

Sailing Practice Techniques

Organized by skill for solo, paired, or multiple boats

Skill	Type	Title	Description
Acceleration	Solo	Kinetics	Practice using kinetics to accelerate. Move weight in and oversheet to heel and steer up. Then flatten the boat to steer down and squirt forward.
Acceleration	Paired Multiple	Stop and go	Get boats lined up on the same ladder rung. Start sailing upwind on a whistle. Come to a complete stop on next whistle. Accelerate on next whistle. Repeat until fleet spreads out.
Acceleration	Solo	Time and distance	Accelerate repeatedly to full speed from a full stop. Gauge the time and distance required. Try to improve the time and shorten the distance to reach full speed.
Angle of heel	Solo	Watch boat waves	Sail upwind and watch your bow and stern waves. Notice how the waves change at different angles of heel and with weather helm. Try to keep the stern wave as straight as possible. Try to keep the bow wave as far forward as possible.
Angle of heel	Solo	Over- and under-heel	Deliberately sail over-heel and under-heel for a period of time. Feel the difference in the helm and the boat speed.
Angle of heel	Solo	Inclinometer	Practice with an inclinometer mounted in the boat. Mark the proper angle of heel and try to maintain precise control. The inclinometer should not become a crutch.
Boat handling	Solo Paired Multiple	Slalom or figure eight	Sail continuously around a short slalom or figure eight course that requires tacks, gybes, and roundings.
Boat handling	Solo	In and out of irons	Stop boat in a head to wind orientation. Experiment with weight distribution, sails, and rudder to get back on starboard tack efficiently.
Boat handling	Solo	Sail backwards	Practice sailing backwards with your mainsail backwinded. Useful for bailing out of a bad location prior to the start.

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Boat handling	Solo	Weight placement	Work on land or on the boat in lighter air to find the best body position to help control angle of heel. Positions include: 1) windward hiking, 2) just sitting on high side, 3) center of boat (able to adjust weight in and out), 4) low side, to windward of boom, and 5) low side leeward of boom. Practice shifting between these positions smoothly.
Boat handling Rules Tactics	Paired	Tactical racing	Race around a shorter course against one other boat. Use starting tactics, attacking and defending tactics, and boat handling skills to try to beat the other boat.
Boat handling Rules Tactics	Multiple	Team racing	Set up team racing with four or six boats on short courses. Balance the teams for skill. With four boats, the object is to make sure no one on your team finishes last. With six boats, use traditional scoring. Team racing is an excellent way to get used to sailing tactically and applying the rules.
Boat speed	Solo	Fore and aft weight placement	Experiment with moving your weight forward and back. Watch your bow wave and try to get it as far forward as possible. Look at the wake from your stern and see if it is gurgling, indicating stern drag. Find a spot where the bow wave is forward and the stern wake is not gurgling.
Boat speed	Solo	String tiller extension	Replace tiller extension with a string or narrow line. Helps reduce oversteering and teaches feel for the helm.

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Boat speed	Multiple	Rabbit starts	Use a rabbit start to get everyone on the same ladder rung at the start. Then sail upwind and try to hold your lane. To set this up, the rabbit sails close-hauled on port and crosses just ahead of boats sailing close-hauled on starboard. Starboard boats must work hard to be at full speed and cross just behind rabbit. Rabbit tacks to starboard after crossing last boat.
Boat speed Boat handling	Solo	Tethered tiller	Tether tiller to a fixed point in the center of the boat with a bungee cord. Vary the tension on the cord based on trial and error. Sail upwind and downwind without using the tiller.
Boat speed Boat handling	Solo	Rudderless sailing	Remove rudder and learn to steer with sail trim and angle of heel
Boat speed Gears	Paired	Speed sailing	Sail 2-3 boat lengths apart on long upwind tacks. If one boat gets ahead or in bad air, reset and start again. Discuss sail trim and steering technique and make adjustments between sets. Try sailing in different gears (point, foot, acceleration).
Boat speed Strategy	Paired	Clear wind racing	Race another boat with the condition that no covering is allowed. This emphasizes boat speed and strategy.
Capsizes	Solo	Capsizes	Capsize intentionally and practice righting the boat and getting back in.
Downwind boat speed	Solo	Offwind points of sail	Sail offwind at different angles from close reach to broad reach to extreme by-the-lee. Focus on how the boat sails at different headings in different wind strengths and different wave conditions.

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Skill	Type	Title	Description
Downwind tactics	Paired	Tactical race	Two boats start nose to tail on a beam reach and bear away to downwind at a signal. Windward boat tries to roll over leeward boat. If leeward boat gets rolled, she gybes and tries to regain advantage. Other boat gybes and tries to defend its lead. Continue until one boat is able to cross on opposite gybe.
Finishing	Paired Multiple	Biased line	Set a biased finish line. Boats do a rabbit start 100-200 yards from the line to increase chances of a close finish. Use tactics to finish at favored end.
Gybing	Solo	Consecutive gybes	Do ten consecutive gybes, waiting only until boat is stable on the new course before gybing again. Time this sequence and try to improve your time.
Heavy air	Solo	Go out and sail	Go out and sail to become more comfortable in heavy air. Practice straight line sailing, response to gusts, tacking, gybing, use of sail controls. Capsizing is to be expected - use a mast head float if needed to prevent turtling.
Leeward mark rounding	Solo	Progressive roundings	Practice sailing around a leeward turning mark (real or imaginary) to coordinate turn and steering. Start with turning from a close reach to close-hauled at a mark. Then try turning from broader reaches, and finally from dead downwind. Then try heeling the boat to aid the turn. Then add a gybe.
Boat handling	Solo	Hand over hand sheeting	Practice the mechanics of hand-over hand sheeting while retaining control of the tiller. You can do this on land or on the water.
Observation	Solo Paired Multiple	Video review	Have someone take video while you are sailing. Analyze it critically. You often do not realize what you are doing wrong until you see it.
Observation	Solo	Observe and predict	Watch another fleet racing. Try to determine which boats are in a position to gain in various situations. See if your predictions turn out to be correct.

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Skill	Type	Title	Description
Penalty turns	Solo Paired	Penalty turns	Do several consecutive penalty turns, either solo or against a partner
Puff/lull response	Solo	Gusty windward shore	Sail near a windward shore on a gusty day. Work hard to keep the angle of heel constant.
Reading puffs	Solo	Puff calling	Practice calling puffs, including their timing and direction. Check your predictions with the feel on your skin, sound in your ears, and the reaction of the boat.
Rules	Solo Paired Multiple	Three boat lengths	On land, try to judge when you are three boat lengths from a designated object.
Sail trim	Solo Paired Multiple	Sail control adjustments	Begin sailing upwind with all the sail adjustments totally loose. After having done this for a while and gained awareness for the feel of the boat, begin by pulling on one of the tuning mechanisms - i.e. outhaul. Take note of the effect and then release it. Move to the next mechanism and repeat the process. Once this has been done with all controls individually, work with combinations.

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Sailing by feel	Solo	Verbalize sensory feedback	Sail upwind in puffy, shifty conditions. Sail for several stretches of perhaps 5 minutes each. During each stretch, verbalize the feedback you are getting from the boat on <u>one</u> of the following. As you verbalize, make adjustments to keep the boat properly trimmed and moving fast. 1) Feel of the tiller: 0 for neutral, 1 – 5 for increasing weather helm; 2) sound of waves as hull moves through water: slow, medium, fast; 3) Mainsheet tension: 1 – 5 for increasing tension; 4) Hiking force: overpowered, underpowered, max power for the conditions; 5) Angle of heel: too flat, too high, just right; 6) Next wind change: predict the next wind change – puff, lull, header, lift; 7) Look aft at your wake – angle of rudder to transom, shape of the wake, etc. 8) Look at your shroud telltales and observe how powered up the sail feels as the telltales and mainsail move relative to each other.
Sailing by feel	Solo Paired	Eyes closed	Sail with eyes closed for 15-30 seconds. Concentrate on feeling the boat and listening.
Sailing lifted tack	Solo	Tacking angle	Sail in a variety of wind and wave conditions. Do repeated tacks, determining your heading before and after the tack. The difference in heading is your tacking angle. Use a compass to determine the tacking angle precisely, or learn to visually approximate it by using reference lines, such as your traveler bar. Then try predicting your new heading after a tack, either by the compass or a reference point on shore.
Starting	Solo	Holding and stopping near a mark	Hold your boat near a mark for as long as possible. Then try sailing toward the mark and stopping just short.
Starting	Solo	Time and distance to mark	Set a timer for 1 minute. Try to cross next to a mark at full speed exactly as timer runs to zero.

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Starting	Multiple	Short line start	Set up a line barely long enough to fit all boats Practice starts in a shortened sequence.
Starting	Solo	Time and distance to mark	Start a fixed distance away from a buoy and try to cross the buoy 20 seconds later at full speed.
Starting	Multiple	Judging the line	Set up a starting line with an observer on an end. Sail close-hauled towards the line in single file and raise your hand when you think you are on the line. The observer blows a whistle when you cross the line. Try this both with and without using a line sight.
Starting	Multiple	Short line	Set up a starting line too short for the number of boats. Run a three-minute sequence and let the sailors fight for position.
Starting	Multiple	Surprise starts	Run a three-minute sequence. Helper blows start signal anytime during the final minute. Encourages sailors not to hang back.
Starting	Multiple	Biased line	Set a line with three different pin buoys at different favors (neutral, port-favored, starboard favored). Start a three-minute sequence. At two minutes announce which pin buoy will be in effect.
Starting	Multiple	Hoverers and Hunters	Set a start line long enough to accommodate all boats, but not much longer. Split the group into hoverers and hunters. Run a three-minute sequence. Hoverers must be in position with one minute remaining. Hunters must not approach line until 30 seconds.
Starting	Multiple	Favored end crowd	Set a biased line and a short course to a weather mark. All boats except one must fight to start at the favored end. One boat is allowed to start at unfavored end. Run several starts to determine the relative advantages and risks of favored end vs. clear air.
Steering	Solo	Rest tiller	Sail with your tiller resting on your lap to break the habit of oversteering.

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Skill	Type	Title	Description
Strategy Leeward mark rounding	Multiple	Last two legs	Do a downwind start from a finish line, and sail to the leeward gate and back. This puts back of the fleet sailors with the leaders for the last two legs of the course and makes the leeward mark rounding more tactical.
Tacking	Solo	Timed consecutive tacks	Do ten consecutive tacks, waiting only until boat is up to speed before tacking again. Time this sequence of tacks and try to improve your time.
Tacking	Multiple	Tack on the whistle	Starting even, the group sails upwind and tacks on coach's whistle. Continue until fleet spreads out.
Tacking	Paired	Tack and cross	Sail upwind together on starboard a few boat lengths apart, with leeward boat slightly ahead. Leeward boat has to try to tack and cross without fouling.
Tacking and Gybing	Solo	Dry tacks and gybes	Practice footwork and tiller control with boat on a lift or trailer. On a trailer, you can have someone swing the boat through the wind as you practice.
Tactics	Paired	Covering	One boat starts behind and tries to escape the other boat's cover. The covering boat must keep themselves between the follower and the next mark.
Tactics Rules Boat handling Starting	Multiple	Blood bath	Set an extremely short windward leeward course, perhaps one or two times as many boat lengths as there are boats. The line should also be short. Run several races with a three-minute sequence and two-three course laps. Police and judge fouls.
Upwind strategy	Solo	Call the layline	Try to tack precisely on the layline from at least 20 boat lengths out.

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Upwind strategy	Multiple	Split course	Sail an upwind course from a rabbit start, with half the boats designated to sail right and the other half to sail left for two minutes before tacking. When boats cross in the middle after tacking, discuss why the boats that crossed ahead gained. Works best with boats of equal speed.
Waves	Solo	Go out and sail	Sail in waves and experiment to get the feel of what works. Upwind, try powering through waves, as well as steering to avoid the biggest crests. Experiment with angle of heel. Downwind, try sailing downhill on the back of waves, while avoiding crashing into waves ahead. Experiment with sail controls to aid steering and control.
Wind shifts	Solo	Detecting shifts	Sail long tacks in flat water, steering precisely to stay high in the groove. Staying high in the groove forces you to head up or bear off when the wind shifts. Observe the shore or compass for a reference to become more aware of the shifts. Then, practice tacking on the heading shifts.
Wind shifts	Solo	Dead downwind	Sail on a constant heading that is roughly dead downwind for the average wind direction. Use a shore reference or compass to keep the heading constant. Then watch the shroud telltales to detect shifts. Try to predict the shifts by observing the water behind you.