

# UNIT 6 - NAVAL SKILLS - MARINE NAVIGATION

Content Area: **Social Studies**  
Course(s):  
Time Period: **December**  
Length: **5 blocks**  
Status: **Published**

## Enduring Understandings

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Demonstrate a basic understanding of navigation and the significant instruments used in this science

## Essential Questions

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1. Define navigation
2. Describe the terrestrial sphere as it relates to navigation
3. Cite the significance of the great circle
4. Define circular measurement
5. Describe the relationship of meridians as they pertain to measurement
6. Describe how distance is represented by a parallel circle on a globe
7. Explain how latitude and longitude are used to locate places on a map
8. Describe how nautical measurements are made at sea
9. Describe true and relative bearing
10. Explain the use of nautical charts
11. Describe how Mercator projection is used by navigators
12. Explain the purpose for the basic types of nautical charts
13. Describe how courses, bearings and lines of position are plotted on a nautical chart
14. Describe the navigational equipment and other means used to pilot a ship

## Content

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- 1 Introduction to Navigation NS3-M3U4C1S1 – Knowledge of Navigation  
NS3-M3U4C1S2 – Nautical Measurements  
NS3-M3U4C1S3 – Nautical Charts  
NS3-M3U4C1S3 – Piloting
- 2 Aids to Navigation NS3-M3U4C2S1 – Navigational Lights  
NS3-M3U4C2S2 – Buoys
- 3 Time and Navigation NS3-M3U4C3S1 – Time and Time Pieces

## Skills

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1. Navigation
2. The terrestrial sphere as it relates to navigation

3. The significance of the great circle
4. Circular measurement
5. The relationship of meridians as they pertain to measurement
6. How distance is represented by a parallel circle on a globe
7. latitude and longitude are used to locate places on a map
8. Nautical measurements are made at sea
9. True and relative bearing
10. The use of nautical charts
11. How Mercator projection is used by navigators
12. The purpose for the basic types of nautical charts
13. Courses, bearings and lines of position are plotted on a nautical chart
14. The navigational equipment and other means used to pilot a ship

## **Resources**

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<http://www.njrotc.navy.mil/curriculum.html>

Naval Science III, Naval Knowledge and Skills for The NJROTC Student

## **Standards**

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Reading: Informational Text

RI.11-12.1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly...

RI.11-12.4. Determine the meaning of words and phrases as they are used in a text...

RI.11-12.7. Integrate and evaluate multiple sources of information presented in different media or formats ...

Writing

W.11-12.1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

W.11-12.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately...

W.11-12.6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products...

Speaking & Listening

SL.11-12.1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively. W.11-12.2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately ...

SL.11-12.5. Make strategic use of digital media...

Language

L.11-12.4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases...

L.11-12.6. Acquire and use accurately general academic and domain-specific words and phrases...