

**Introduction to  
Sailing  
February 27, 2023**



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## **Today's Agenda**

- 1. The Wind (Continued)**
  - Direction and Velocity
  - "Apparent" vs. "True" Wind
  - "Feeling" the Wind
- 2. Experiment**
- 3. Preparing to Sail on Hiatus - Etiquette**
- 4. Crew Roles & Responsibilities**
- 5. Knot Lesson – The Clove Hitch**

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## What This Course is About?

- To learn how and why a sail is more than a boat ride, and...
- To learn how we can participate in the experience more deeply

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## Sailing is an Art

- “By its very nature sailing is slightly enigmatic and requires abstract thought. It takes effort. Which in turn necessitates a certain amount of involvement. And this involvement is what being a sailor is all about.”
- “Each time I drop the mooring there is magic when I realize that through cunning and skill, I have tricked the wind into moving my boat.”

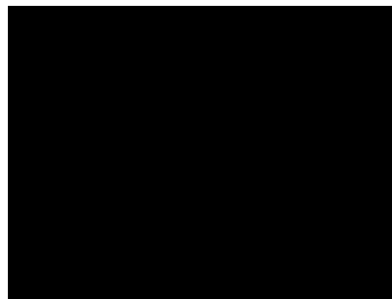
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## Sailing is an Art

- “A sailor is one who can handle a vessel of almost any type quietly and competently. [And] can read the water, the current, the waves, the clouds and even the smells. Much like having one’s thumb on the pulse of the universe.”
- “Sailing is not a science that can be practiced with precision. It is an art, or at the least a craft, with its own medium. As an artist uses and understands light, you must understand the wind. It is the sailor’s medium.”

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## Points of Sail - Review



<https://www.youtube.com/watch?v=tYo5tvojU0I>

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## Understanding the Wind

1. Wind Sense
2. Apparent Wind vs. True Wind
3. Feeling the Wind

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## Wind Sense

- A wind sense begins with knowing from whence the wind blows
- There are only 2 relevant questions:
  1. Direction, and
  2. Velocity or Intensity
- The source, the direction, of the wind determines the primary reference relative to the boat and forms the reference to which all sailing activities are related.

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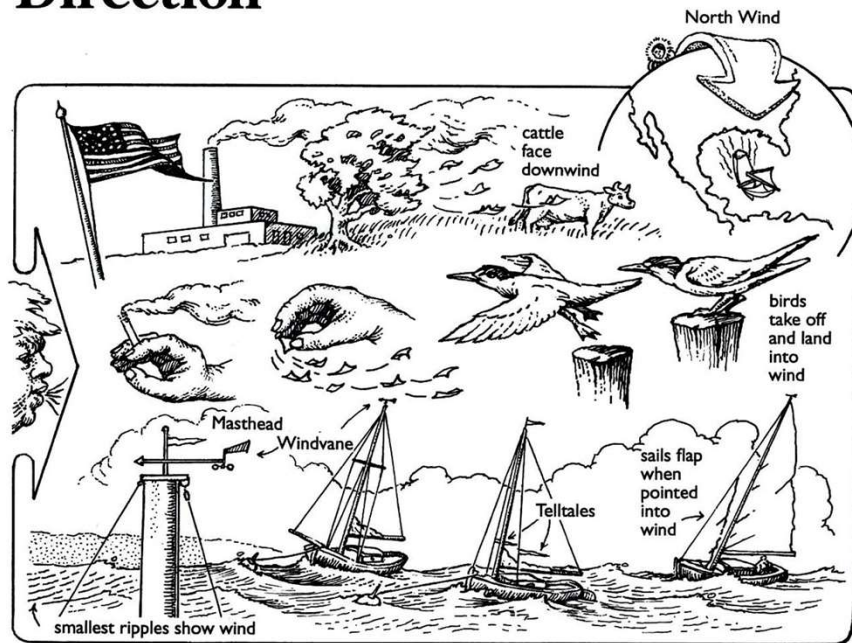
# Wind Direction



<https://www.youtube.com/watch?v=5B1YdpLkYFE>

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## Direction



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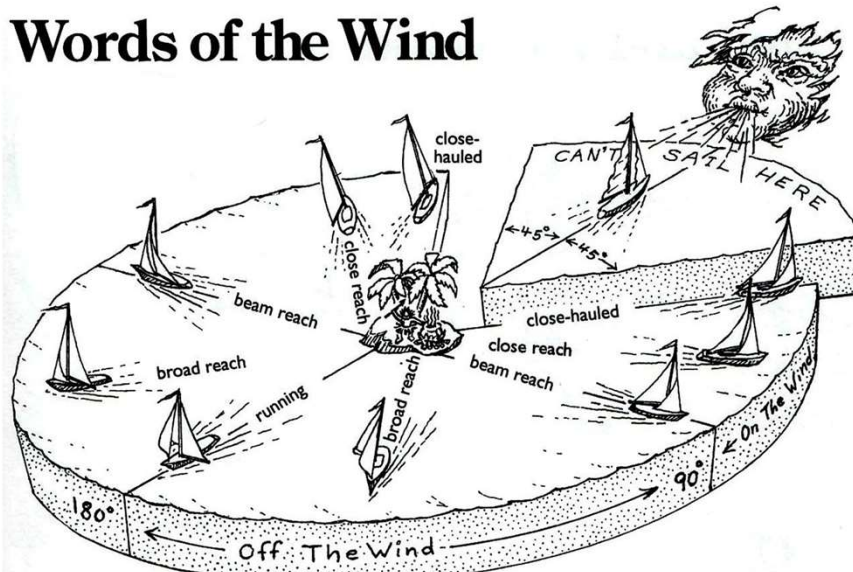
# Wind Speed Tables

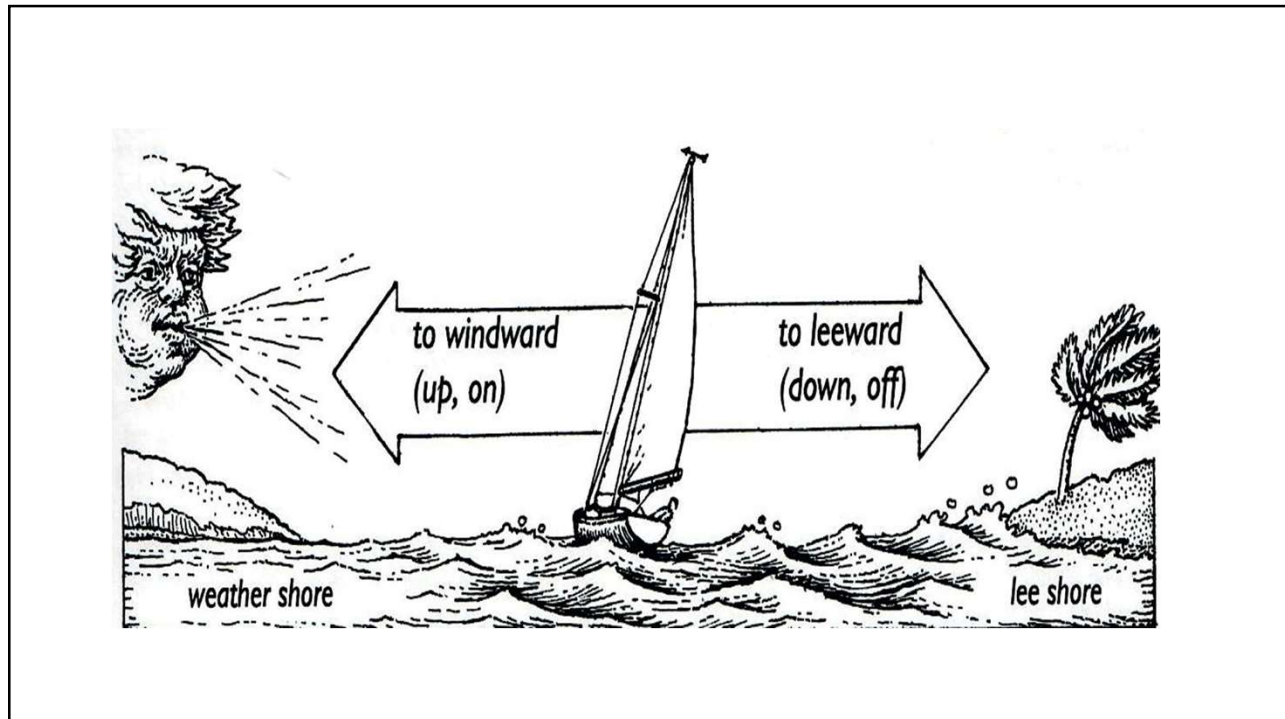
Before the 19th-century there was no uniform way of describing wind and sea conditions. One sailor's fresh breeze was another's howling gale. In 1806 Admiral Sir Francis Beaufort devised a table that classified winds into groups called Forces. The system worked, and is still in use today.

The trouble is that his tables were devised for ships of the line, and meant more to those on board the CONSTITUTION during the War of 1812 than the crew of a modern Catalina 22 trailer/sailer. So the tables below have been adapted to make them more relevant to a small coastal cruiser.

FORCE	MPH (KNOTS) *	PRESSURE LBS./SQ. FT.	DESC.	WAVE PATTERN	WAVE HEIGHTS	EFFECTS ON LAND	SMALL CRUISER
Force 1	1-3 (1-3)	.004-.036	Light airs	Glassy calm, some ripples	Flat	Flag hangs limp, windvanes do not respond.	Use motor. Steerageway possible; full main and large drifter.
Force 2	4-7 (4-6)	.064-.196	Light breeze	Overall ripple pattern	0-5'	Flag stirs, leaves rustle, wind felt on face, wind vanes move.	Boat begins to heel, full main and drifter or #1 genoa.
Force 3	8-12 (7-10)	.256-.576	Gentle breeze	Small glassy waves	5'-1'	Flag occasionally extends, leaves and twigs in constant motion.	Comfortable sailing. Noticeable heeling; full main and #1 genoa.
Force 4	13-18 (11-16)	.676-1.29	Moderate breeze	Longer waves	1'-1.5'	Flag flaps, small branches move, dust and paper raised.	Great sailing. Boat making speed. Full main and #1 genoa.
Force 5	19-24 (17-21)	1.44-2.30	Fresh breeze	Some whitecaps	1.5'-2.5'	Flag ripples, small leafy trees begin to sway.	Leeward rail near water. Single reef in main and #2 genoa.
Force 6	25-31 (22-27)	2.5-3.84	Strong breeze	Whitecaps, some spray	2.5'-4'	Flag snaps, large branches in motion, whistling in wires.	Sailing becomes strenuous. Second reef in main and working jib.
Force 7	32-38 (28-33)	4.09-5.77	Moderate gale	Swell form with whitecaps	4'-5.5'	Flag extended, whole trees in motion.	Progress to windward impossible. Three reefs in main and working jib.
Force 8	39-46 (34-40)	6.08-8.46	Fresh gale	Foam blown off wave tops in well marked streaks	5.5'-7.5'	Twigs and small branches broken, difficult to walk.	Limit of boat's sailing ability. Use motor or seek shelter.
Force 9	47-54 (41-47)	8.83-11.6	Strong gale	Waves begin to heighten and roll	7.5'-10'	Slight structural damage occurs.	Run under bare poles, lie ahull, or sit to sea anchor.
Force 10	55-63 (48-55)	12.1-15.8	Whole gale	Very high rolling waves with long overhanging crests	10'-13'	Trees broken or uprooted, considerable damage.	Swear oaths you will not keep once back on land.

# Words of the Wind





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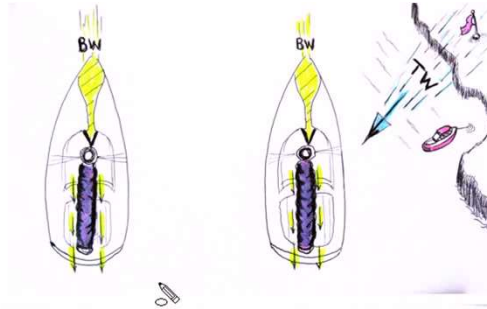
## True vs. Apparent Wind



<https://www.youtube.com/watch?v=JzxDxS9AhyQ>

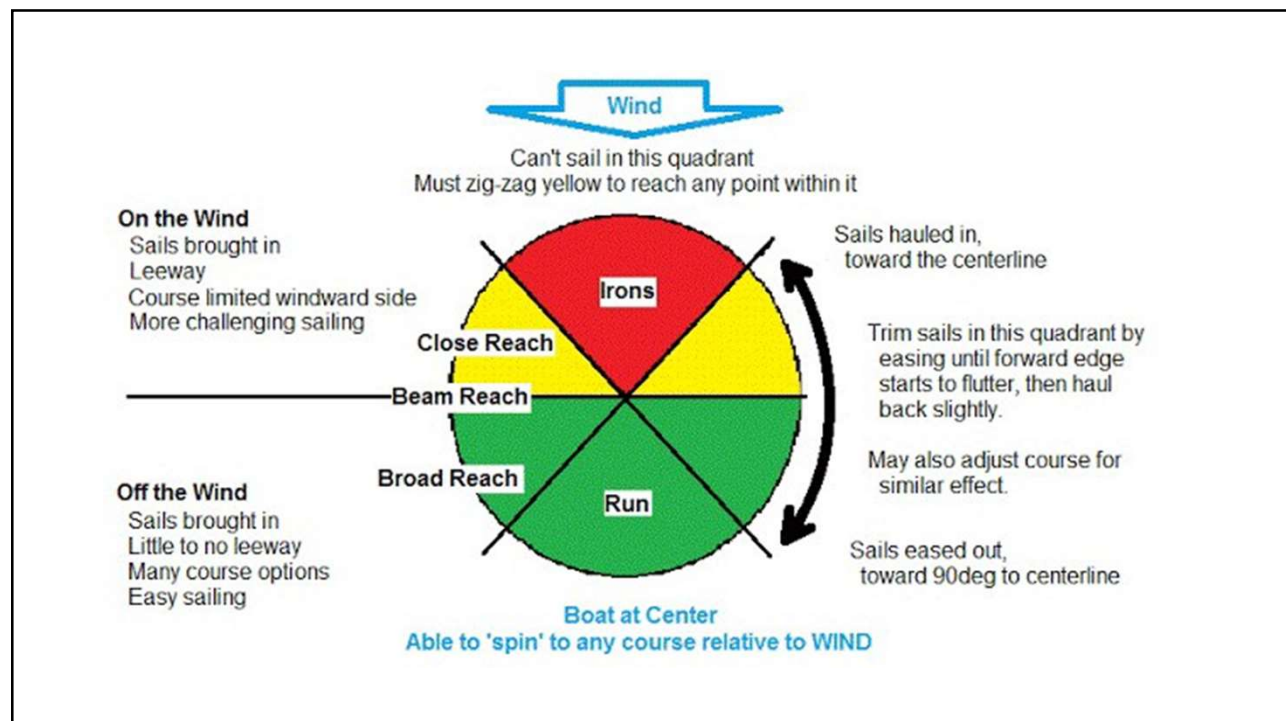
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# Effects of Apparent and True Wind



<https://www.youtube.com/watch?v=8xo0ySZ98oc>

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# - Quiz -

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*Direct practice –  
finding the wind  
direction and  
points of sail*

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## Finding the wind direction (eyes closed)

- Turn your head slowly from side to side
- Notice where the wind strikes your head/body
- Find the spot where you feel the wind equally on both cheeks (Hint: you can also listen for the sound of the wind in your ears i.e., find the spot where you hear the wind equally in both ears)



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## Exercise 1 – turn to close hauled starboard tack

- Where are you feeling the wind? (e.g., your cheek/your ear/your shoulder/your back)
- Should feel wind on your right side



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## Exercise 2 – turn to beam reach starboard tack

- Where are you feeling the wind? (e.g., your cheek/your ear/your shoulder/your back)
- Should feel wind on your right side



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## Exercise 3 – turn to beam reach port tack

- Where are you feeling the wind? (e.g., your cheek/your ear/your shoulder/your back)
- Should feel wind on your left side



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## Exercise 4 – turn to running

- Where are you feeling the wind? (e.g., your cheek/your ear/your shoulder/your back)
- Should feel wind on your back



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# PowerPoint 2 – Preparing to Sail on Hiatus & Crew Roles and Responsibilities

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# Knot Lesson

## The Cleat Hitch

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## Cleat Hitch



<https://youtu.be/1EqplEdAlwE>

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## Homework for Next Week

- Chapter 1 Pages 20 – 25
  - Anatomy of a Sailboat
- Chapter 3 Pages 43 – 55
  - Getting a Feel for Sailing (Using the Wind)
    - Sail trim
    - Tacking
    - Jibing