

NAVIGATION

Two forms of navigation for kayakers- piloting and ded reckoning.

Piloting- keeping track of your location using known landmarks. Reference materials are guidebooks, maps and charts.

Tip- always look back when leaving shore or rounding a headland- remember, areas always look different from the opposite direction. Also tide level will drastically change how a launching/ landing spot looks.

Ded reckoning- stands for deductive reckoning. This is used when no known landmarks can be seen such as at night or in the fog.

To use ded reckoning you need 6 things. You need to know:

- 1) where your start point is
- 2) where you want to end up
- 3) a compass bearing to follow
- 4) the amount of time it will take
- 5) your group paddling speed (3kn average)
- 6) the distance you are going

Equations for finding time, speed and distance are: $D=st$ $S=d/t$ $T=d/t$

Example : 3 knots x 2 hours = 6 nm travelled

Things to consider that make ded reckoning inherently inaccurate: current , wind, unsteady paddling speed.

Aiming off- For example ,if you are paddling for a point of land on an island , it's best to aim for the fat part of land so as not to miss and end up not knowing where you are.

Hand railing- using a shoreline to follow

Backstops- 2 types- physical features and time.

Physical backstop- for instance - you want to hit a creek for a water top up and there is a bay beyond it or a headland on the chart you would know that you have gone too far.

Time backstop- if you are navigating using ded reckoning and your calculations say you should have arrived at your destination by now you need to make a decision. The best course of action would be a 90* turn towards the largest , closest land mass.

Ranges- when two stationary objects are in line from your vantage point you have established a range. If you keep these two objects lined up you can be certain that you aren't drifting off course.

Line of position- if you are directly between two objects shown on a chart, you are somewhere along the line between them.

Triangulation- using a compass to draw lines of position on a chart using known landmarks to more accurately pinpoint your position. The 3 points must be 90* or more apart for this to be accurate.

Circle of possibility- used to find out how far you can paddle in a day or on a trip.

Example- you have 6 hours to paddle for a day trip. Your average speed will be 2 knots(allowing for sight seeing, lunch and rest stops).

So 6 hrs x 2 knots = 12 nm

So this means you could paddle 6 nm out and 6

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nm back. Building in a safety factor for in case you face a head wind on the way back , maybe you only go 5 nm out. Now take a drafting compass and measure 5 nm and draw a circle from launch point. You now have a circle of possibility.