

## Navigation Flipbook Notes

### Marine Research Skills Syllabus Match

Subject matter and suggested learning experiences

Key concepts / elaboration	Learning experiences	Page	KU	IA	EC
MS3.1 Marine navigation and communication devices (e.g. GPS [global positioning system], radio, mobile phone) and procedures are used for coordination and safety.	Give example of how navigation devices can show incorrect readings. Describe non-electronic devices are used for co-ordination and safety. Explain the use of a steering compass. Define terms variation and error and describe how it affects very compass. Distinguish between a pleorus, hand held, fluxgate and steering compass.	15-33	✓	✓	
MS3.2 Chart datum and the IALA-A (International Association of Lighthouse Authorities region A) buoyage system are interpreted when operating vessels in marine environments.	Define the term pilotage and state its use. List the five types of IALA markers and describe their possible shapes. State the rules using these markers, for entering and leaving port. Identify IALA markers on a local chart  Explain why the correct chart datum and chart software is used with a GPS when operating vessels in marine environments	11-14  68	✓	✓	
MS3.4 A safe passage is planned and implemented using a variety of calculations and modifications (e.g. speed, distance, time).	Define the terms latitude/longitude, nautical mile, compass rose. Define the terms latitude, longitude, chart block, soundings, nautical mile and tidal datum. Calculate chart depths, distance speed and time for a variety of research sites using a chartDistinguish between variation, deviation to calculate a ships head given a variety of bearings.  Plot a safe course to a research site, calculate the distance and compute the correct course to steer using a compass rose, dividers and set squares. Describe how a gps and chart plotter are used to create waypoints to steer a course to and from a research site. Fix a position on a chart using hand head compass, chart, set squares and pencil. Plot a set of waypoints for a research voyage.	24-50	✓  ✓	✓  ✓	✓  ✓
MS3.3 Navigational aids are used to plot courses and record locations as navigational precision is required for establishing and revisiting research sites.	Explain the use of a a depth sounder, radar, GPS, waypoints to plot courses and record locations. Justify the use of a combination of navigation and communication devices in safely entering a port.	24-50  66-68	✓		