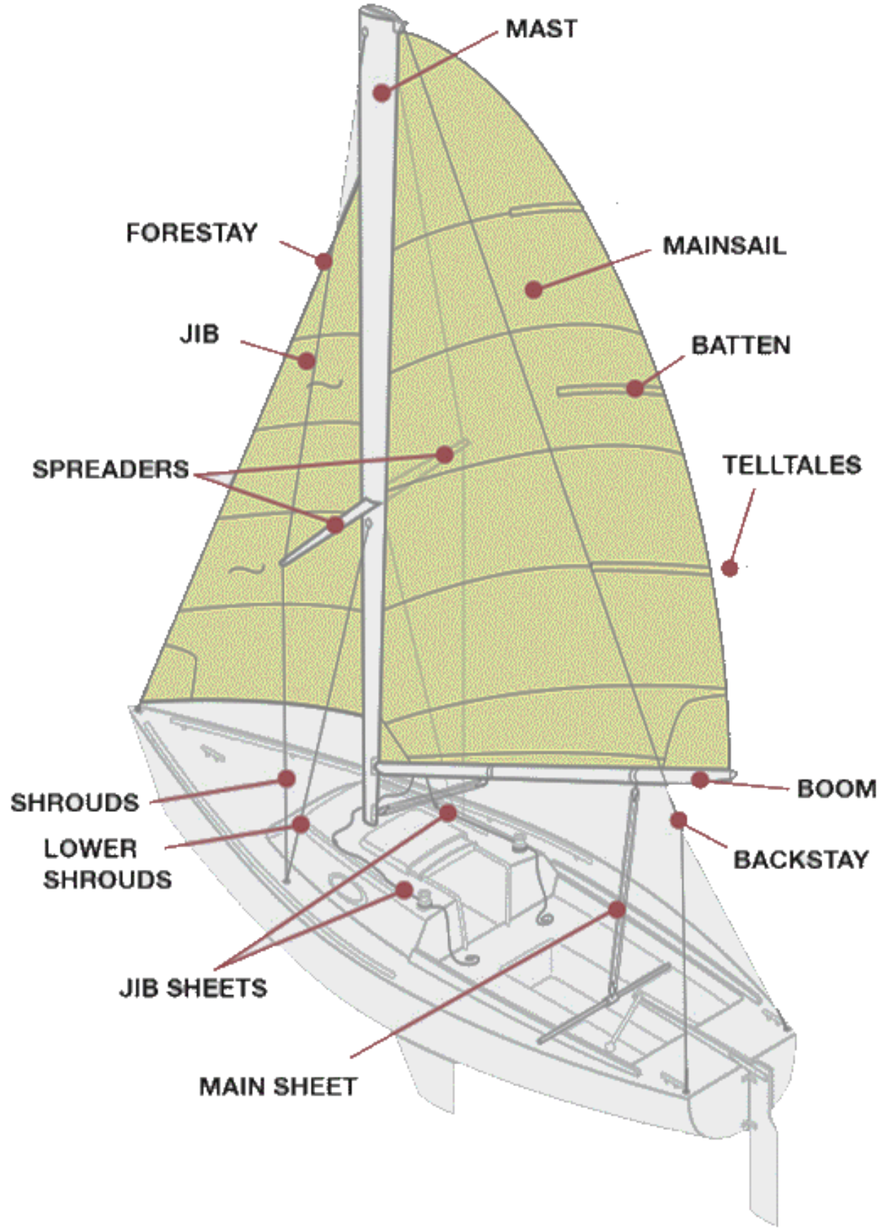
Hull
Bow
Stern
Port
Starboard
Deck
Keel

Transom
Rudder
Tiller
Cockpit
Cabin
Companionway



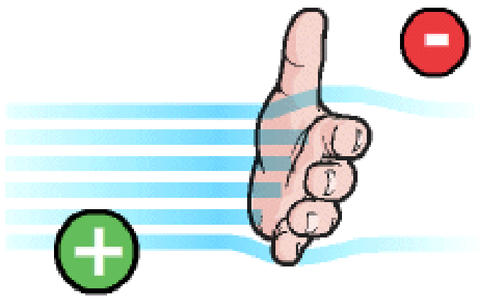
PARTS OF THE RIG & SAILS

Mast	Forestay
Boom	Backstay
Mainsail	Spreaders
Main Sheet	Shrouds
Jib	Battens
Jib Sheet	Telltales



HOW A SAIL WORKS - CREATING LIFT

Push Mode



When you hold your hand perpendicular to the ground, the wind pushes against it, forcing it backwards.

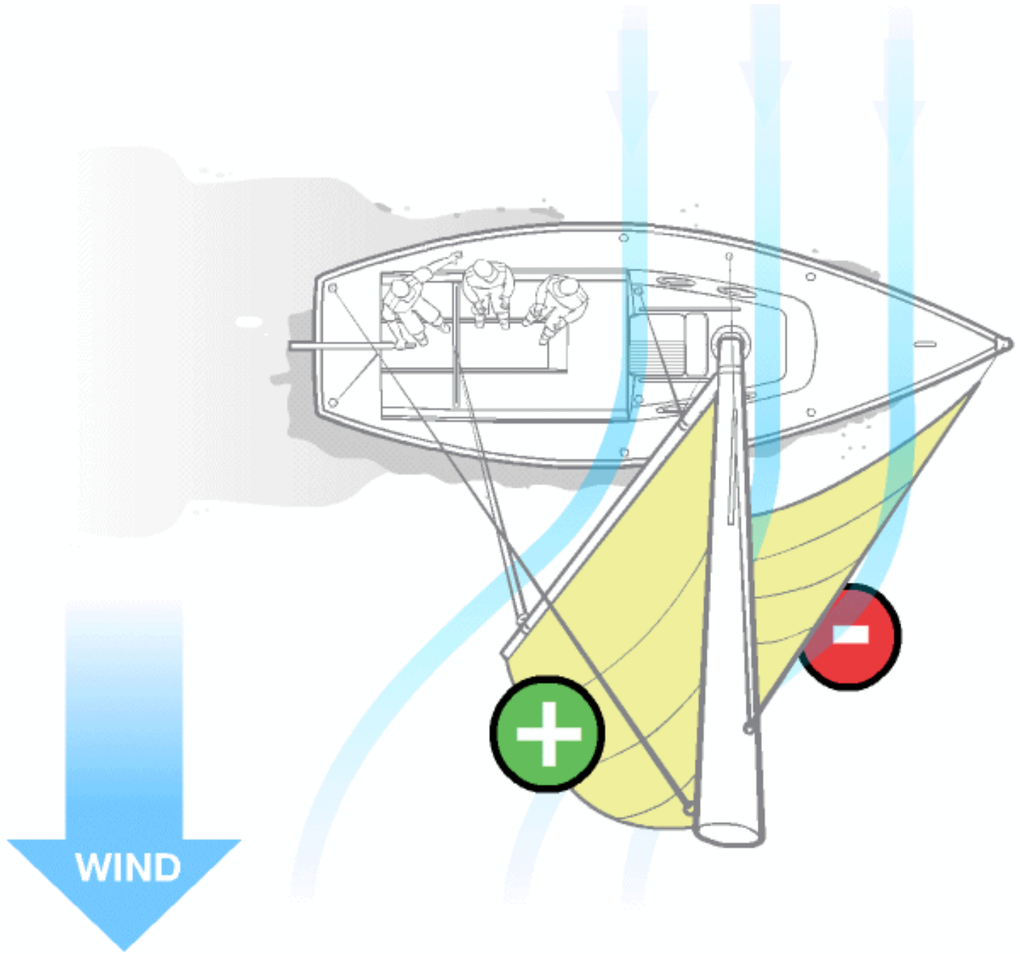
Pull Mode

But when you turn your hand parallel to the ground, the wind lifts, or pulls, your hand up.

HOW A SAIL WORKS - PULL MODE

- In **Pull Mode**, the wind is coming from the side of your boat, from either port or starboard.

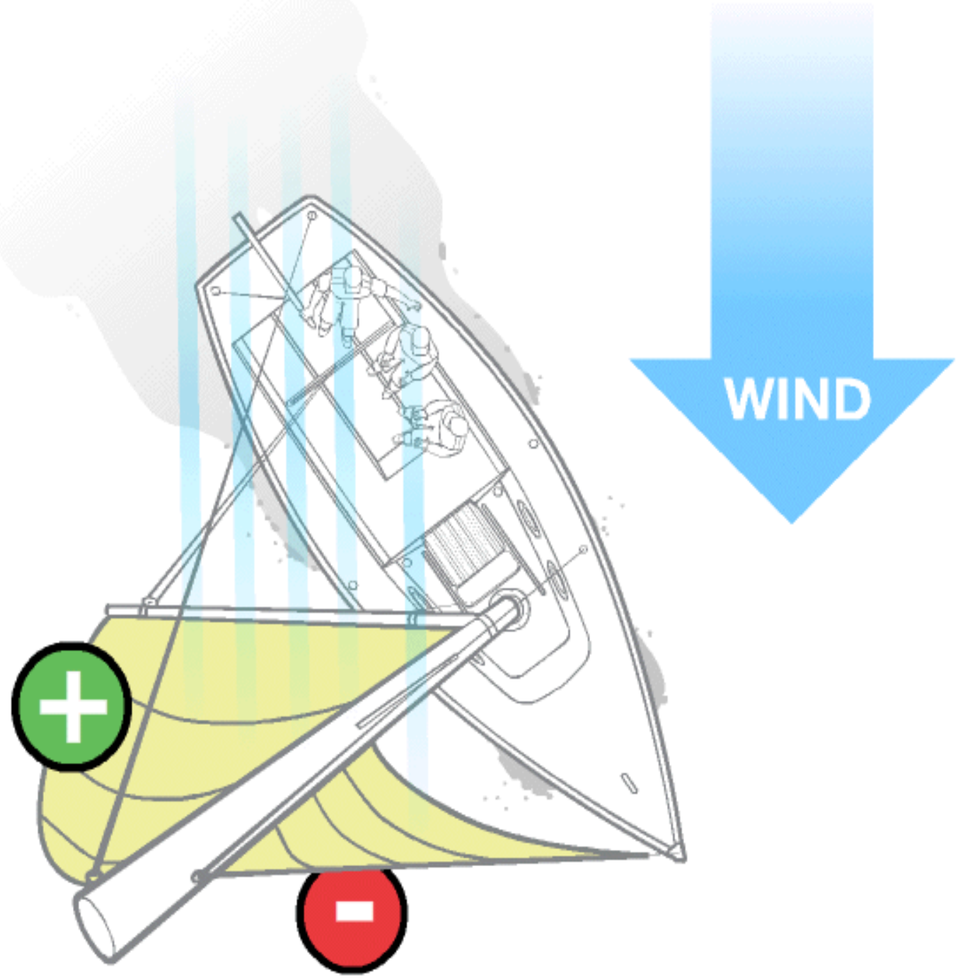
- With the wind coming from the side, the wind bends to the sail as it flows by, which creates higher pressure on the inside of the sail and lower pressure on the outside.



HOW A SAIL WORKS

- Think of sails as your boat's engine.

- With the wind coming from the side, the wind bends to the sail as it flows by, which creates higher pressure on the inside of the sail and lower pressure on the outside.

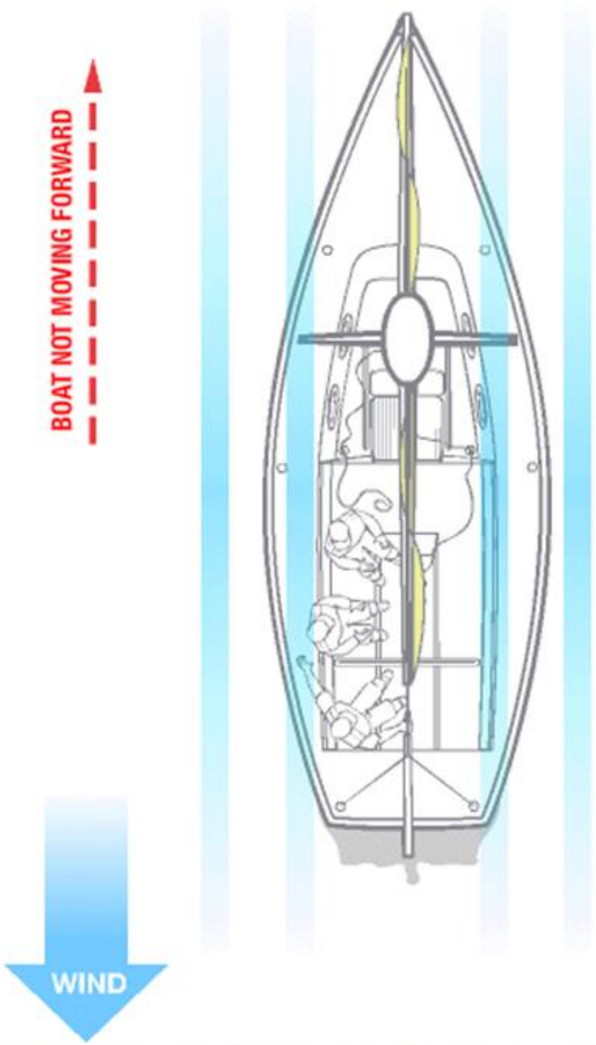


HOW A SAIL WORKS: NO-GO ZONE

- There is no difference in air pressure between the sides of your sail when the wind coming from the bow.

- Instead of pushing or pulling your boat, your sails will just luff in the wind and you will come to a stop. You'll be in the No-Go Zone**.**

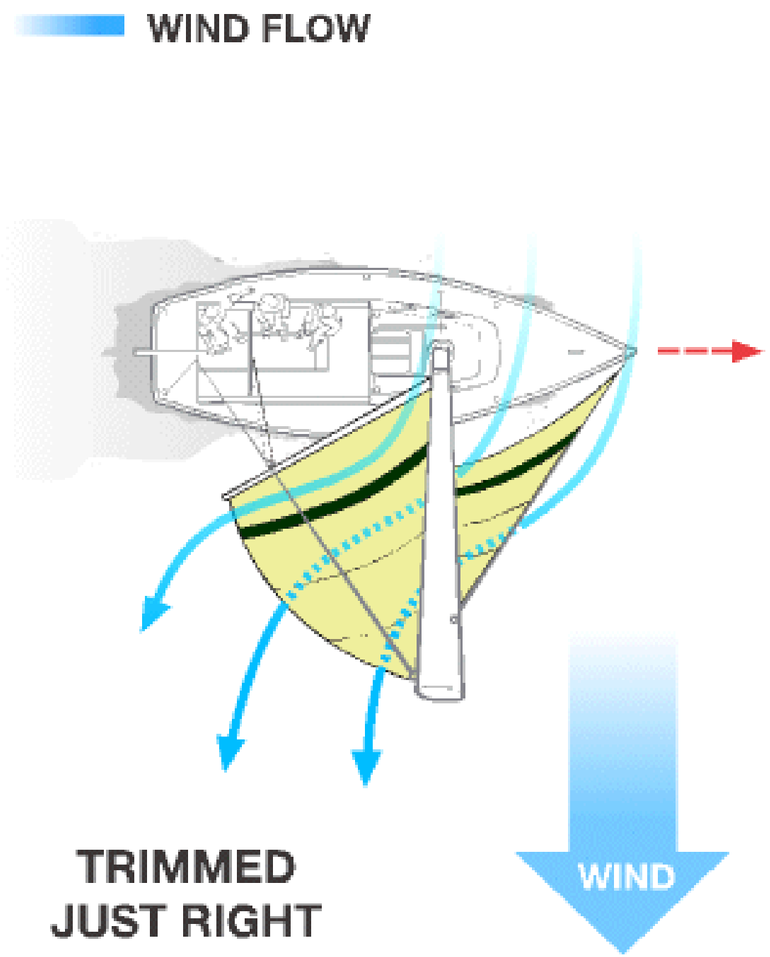
- To get moving again, you'll need to shift the direction of the boat to get the wind hitting your sails from the side. This is called **"getting out of irons."**



TRIMMING A SAIL

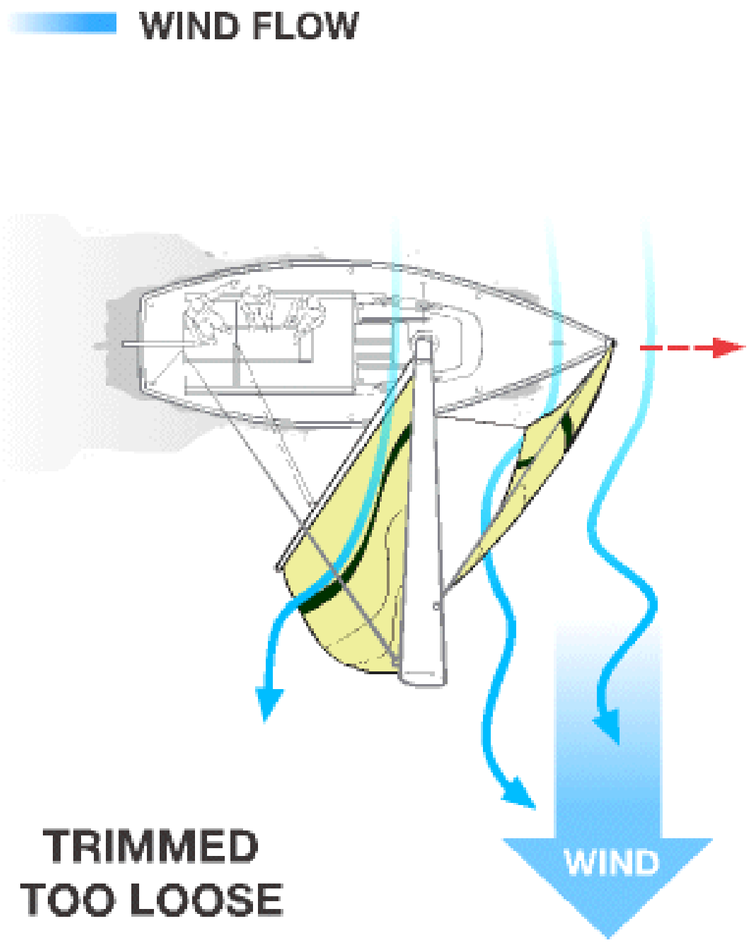
Trimmed Just Right

- Smooth air flow
- Optimum power
  - Maximum boat speed
- Good control
- Balanced



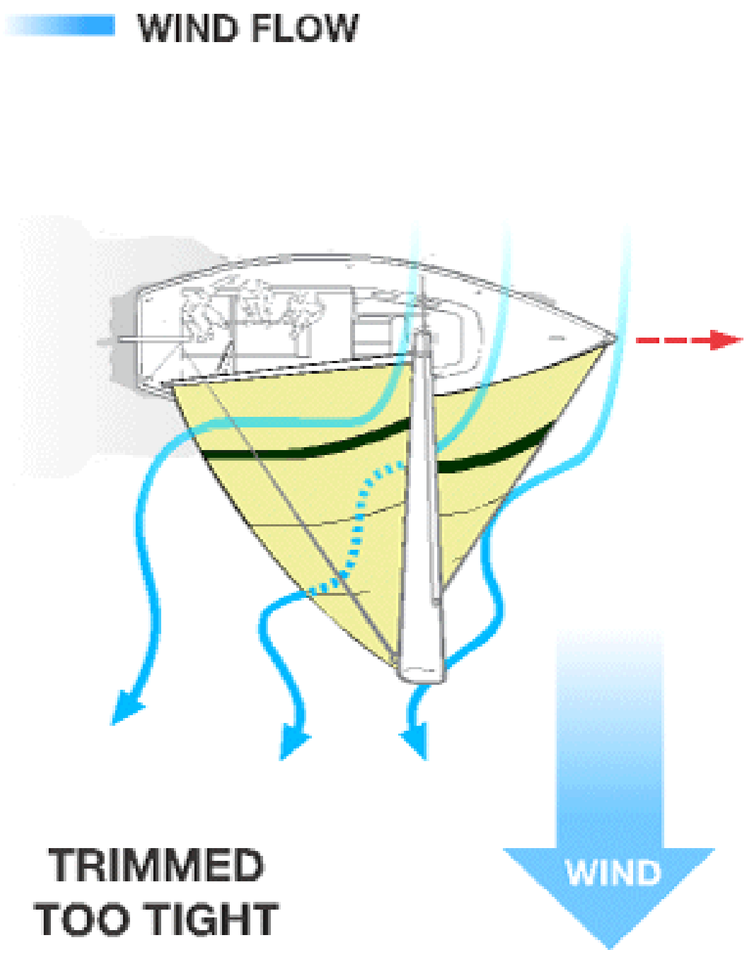
TRIMMED TOO LOOSE

- Turbulent air flow
- Low power
- Low boat speed



TRIMMED TOO TIGHT

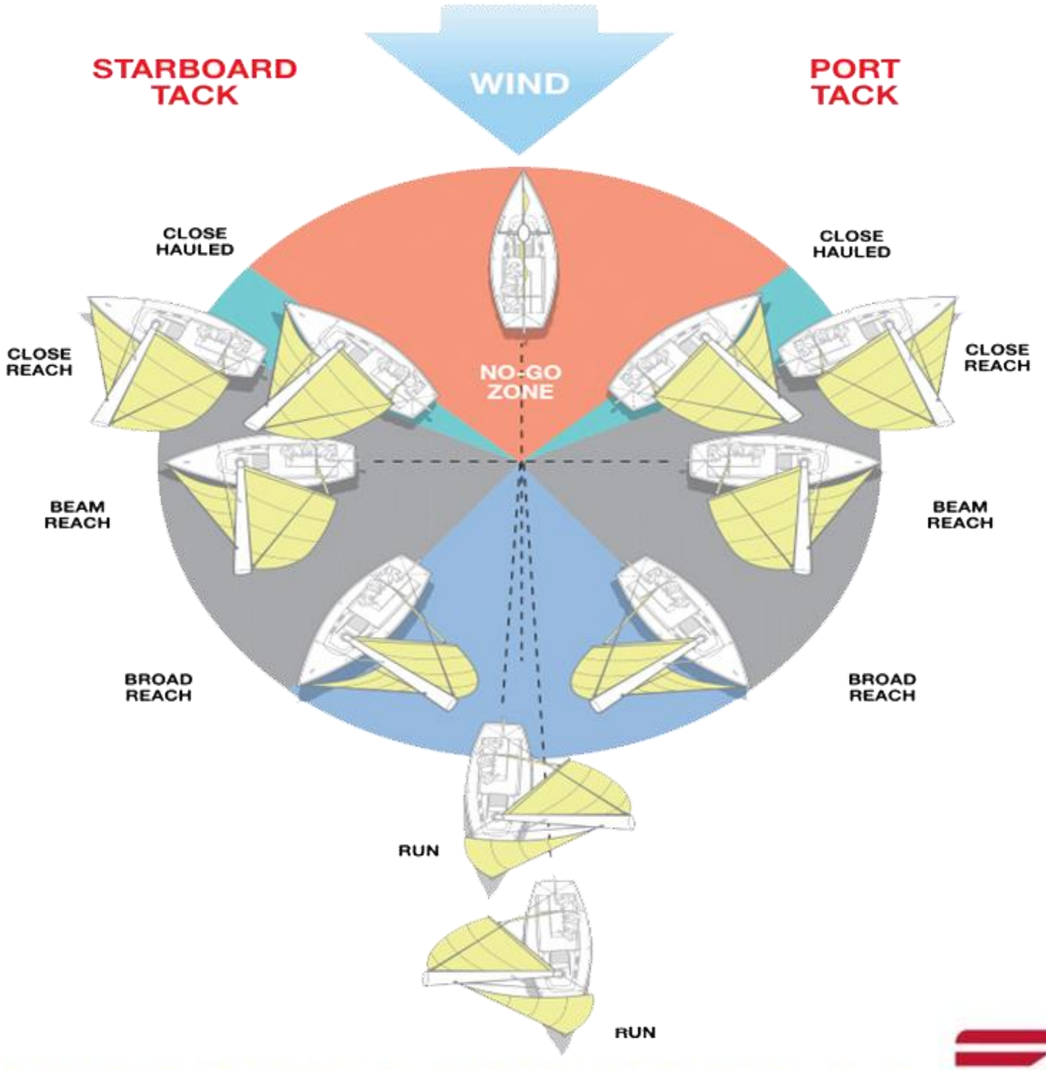
- Turbulent air flow
- Loss of power
- Loss of boat speed
- Difficult steering
- Excessive heeling



POINTS OF SAIL - INTRODUCTION

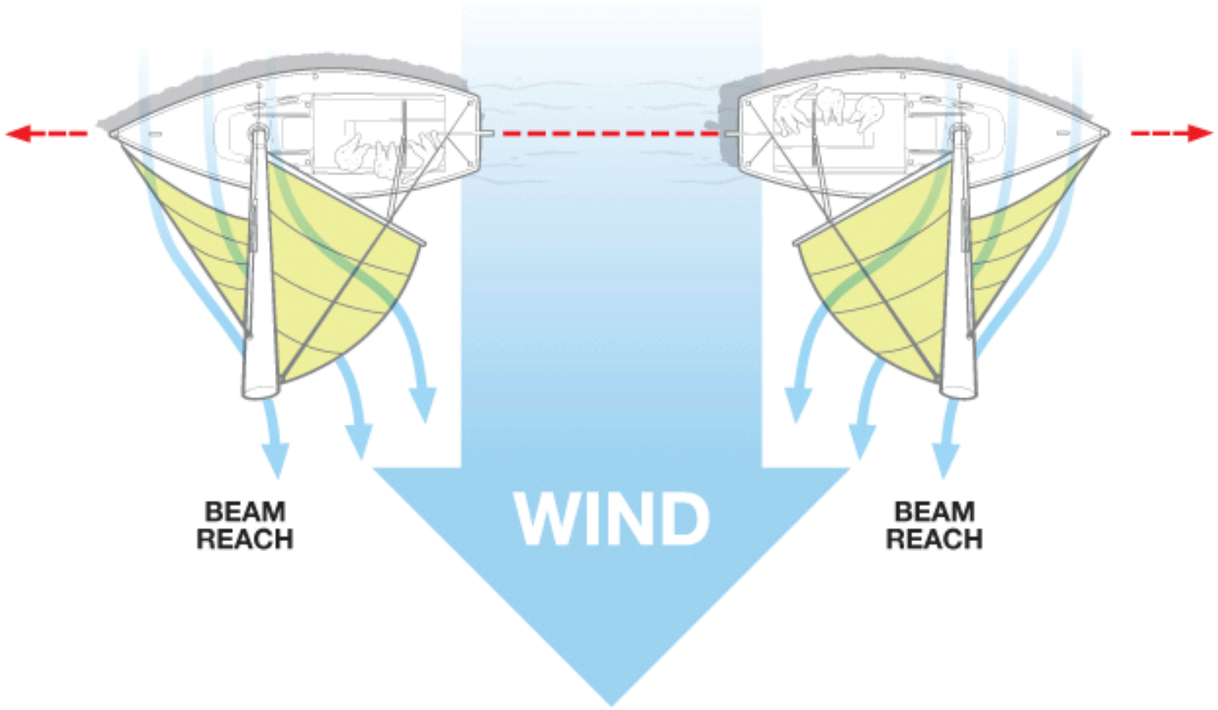
- Points of sail are the names for the different positions of your boat relative to wind direction.

- There are three main points of sail:
  - **Reaching**: sailing across the wind
  - **Close-hauled**: sailing into the wind
  - **Running**: sailing downwind



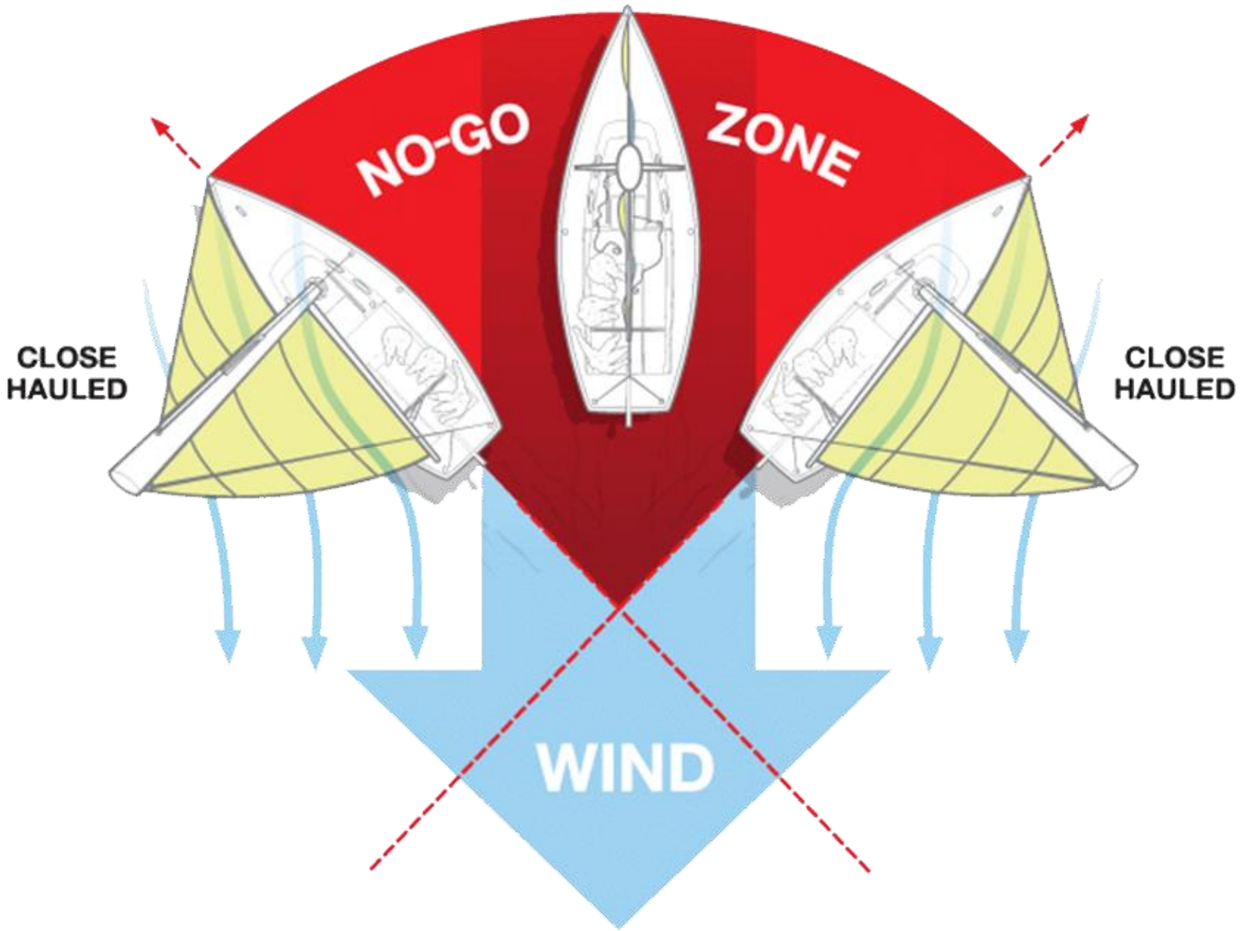
POINTS OF SAIL - SAILING ACROSS THE WIND

- Fastest point of sail is a **beam reach**. This is when the wind is coming across your boat at a 90 degree angle to the bow.
- Called a beam reach because you are reaching - sailing with the wind across your beam and the wind is perpendicular to you haul.



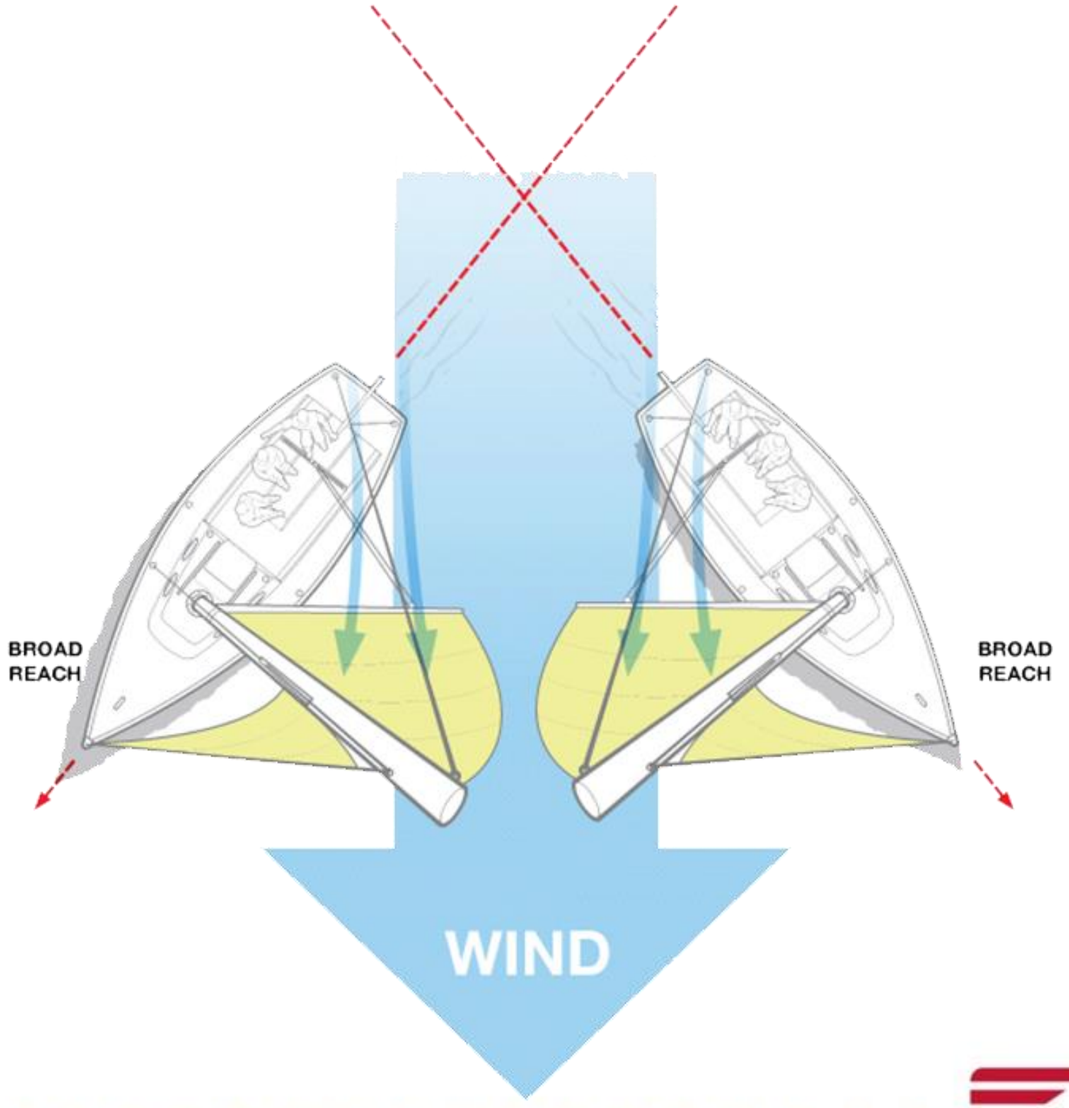
POINTS OF SAIL - SAILING UPWIND

- You cannot sail into the wind. This is called the **No-Go Zone**.
- To sail upwind, sail upwind at a 45 degree angle. This point of sail is called sailing **close-hauled**.
- Because you are sailing as close to the wind as you can without entering the No-Go Zone, and your sails are fully-hauled, or sheeted in.

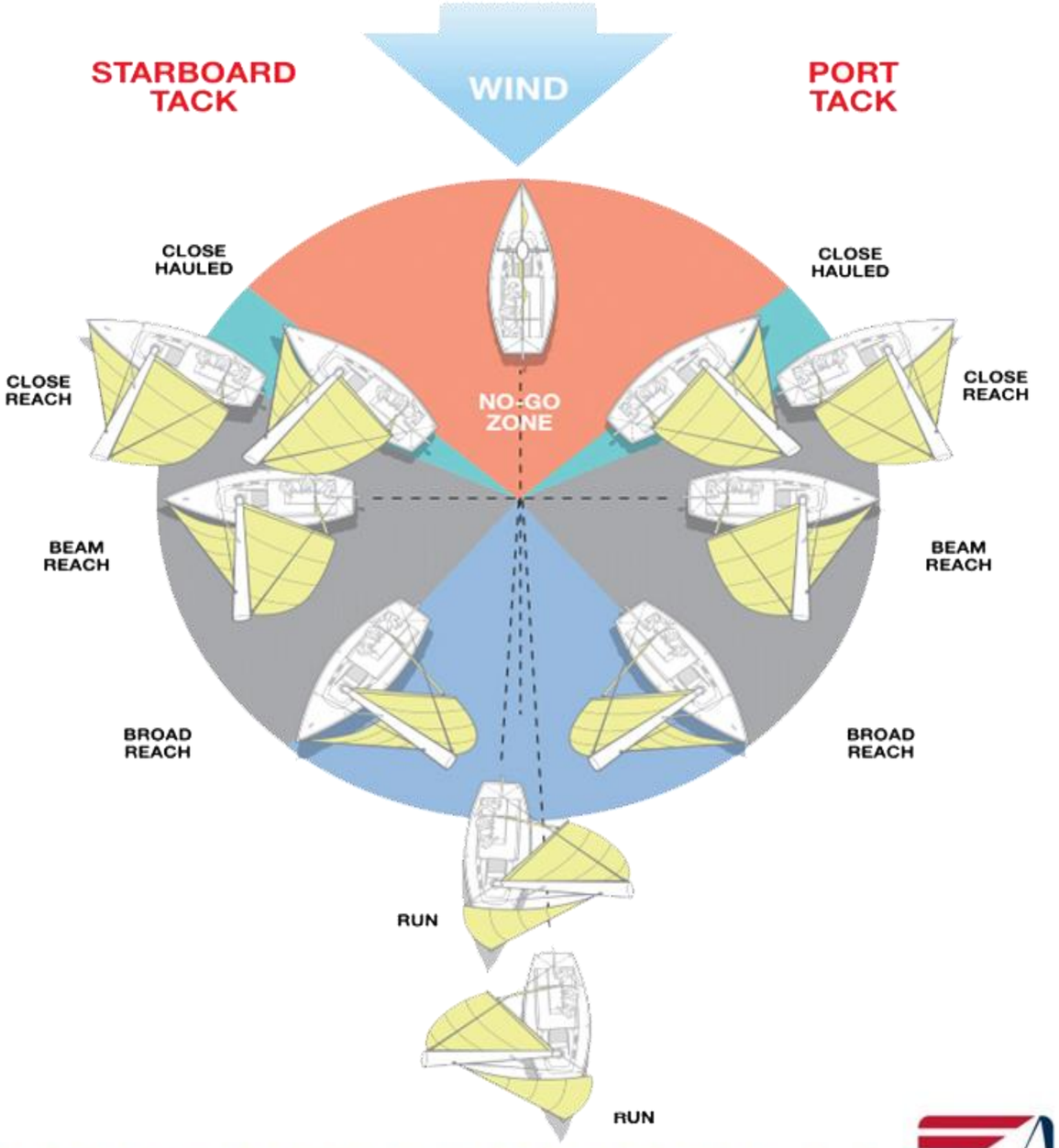


POINTS OF SAIL - SAILING DOWNWIND

- Sailing directly downwind is called **running**, or **being on a run**.
- In this position you will have your sails sheeted out perpendicular to the wind.
- One downfall of being on a run is the danger of an uncontrolled jibe, something we'll learn about later.



REVIEW


STARBOARD TACK
WIND
PORT TACK
CLOSE HAULED
CLOSE HAULED
CLOSE REACH
CLOSE REACH
NO-GO ZONE
BEAM REACH
BEAM REACH
BROAD REACH
BROAD REACH
RUN
RUN

UNIT SUMMARY

TOPICS COVERED

- The basic parts of a sailboat and rig
- How a sail works to create lift
- The difference between Push and Pull Mode
- What the No-Go Zone is
- The basic concept of trimming a sail
- The points of sail