

Nautical Studies

Curriculum Intent

The curriculum intent in maritime studies is in 2 main phases. In the early years, it is a very good way to introduce outdoor adventurous activity to our younger pupils, with all that this entails in terms of developing self-esteem, character development and resilience, this is taught mainly through docks days. In year 7 and 8 we also use maritime studies to engage students with examples of the application of other subjects within a maritime context, with single period classroom lessons once a week.

From year 9 upwards we enter the second phase of maritime studies when it becomes an optional subject all the way up to the sixth form. The main drives for year 9 to 13 are both to prepare students for the world of work and further study in maritime disciplines. The students who take these courses will leave LNS with an understanding of the importance of the maritime economy to the UK, how technology is changing the way maritime works, and as rounded citizens who know the importance of looking after the marine environment whilst also working efficiently and safely.

In years 10 and 11 we offer a differentiated pathway. Level 1 focuses on careers associated with boat maintenance and repair; Level 2 prepares students either for the level 3 course or progression into an apprenticeship that could one day, for example, lead to boat master qualifications.

The level 3 sixth form course prepares students either for maritime college and university entrance, or for direct entry into maritime apprenticeships.

How the maritime curriculum links to whole school intent:

Successful Pupils - Every pupil is encouraged to take maritime qualification if they want to whilst they are at LNS. This ranges from national governing body certificates such as RYA and British Canoeing through to aspiring to achieve captain and chief engineer qualifications when they are older. The level 3 course is very successful at progressing students onto fully funded Merchant Navy cadetships at maritime universities, as well as onto apprenticeships/careers both port-based and at sea.

Literate Pupils - English is the international language of the sea, in addition there is a whole specialist maritime language of nautical terms and expressions. We take great care to ensure our students know the correct terminology from year 7 upwards. Clear communication skills are of course important for the radio operators licence that we teach students in upper school. When the students leave LNS to gain professional maritime qualifications, these are always assessed with an MCA Oral Exam. As part of the students cultural maritime education we also bring in elements of maritime history, literature and art to engage and inspire the students.

Responsible pupils - Three themes thread through the maritime curriculum at all key stages: safety and risk assessment; care for the environment and working as a responsible crew. This applies equally to lessons on the water as it does in the classroom.

Aspiring pupils - The school is very lucky to have such a good network of pupils who have left LNS to go onto successful maritime careers. We often have visits from these people who inspire the next generation to follow in their footsteps. The maritime curriculum is structured so that in year 9, the pupils know why they need to do their best in the STEM subjects.

Year 7

Year 8

Year 9

Year 10

Year 11

Year 12 & 13

<p>T1: In T2 English Dept Study the Tempest - link to Shakespeare. The years 7s at this time will have a series of lessons on the weather this also prepares students for Geography T2 Natural Hazards. Geography do Weather and climate in T6 reinforce rather than replicate. Sources of weather info - Beaufort scale, sea states, what clouds tell sailors. History Dept. are working on Foundation of school and Titanic disaster</p> <p>T2: Science Dept. are doing forces Nautical Dept. use 1851 Trust material on forces in sailing plus buoyancy (Tin foil boats?)</p> <p>T3: Maths use of angles introduce bearings and simple navigation - link to T6 maths Coordinates Introduction to the marine map (a Chart)</p> <p>T4: Science dept. are doing energy link to 1851 materials on energy? How a sail works? Geography are studying rivers so Nautical Study the Thames source to sea- three themes the nature of the river, commercial use and leisure use. Project work (trip on the Thames)</p> <p>Link to Art Nautical Themed art T3/ T4 based on river Thames</p> <p>T5: Physical Education are covering Sport and Society. Nautical the America's Cup and competitive water sports (Olympic sailing and Kayaking events)</p> <p>1851 Trust materials</p> <p>T6:</p>	<p>T1: Maths Fraction operations - for nautical introduce rule of 12ths and tides? Depth of water on charts, under keel clearance at low tide. Buoyage.</p> <p>T2: History are doing Trans atlantic slave trade - Nautical dept Study of London Docks, Cutty Sark, Suez Canal, Panama canal?</p> <p>T3: Science are doing waves good opportunity to look at effect of headlands, coasts, estuaries and harbour walls on waves</p> <p>T4: In T3 Science has done pressure - link this to formation of high and low pressure weather systems what causes a strong wind, barometer, weather map, what causes a sea breeze. The Sirocco, Passat, Lodos, Mistral wind and other sea breeze phenomena. The trade winds - Roaring Forties. The Doldrums.</p> <p>T5: Geography are doing resource management. Nautical study fishing and fish stocks</p> <p>Computer Science are doing how is the digital world connected - Nautical introduce GMDSS and AIS</p> <p>T6: Design and Technology are doing smart materials - link to 1851 Trust boat building materials and 3D design / naval architecture. (could we have a boat design competition with DT?)</p>	<p>T1 Practical boat handling skills. Students will learn how to set up a boat and sail a dinghy on all points of sail. By the October half terms they should be able to apply the RYA standard methods of tacking and gybing and start to apply some of the "5 essentials" of sailing.</p> <p>T2: Working in the Maritime Sector This unit explores the key elements of the maritime sector - vessel types.</p> <p>T3: Working in the Maritime Sector This term we focus on careers on land based, and inland waterways careers. We have tasks on ports, marine science, fisheries, and maritime legal and financial careers.</p> <p>T4: Working in the Maritime Sector This term starts with a look at Royal Navy careers and a task on ship surveying. In the middle of this half term students get a fortnight to explore in more depth career pathways that are of specific interest to them, with a focus on why they need to make the right choices in year 10 and study hard at the STEM subjects. The last part of this term they will look at the daily decisions that have to be made at work for marine professionals on 2 vessels of their choice.</p> <p>T5: Practical boat handling Skills This term we are expanding on the 5 essentials to introduce more advanced sailing. Topics include an introduction to racing, to fine tune 5 essentials; sailing up to</p>	<p>Note : There is a differentiated level 1 and level 2 scheme of work. Scroll down for level 2</p> <p>The docks sessions are common to L1 and L2</p> <p>Level 1</p> <p>L1 T1: Practical boat handling During this term we will do the summative assessment of the students sailing skills; the students will write their performance review task and action plan for future development.</p> <p>L1 T2: Maritime Safety Skills Health and safety at work; how to identify and follow hazard sheet and product sheet instructions; the importance of PPE; Health and safety at work act, and what to do if the work you are being asked to do is at odds with HSE guidance.</p> <p>L1 T3: Examples of work place practices in the maritime sector, and how HSE guidance applies to these examples; Who in an organisation is responsible for different types of workplace practice and law. The importance of personal conduct in following safe working practices.</p> <p>L1 T4: This term we look at emergency procedures; how to call for help with VHF radio and distress signals; basic first aid and response to fire.</p> <p>L1 T5: Developing group and teamwork skills We use the 1851 Trust teaching resources to develop group and teamwork skills in the investigation of what it takes to win the America's cup. The students will present their work to each other</p>	<p>Note : There is a differentiated level 1 and level 2 scheme of work. Scroll down for level 2</p> <p>Level 1</p> <p>L1 T1: Introduction to vessel engineering Propulsion and steering systems.</p> <p>L1 T2: Introduction to vessel engineering Importance of planned regular maintenance of vessels; PPE.</p> <p>L1 T3: Rope work and knots Characteristics of different rope types; knots; use of blocks and tackles.</p> <p>L1 T4: Attainment 8 intervention / catch up for students who did not complete year 9 materials</p> <p>L1 T5: Attainment 8 intervention</p> <p>L1 T6: Attainment 8 intervention</p> <p>Level 2</p> <p>L2 T1: Sign off of Performance review and practical boat handling skills unit.</p> <p>RYA Essential Navigation and seamanship Relative directions, distance and position on a marine chart; admiralty chart conventions</p> <p>L2 T2: RYA Essential Navigation and seamanship Pre sailing checks; sending distress signals; man overboard; introduction to electronic navigation.</p> <p>L2 T3: RYA Essential Navigation and seamanship The basic principles of radar navigation;</p> <p>L2 T4: RYA Essential Navigation and seamanship Pilotage and anchoring; sign off of course.</p> <p>L2 T5: Attainment 8 intervention</p>	<p>We currently follow a yea A / Year B curriculum patterns with year 12 and 13 taught together</p> <p>Year A</p> <p>Yr A T1: Operational and regulatory environment Port services; role of the the MCA; types of surveyor; types of marine insurance and P and I; role of the IMO; key codes and regulations</p> <p>Yr A T2: Operational and regulatory environment Penalties for breach of health and safety; types of emergency in port and at sea; response to accidents and near misses; maintenance of records; how to use resources to reduce environmental impact; alien species control.</p> <p>Yr A T3: Operational and regulatory environment GMDSS; vessel tracking and monitoring. Passage planning vessel preparation; causes of tides and effects of tides on sea state, including headlands, races and estuaries.</p> <p>Yr A T4: Passage planning Tidal curves; tidal atlases; effect on course to steer and allowance for it; interpolation of rate; route planning.</p> <p>Yr A T5: Practical boat handling skills Explain how to and demonstrate the handling of a powered vessel in a range of settings and conditions.</p> <p>Yr A T6: Practical boat handling skills Ferry gliding, towing alongside; emergency action plans; produce a session plan and risk assessment.</p>
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