Spring clinic outline and thoughts 4/28 Thursday - Rick

1. Links/resources:
   - Speed and Smarts issue 112 "rules of thumb" (show sample) by David Dellenbaugh
   - Windmapper.com - Great Lakes region: wind maps with air flow arrows and other information.
   - Weather.com - 10 day/hourly/maps
   - Speed and Smarts - Tips for jibing in light and heavy air.
   - US Sailing - online references (show sample)
   - Local resources (rules and long time boat owners)- Fleet leaders, and our home-grown rules experts and Judges.
   - More rules sources - Eric Johnson - senior judge - 2103 rules presentation - part 1 and 2 on You Tube.
   - Interlake Class Association web site - on the water video instruction - by Skip Dieball.
   - Understanding the racing rules of sailing - by Dave Perry.
   - Positioning - The logic of sailboat racing - by Stuart Walker
   - Ladder rung sampling - Highlights version of 34th America's Cup - any race 14 through 19 on you tube.

2. Terminology
   - Wind sometime called "air"
   - Windward/leeward
   - Lift/header (show with ladder rung geometry)
   - Trim/ease
   - Pinching
   - Feathering
   - Footing
   - Top and bottom of the course.
   - Weight placement/balance (up/down, while hiking in/out, fore and aft)
   - Balance of crew weight
   - Leverage on the fleet
   - Wind pressure
   - Crew and Helm (Crew can mean everyone on board)
   - Bear off/head up
   - Geometry of the course (show a few samples)
   - Closehauled, reaching, running upwind, downwind,
   - Ladder rungs - Angle from centerline of boat equal to the closehauled course plus 90 degrees to help determine how you are doing in relationship to other boats (show geometry circle) 45 and 90 degree angle reference marks Usually applied at the edge of the deck from a center axis point.

3. Boat prep

- Follow the tuning guide that came with sails or the standard guidance regarding adjustments if only one is sail supply for the Class.
- No breakdowns - Murphy's Law (tape those cotter rings down, etc.)
- Extra gear out of boat. Only necessary stuff in the boat
- Use white rigging tape or white electric tape. Dark colors heat up, get gummy and leave residue.
- Laminar Flow Indicators in good shape - yarn best (locations - diagram)
- Use cotter pins aloft with ends tucked in, circle pins ok down low where they can be viewed. All taped down so cannot be bent out of shape and work lose, or damage something.
- Look things over before leaving the dock that you had to reattach after the last race.
- Dry spinnaker out if it's wet before, between and after racing for the day and check between races for twists.
- Tools and parts on board - Boats with stayed mast: Multi tool, Gorilla tape, 6' line 3/16" with small loop already tied in end. Piece of sail tape, circle pins, clevis pins, white rigging tape, and or white electrical tape, yarn and a couple of band-aids. Then for the Laser/Sunfish - Gorilla tape, the same line, couple of band-aids in the inspection port stash bag. All in a heavier mill zip lock so dry.
- Reduce purchase on the mainsheet if the class allows and wind is not too high for the day so the sail can be sheeted in and out quicker.

4. Many times we get caught up in these discussions with the leader referred to as the winner of the race and neglect the rest of the fleet. First place tends to be a small space.

5. A leader can be any boat in front of the next boat or group of boats regardless of the overall place in the fleet, so there are leaders throughout the fleet.

6. Sailboat racing should be thought of as more than finishing in the top spot. Fun, finishing ahead of the next up in the fleet, getting to buoys quicker than usual, exercise, good teamwork, good overall sense of camaraderie are all fulfilling goals especially when you try measuring how things happened and why they did not.

7. Practice time reading wind and boat handling (a few diagrams)

- Practice as in a race staying on one tack no longer than 15 - 20 seconds as if you are confronted with other boats and are required to tack or jibe.
- Wind presence - try to determine which side of the course has the most puffs and the most pressure.
- Taking and jibing (minimum 10 tacks, minimum 4 or no jibes).
- Stopping and starting (as if working toward the start line (gybe and tack a few times mixed in)

- Straight line - speed testing can be done when getting to and from the practice area. But kept out of boat handling practice or warm ups, if possible.
- Eyes out of cockpit and look around - control adjustments, weight placement, moving around boat, countdown to start and doing various tasks and the timing of those tasks and movements should become second nature so the helm and crew can concentrate more on the changes outside of the boat.
- Boat handling - learn to be nimble and well practiced in all maneuvers - taking, jibing, heading up bearing off, mark rounding's, 720's, stopping starting when approaching the starting line and rigging the boat/launching.
- Importance of "time in boat" other than in the race. Time in boat = as much out of boat also, either preparing boat, learning more by discussion, reading or you tube, working out, etc.. <u>If a race is cancelled, or decide there is to much wind and stay on shore, or no wind, etc., get this display equipment out and mess around with situations like rules, tactics, strategy.....</u>
- Chest grip of tiller extension allows for faster hand over hand sheeting when pulling in allot of mainsheet. Hold the tiller extension by the end in front of your chest so that you can use your pinky to middle fingers to quickly grip the mainsheet, and drop, repeatedly during hand over hand trimming of the mainsheet. Or to hold a spinnaker sheet during jibes, while adjusting control lines, raising and lowering the centerboard, adjusting hat, etc.
- The person on the helm needs to focus most of their time on keep the boat at full speed while looking upwind anticipating when the wind pressure will change so there are no surprises and reactions can be planned. The crew can help with wind location and approximate timing of the increase or decrease and move their weight accordingly to keep the boat healed properly.
- See #39 Ease, Hike Feather and Trim below.

8. Crew and Helm prep
    - Determine a style of vocabulary in the boat so no second guessing.
    - Open mind, ready to learn and have fun regardless of how things turn out.
    - Conditioning - cardio as possible (bike, run or walk), hand grip, stretching.
    - General body health - No foods with added sugar, cut down on refined grain foods, low or no refined carbs, no artificial sweeteners, in other words no processed foods and simply eat real fresh food that does not need a label to tell you what it is.
    - Rub shoulders with the faster sailors and ask questions even if basic.
    - If your a faster sailor have a meaningful discussions with new sailors and keep it simple.
    - Plan for someone ending up in the water and how to approach and help them.
    - Comfortable clothing for the day in layers, but <u>not</u> bulky water suckers. Breathable, not bulky....if you go in the water you need to be able to raise your arms above the water. "Under-Armor style" cotton or wool not good. Spray jackets good ....

9. Managing risk

- Increasing your odds of a better outcome relative to others.
- Sailboat racing is like a jig-saw puzzle. All the pieces are there, there is no necessary order to assemble the puzzle, but there are things you can do to be organized in the way you proceed, the odds of assembling it quicker is to turn all the pieces right side up, get the border done, sort by color, etc. Sailing has it's own quirks regarding organization. One needs to be prepared to react to changing variables which cascade down the lake requiring you to use what's presented at the time in the most efficient way possible to move round the lake efficiently.
- I suppose luck can be being in the right place at the right time, but most of the time being in the right place is by observing and being aware of what is being presented on the race course and playing the odds of the best average outcome. All the time positioning yourself to take advantage of the conditions as they come at you.

10. The escalator: No perfect race - least mistakes better outcome. (Diagram)

- Lets say we are walking on a downward moving escalator, facing upward, at the top step keeping pace so you do not move downward
- If we were to make a boat handling mistake, miss a wind shift, get overpowered and not get the boat on it's feet, etc. we are then required to move down one step for each, but keeping the same pace.
- Gradually all the boats will be lower on the escalator. Even the various leaders are lower. The leaders will make mistakes too, or they may burn some of their lead to consolidate on the fleet, or burn distance to position themselves in the path of the highest wind pressure coming down the lake at the fleet.

11. What are the things that move you down the escalator?

Things that can slow you down.

- Boat handling errors.
- Poor communication in the boat (vocabulary inconsistent, task timing, etc.)
- Pushing your right-of-way can be very slow especially when its marginal and takes your mind off the tasks at hand, sometimes it's better to simply give way and let others get out of your way.
- Weeds on the centerboard and rudder.
- Rudder not full down.
- Loose rudder blade and tiller connection
- Centerboard or daggerboard not at the best height for the point-of-sail.
- Forgetting to lower centerboard at the bottom mark (explain an experience)
- Sails not fully raised
- Not following the tuning guide for your boat or sails.
- Minimal practice or poorly organized short practice on race day immediately prior to the race.

- To much junk in the boat.
- Ball stoppers on the end of lines that reach the floor. They can be like standing on marbles and someone will fall down.
- Not being ready/practiced for medium to high winds and get discouraged.
- Not ready for high wind spinnaker use.
- Tiller extension universal breaks.

12. Ways to hold your place on the escalator:

Watching for mistakes of other boats, responding to these observations and changing conditions, or luck.

Typically made possible by other boats regarding boat handling mishaps or lack of boat handling skills.

The largest "gains" or lack of loss can be made at mark rounding's when other boats botch a rounding or others are not paying attention to changing wind conditions.

Noticing that:

- Your typical nearest competitor is caught in traffic and cannot respond to an advantage. Allows you to consolidate your position or take greater risk.
- Seeing your neighbor's hat with chin-strap caught in mainsheet at the start or any mark rounding.
- Centerboard/daggerboard up to far at bottom mark rounding. (Seeing side-slip)
- Their spinnaker up too long at bottom mark.
- Their rudder is not down all the way. (Should mention this to them)
- Their mainsail or jib not raised up all the way for the conditions. (Saggy pants condition) (should mention this to get up to speed)
- Sail obviously out of adjustment for the conditions. (Should mention this to them)
- Spinnaker in an hour-glass or attached sideways.
- Slowed for some reason like running aground or massive weeds.
- Hit the buoy (if you see point this out especially ifyou saw them look)
- Clumsy clearing weeds off the rudder or centerboard (could make a move during this time)
- Almost tipped over so could be panic onboard or allot of water.
- Sailed over spinnaker sheet or the spinnaker
- Spinnaker pole went overboard
- Sailing on headers
- Sailing away from the most wind pressure
- Late to start

- Sailing parallel to the finish line.
- Sailing on a header after rounding the bottom mark
- Sailing on a header to the lay-line after the start
- Not digging back into the favor side of course or the most wind when wind is oscillating.
- Not looking back up the course when sailing downwind
- Raised voices
- Weight out of position
- Several boats at the bottom mark very close together and tight to mark sailing dead down wind, and you are just behind them or clear ahead of them.
- Set up too early at the start and just luffing waiting for the horn.
- After rounding the top mark they sail perpendicular to the course to the next mark.
- Weeds on their rudder? (Observed no weed check)
- See untying a tangle in the mainsheet
- Cooler full of beer
- Overdressed or underdressed (assuming they are not feeling comfortable)
- Underhand tiller grip at bottom mark rounding. (Slower take up of line)
- Letting jib sail out when overpowered instead of mainsail whole sailing up wind. (should mention this at least on shore to improve overall performance)
- Getting surprised each time overpowered and taking a long time to recover.

13. Prestart practice and observations.
    - Sailing instructions - learn them and put in a zip lock with the tools and tape.
    - Wind/weather conditions prior to leaving the dock. So you have the right clothing and idea of what to expect.
    - An abbreviated version of the things you would do in your longer practice sessions as a prerace warm up.
    - Check of all systems and adjust to given wind range of the day.
    - Watch wind patterns as they come down the lake and make a general plan. Maybe stand up to see better.
    - Determine place to start with back up plan if to crowded.

14. Start area
    - Get there on time as early as possible
    - Line site several times. Ask the line sighter on race management boat to step out of the way of mast on signal boat for a minute or two.
    - Near favored end (being keen on where the next highest wind pressure will be as it comes down the lake and how long the current puff of wind you are in will last before it dissipates)
    - With space and not trapped in a wind shadow from above or below(clear lane)
    - Boat tuned for current average wind.
    - Check for weeds at around two minutes of start.

- Full speed at start at least somewhere on the line in the front row. (diagrams)

15. Just after the start (diagram)
    - How is the fleet dispersing and relationship
    - Wind pressure and direction.
    - Next new wind coming down the lake. Prepare to be in it.
    - Stay or tack - many times if the starting line is port end favored by wind direction alone you are on the headed tack as you cross the line on starboard. Get on the lifted tack as soon as possible. Should be on port tack as soon as possible especially if you are in the middle of the line. Then when the next right side shift comes tack back to starboard and you may cross or be even with the few that started at the port end of the line.
    - Ongoing analysis of wind pressure/wind direction change/other boats, weeds.

16. Mid windward leg (Diagram oscillating wind)
    - Wind pressure?
    - How is the fleet dispersed?
    - Relationship of you and fleet?
    - Stay with leaders or separate for more leverage, or if wrong less leverage.
    - How many tacks are normal on a windward leg?_____

17. Managing risk - regarding separation from fleet. diagram
    - The further apart side to side across the course the higher the risk and loss of control.
    - Once in awhile really high separation will send you to the top of the fleet....

18. Approaching top mark
    - Are the main and jib sheets clear to be eased fast all of the way to the knot as necessary.
    - Where is the most pressure? Right or left assuming down wind leg next.
    - Watch for other boats that have already turned the buoy aiming down wind.
    - Pinching to high with no speed trying to lay the windward mark. Not good. Better to be at full speed and able to maneuver the boat readily to take advantage of the wind. Even though just 20 yards from the buoy there may be several wind shifts in just a short time. Which would allow a quicker rounding and get on your way to the next buoy.

19. At top mark (diagram)
    - Prepare to aim the boat at the next buoy immediately so less distance is traveled to the side as the buoy is left behind.
    - Head out of boat and look.
    - Next wind pressure over shoulder.

- Stay or jibe
- Where is the most pressure
- Relationship to fleet and wind pressure
- Watch for boats coming and going to the mark.

20. Mid downwind leg (diagram)
    - Work into an inside position for the mark rounding or at least start thinking about it.
    - Ladder rung slinky.....

21. Approach to bottom mark (Diagram)
    - Look up wind for the next most wind pressure.
    - Weigh odds of good clean rounding by pressing an inside position?
    - Or bail out and let the glob of boats fight it out and duck in right at the buoy just behind the inside boat. Allows you to tack immediately to get leverage on the cluster of boats just ahead.
    - Or shoot below and ahead of the inside boat during the rounding if the wind is to the right. (Assuming marks are to be left to port)

22. At bottom mark (diagram)
    - wide on the approach, tight to the buoy on course to top mark at full speed.
    - "wide on the side, narrow on the arrow"

23. Just after bottom mark - similar to just after the start. (diagram)
    - Lifted or headed. Where is the next greatest pressure coming from
    - Watch for other boats coming or going.

24. Approaching the finish (diagram)
    - Be on the tack aiming more perpendicular to the line in the most wind.

25. At finish
    - At the last ½ boat length aim even closer to the wind (shooting the Line)

26. After the finish
    - Clear out of the way to the side of the course, so others see your courtesy and maybe do the same when they finish ahead nest time.

27. Hitting a buoy 360 degree circle (not around the buoy)
    - Clear out of the way (unless open space already) and jibe first. The momentum of the jibe will help carry you through the tacking required.

28. 720 penalty circle
    - Same as hitting a buoy of the rsce buoy , but teo circles

29. Tack or Stay?

- Very soon after the start a constant thought of this should be in your mind with regard to the relationship to other boats, wind pressure, where you are on the course and freedom to do either and the odds of it been beneficial.
- Lifted or headed.

Cross or tack analysis - wind pressure/wind direction changes/other boats

30. Crossing or tacking randomly with no plan.
    - This approach does not give you any feedback regarding what you did is good or bad. No way to measure the odds or risk in the future.
    - Relies completely on casual luck

31. Cross or tack regarding wind pressure (diagram)
    - Cross below no tack. Good if wind pressure appears to be higher soon in the area you are sailing toward.
    - Tack below or to the side to keep from being crossed - good if wind pressure appears that it will be higher over your shoulder to windward, and prevents lead consolidation by others.
    - Cross above with no tack - Good if wind pressure is likely to be in the direction you are sailing toward, or the goal is at hand (buoy, finish), or digging back into the fleet so with back with the fleet.
    - Cross above with tack. This consolidates lead over that portion of the fleet.
    - Tack below with loose spacing - so clear wind and go with the fleet.

32. Tack or cross regarding other boats (diagram)
    - Tack above with tight cover - if you put them in your wind shadow could force them to tack and you loose control of them or the fleet.
    - Take above with loose cover - allows them to stay on same tack with you and you have more control or them or the fleet if they stay with you.
    - Tack below and ahead tight - if you put them in your wind shadow could force them to tack and you loose control of them or the fleet.
    - Tack below and ahead loose - allows them to stay on same tack giving you more control of them and fleet if they stay with you.

33. Scan the width of the course between the bottom and top mark you for highest wind pressure and analyze your options. Position yourself to sail into it, either by tacking toward it or staying on same tack. If tacking you have to analyze how much of a loss you will take if sailing on a header to try and better yourself by it. Or, maybe you're lucky enough to get a header enabling you to tack toward the increased pressure then great, a bonus. Invariably the wind is fanning out with the increased pressure. Be prepared to stay or tack as necessary based on your current situation (cover by another boat or a clear lane) and the next pressure coming down the lake, all the while balancing the boat and keeping it at full speed not stalled out.

34. The lifted tack....
    - Great we made it on to a lifted tack and in the most wind pressure on the lake. We are going to kill them...
    - Hmm, are you being lifted around the windward mark so bad that you will be on a huge header if you tack to get to it?

35. Over standing the windward mark....getting to the lay line to soon.
    - You've over stood the windward mark, ok we'll just reach to the buoy, then you get 50 yards away and find that you are now headed and need to tack.
    - The wind has shifted several times to get you into this situation. Best not to get to the lay line to soon even if you have to dig back into the middle of the course on a neutral heading no lift or header is better than over standing to far away from the mark.

36. The headed tack...
    - Only if needing to dig back into the fleet would you want to be on the headed tack to consolidate a lead over the nearest boats.
    - Or you see a huge fresh breeze coming down the lake and the fleet ahead of you shows you what's going on and if you do not attempt to get into it or at least near it the fleet will sail around and over you. If you do not recognize this soon enough you may as well stay on the lifted tack and hope for luck to come your way.

37. Multiple fleets on the lake or other sailboats on the lake.
    - These can act as tell tales and give clews regarding a fresh breeze and likely direction. Watch out for folks just day sailing (may not be a true heading ,but you can gauge velocity.

38. How can you tell what direction the next puff will be?
    - If the wind is consistently veering and backing at a steady interval then it is less important to know the direction. You just need to get in sync with it but at the same time you do not want to sail to far away from the average fleet location on the course, or sail out of the puffs, or to far to the side of the course because you will lose control of the fleet.
    - Typically a gust of wind coming across the lake fans out from the middle of it at the sides. But usually the overall direction of the puff is a few degrees or more to one side or the other.
    - The generally line up with the gust of wind so you will be in it when it arrives then stay or tack as needed in relation to the fleet.
    - Clean boat handling is required to tack in large velocity increases otherwise any gains will be lost by being overpowered going into and out of a tack.

39. Ease - hike - feather and trim: EHFT
    - Being able to keep the boat on it's lines/feet and moving fast without being overpowered is key to getting around the course as fast as possible.
    - If you are not reacting to moderate to powerful gusts. By dumping the excess power, moving your weight, feathering the bow up and trimming you will lose yards at a time with the rudder stalled out and the boat going slide-ways. Even in moderate mild hiking conditions this is true.
    - It is better to look ahead up the course into the apparent wind, notice the dark patches and be ready to react immediately than to be surprised and late to react. Anticipation is key all the while being ready to react to the windshift that should accompany the increased wind pressure.
    - Some say the EHFT sounds like allot of work to do all of that, well not more than being overpowered and having to let the mainsail out anyway and haul it in even further than the smaller increments required in a controlled EHFT. Plus you will get around the course quicker.

40. The S jibe.
    - Find several on you tube and watch them paying attention to tiller, weight, etc. movement as a team. See hand out

41. Why are some folks standing up in their boat before or during the race?
    - Line sight of starting line - Sometimes it is hard to get a line sight within 5 minutes of the start because the race manager tends to stand at the sightline blocking the view of the buoy and shoreline in the distance. So you need to get it early or ask them to move out of the way for a few minutes. Also important to watch if they adjust the line after you have sighted the line and then re-sight as needed. In general 2 - 3 sighting are required to get a good average as the boat can swing around.
    - Better look at the wind up the lake.

42. Synchronized boat handling drill: (always thought this would be fun)
    - 2 or 3 boats
    - set 10 -15 second timers
    - all get on same tack with a stop go, stop go
    - Then all tack at same time.
    - Again
    - Again
    - Stop go stop go
    - Bear off
    - Gybe
    - Gybe
    - Gybe
    - Then stop and go
    - Stop and go
    - Spread out slightly and do a 720 to finish up.

- (or something like this)
- Then get into your own prerace prep.
- Put a 2-3 minute routine together and go to an off the lake regatta, go out before the race prior to the start and do a 2 minute. This will give folks something to talk about and is great for boat handling and a warm up.

43. Length of start and finish lines:
    - An overly long starting line has a higher percentage of risk for the whole fleet. Shorter lines are a bit more fun allowing for the fairest starts especially those new to the game because those lucky at one end have less advantage over the entire fleet.
    - An overly long finish line makes a short last windward leg sometimes a no or one tacker and no chance for the fleet to make any moves to use tactics to try catching up.