

**Groton Public Schools
Curriculum Map**

INTRODUCTION

Course Title: Naval Science Three (NS-3)
Curriculum Area and Grade: Navy National Defense Cadet Corps (NNDCC)/NJROTC

Course Purpose:

Prerequisite: Naval Science I or transfer from other JROTC program.

This course is the odd year curriculum for cadets to expand their knowledge and experience beyond the introduction to JROTC class. The curriculum includes two areas of study: (1) naval knowledge with studies of sea power, national security, military law, and laws of the sea, and (2) naval skills with studies of shipboard life, seamanship, rules of the road, and navigation.

Major Learning Goals and Understandings:

Student Learning Expectation(s):

- Students will understand how sea power is used for our national security
- Students will learn the basics of naval operations
- Students will understand the different warfighting organizations and their purpose in the US Navy.
- Understand how a naval warship operates 24/7
- Become a better leader by with increased responsibilities. Increase understanding of the principles of leadership and how you can become a successful leader

Units/Theme/Concept and # of Weeks

Quarter = 9 weeks, Semester=18 weeks, Trimester= 12 weeks, Year=36 weeks --- usually spread over 40 weeks

Unit 1- Sea Power and National Security	Unit 2 – Naval Operations and Support Functions
Unit 3 – Naval Weapons	Unit 4 – Modern Naval Warfare
Unit 5 – Shipboard Organization and Watchstanding	Unit 6 – General Military Training (GMT)

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Date Approved:

Unit 1 - Sea Power and National Security

Grade: 11	Subject: NNDCC/NJROTC	Course: Naval Science Three (NS 3)	Length of Unit: 6 weeks
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NNDCC/NJROTC Standards

- Introduction to the Navy Junior Reserve Officer Training Corps (NS-1 Textbook)
- Sea Power: A Naval History
- Influence of Sea Power Upon History
- Cadet Field Manual (11th Edition revised) NAVEDTRA 37116-K
- The Bluejacket's Manual

Part 2 – Unit Standards

Key Performance Expectations (Content Knowledge and Concepts/Skills)

The students will know:

1. The Importance of Sea Power
2. The U.S. Merchant Marine
3. Grand Strategy
4. U.S. Strategy and the Navy
5. National Security and Modern Conflict

The students will be able to explain or define:

1. What two major political developments since World War II have increased the importance of the oceans?
2. In what five ways does the U.S. merchant marine contribute to national defense?
3. Why is the U.S. merchant marine an important part of U.S. Sea power?
4. What governs U.S. grand strategy?
5. What are the four traditional core principles upon which U.S. grand strategy has always been based?
6. What are joint operations?
7. What are combined operations?
8. What are the seven subdivisions of modern U.S. Navy and other military service command and control systems?
9. What are the three naval warfare areas?
10. What is the mission of the Navy?
11. What is the Navy's two basic functions?
12. What are the functional roles of the U.S. Navy?
13. What is our nation's strategic nuclear triad?
14. How may selective use of military force limit wars or reduce the danger of major power confrontations?
15. Why are naval and air operations less risky than ground force invasion?
16. What are the nine principles of war?
17. What is general war?
18. What are the three basic considerations in evaluating an external threat?
19. What main factors affect a nation's national strategy?

Big Idea

- **Big Ideas**

- U.S. Navy is responsible for three functioning strategies: strategic nuclear deterrence, deployment of overseas forces, and security of the sea lines of communication
- Sea Power: "the sum of a nation's capabilities to implement its interests by using the ocean areas for political, economic, and military activities in peace or war in order to attain national objectives."
- The main components of sea power, he stated, are naval power, ocean science, ocean industry, and ocean commerce.
- 80 percent of all world trade goods are transported by water.
- Ships engaged in commerce that carry goods and liquids from one place to another over the world's oceans and water- ways
- National strategy there are political, economic, diplomatic, legal, and naval and military strategies, both inter- national and domestic.
- All the national strategies together constitute grand strategy
- U.S. grand strategy is governed by the Constitution, U.S. law, government policy regarding international law, and the national interest as expressed by our national security policy.
- Military strategy involves physical violence or the threat of such violence.
- U.S. Navy is to be prepared to con- duct prompt and sustained combat operations at sea in support of U.S. national interests.

Part 3 – Common Unit Assessments

- NNDCC academics
- Formative and Summative assessments
- Self-assessment: Review / grade own work; reflections
- Peer assessment: Peer feedback/input
- Personal Inspection
- Drill (not drill teams)
- Projects/Homework/Research
- Physical fitness participation.

Part 4 – Common / Assured Learning Experiences

Students will participate in:

- Group activities
- Modeling
- Peer assessment
- Monitoring, guidance, support
- Student-led class presentations
- Field work
- Encourage student leadership and teaching
- Direct instruction

Unit 2 - Naval Operations and Support Functions

Grade: 11	Subject: NNDCC/NJROTC	Course: NS 3	Length of Unit: 6 weeks
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Unit 2:

- Introduction to the Navy Junior Reserve Officer Training Corps (NS-1 Textbook)
- Cadet Field Manual (11th Edition revised) NAVEDTRA 37116-K
- The Bluejacket's Manual

Part 2 – Unit Standards

Key Performance Expectations (Content Knowledge and Concepts/Skills)

<p>The students will know</p> <ol style="list-style-type: none"> 1. Naval Operations 2. Naval Communications 3. Naval Intelligence 4. Naval Logistics 5. Naval Research and Development 	<p>The students will be able to:</p> <ol style="list-style-type: none"> 1. As set forth in Sea Power 21, what are the three concepts that will underlie all naval operations in the twenty-first century? 2. What is communication? 3. What is "naval communications"? 4. What are military intelligence and political intelligence? 5. What is the difference between information and intelligence? 6. What are the five steps in the intelligence process? 7. What are the six basic national intelligence sources? 8. What kind of information is naval intelligence primarily interested in collecting? 9. What is a military attaché? 10. What are the seven principles of logistics that must be reflected in logistics planning at all levels? 11. When did modern logistics begin? 12. What is the relationship between strategy, tactics, and logistics? 13. What is the mission of the Office of Naval Research? 14. What kinds of research does the Naval Research Laboratory do? 15. What is DARPA?
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Big Idea

- **Big Ideas**
 - Military operations require understanding of the overall strategy and then broken down to individual naval forces
 - Effective communications are required to support naval forces weather through radio, satellite or visual
 - Intelligence is gathering, understanding, and reviewing various sources to exploit the enemy
 - Various military and civilian organization collect intelligence
 - Intelligence is based on a need-to-know basis
 - All forces require food, water and supplies to sustain operations for naval forces.

- US Navy needs to develop advanced technologies through research to support naval forces.

Part 3 – Common Unit Assessments

- NNDCC academics
- Formative and Summative assessments
- Self-assessment: Review / grade own work; reflections
- Peer assessment: Peer feedback/input
- Personal Inspection
- Drill (not drill teams)
- Projects/Homework/Research
- Physical fitness participation.

Part 4 – Common / Assured Learning Experiences

Students will participate in:

- Group activities
- Modeling
- Peer assessment
- Monitoring, guidance, support
- Student-led class presentations
- Field work
- Encourage student leadership and teaching
- Direct instruction

Unit 3 - Naval Weapons

Grade: 11	Subject: NNDCC/NJROTC	Course: NS-3	Length of Unit: 6 weeks
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NNDCC/NJROTC Standards

- Introduction to the Navy Junior Reserve Officer Training Corps (NS-1 Textbook)
- Cadet Field Manual (11th Edition revised) NAVEDTRA 37116-K
- The Bluejacket's Manual

Part 2 – Standards

Key Performance Expectations (Content Knowledge and Concepts / Skills)

<p>The students will know:</p> <ol style="list-style-type: none"> 1. Naval Weapons 2. Naval Ship and Aircraft Guns 3. Navy Ship, Submarine, and Aircraft Missiles 4. Laser Weapons and Rail Guns 	<p>The students will be able to:</p> <ol style="list-style-type: none"> 1. What is a weapon system? 2. What must a weapon system include? 3. When did the attack carrier supersede the battleship as the principal fleet unit? 4. What is the general term used for weapons and related physical equipment? 5. What are the distinct types of guns on a naval vessel? 6. What does the fuse in a projectile do? 7. What is a projectile, and what are its three main parts? 8. What are the three classes of naval gun projectiles? 9. What is the purpose of rifling in a gun barrel? 10. What are the two types of ammunition used in modern naval guns? 11. How do homing torpedoes operate? 12. What are the types of missiles in the naval forces? 13. What Navy missile is a part of the nation's strategic nuclear triad? 14. What are the four basic parts of a guided missile? 15. What type of weapon has become the main armament on most of today's armed naval aircraft? 16. New weapon systems will use advanced technology
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<p>Big Idea</p> <ul style="list-style-type: none"> ● Big Ideas <ul style="list-style-type: none"> ○ What weapon is at the center of the modern carrier battle group? ○ What are the weapons systems found on naval ships are guns and missiles ○ What is the sole mission of the Fleet Ballistic Missile and Fast Attack Submarines? ○ What is the Navy's primary fighter and attack aircraft? ○ What are weapons that support naval aircraft? ○ Technology will increase the range of current weapon systems.
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- NNDCC academics
- Formative and Summative assessments
- Self-assessment: Review / grade own work; reflections
- Peer assessment: Peer feedback/input
- Personal Inspection
- Drill (not drill teams)
- Projects/Homework/Research
- Physical fitness participation.

Part 4 – Common / Assured Learning Experiences

Students will participate in:

- Group activities
- Modeling
- Peer assessment
- Monitoring, guidance, support
- Student-led class presentations
- Field work
- Encourage student leadership and teaching
- Direct instruction

Unit 4 - Modern Naval Warfare

Grade: 11	Subject: NNDCC/NJROTC	Course: NS-3	Length of Unit: 6 weeks
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NNDCC/NJROTC Standards

- Introduction to the Navy Junior Reserve Officer Training Corps (NS-1 Textbook)
- Cadet Field Manual (11th Edition revised) NAVEDTRA 37116-K
- The Bluejacket's Manual

Part 2 – Standards

Key Performance Expectations (Content Knowledge and Concepts / Skills)

<p>The students will know:</p> <ol style="list-style-type: none"> 1. Cyber Warfare 2. Special Warfare 3. Mine Warfare 4. Chemical, Biological, and Nuclear Warfare 	<p>The students will be able to:</p> <ol style="list-style-type: none"> 1. What are the diverse types of modern warfare? 2. What is the difference between cyber terrorism and cyber warfare? 3. What is the concern about the use of cyber countermeasures by the United States in retaliation for cyber-attacks by foreign government entities? 4. What is spyware and what is adware? 5. What is DOD's definition of special warfare? 6. What characterizes special warfare operations? 7. What is the primary special warfare force within the U.S. Navy? 8. What is the Marine Corps' special warfare organization? 9. What is the premier special operations force within the US? Army? 10. What are the three principal aspects of mine warfare? 11. How is defensive and offensive mining used? 12. What are the categories by which mines are classified? 13. What are special weapons, or weapons of mass destruction? 14. What is chemical, biological, and nuclear warfare?
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Big Idea

- **Big Ideas**

- The diverse warfare fields are specific and have unique functions for naval forces
- Cyber terrorism is the biggest threat to our nation and naval forces
- Special operations are specific tactical projections of power throughout the world
- Navy SEAL and Marine Raiders are the premier Tier I naval special forces
- Mine warfare consists of diverse types of mines that can be used offensively or defensively
- CBN warfare has been used throughout history
- Know the various type of chemical, biological agents
- CBN has specific cleanup and protection procedures for naval forces
- CBN has an agenda of causing mass casualties.

Part 3 – Common Unit Assessments

- NNDCC academics
- Formative and Summative assessments
- Self-assessment: Review / grade own work; reflections
- Peer assessment: Peer feedback/input
- Personal Inspection
- Drill (not drill teams)
- Projects/Homework/Research
- Physical fitness participation.

Part 4 – Common / Assured Learning Experiences

Students will participate in:

- Group activities
- Modeling
- Peer assessment
- Monitoring, guidance, support
- Student-led class presentations
- Field work
- Encourage student leadership and teaching
- Direct instruction

Unit 5 - Shipboard Organization and Watchstanding

Grade: 11	Subject: NNDCC/NJROTC	Course: NS-3	Length of Unit: 6 weeks
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NNDCC/NJROTC Standards

- Introduction to the Navy Junior Reserve Officer Training Corps (NS-1 Textbook)
- Cadet Field Manual (11th Edition revised) NAVEDTRA 37116-K
- The Bluejacket's Manual

Part 2 – Standards

Key Performance Expectations (Content Knowledge and Concepts / Skills)

<p>The students will know:</p> <ol style="list-style-type: none"> 1. Shipboard Organization 2. Shipboard Watches 	<p>The students will be able to:</p> <ol style="list-style-type: none"> 1. What are the three meanings for a "watch" in the Navy? 2. What do the eleven general orders of the sentry embody? 3. What are the readiness conditions for Navy ships? 4. When is each readiness condition set? 5. How many watch sections might a ship have during peacetime? 6. What are the responsibilities of a command duty officer? 7. What are the responsibilities of the officer of the deck? 8. What are the responsibilities of the officer of the deck? 9. What are the two basic types of enlisted watches in a topside underway section? 10. Who is the main enlisted assistant to the OOD on the bridge when under way? 11. What do lookouts report during their watches? 12. What are the duties of the QMOW? 13. Where is the primary shipboard watch station in port?
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Big Idea

- **Big Ideas**

- How is a naval ship organized?
- Who has ultimate command?
- What are the major departments found on a naval vessel?
- Who runs each major department on a naval vessel?
- What are the watch sections aboard a naval vessel?
- The 11 general orders are required for the safe operations of naval forces
- Material conditions are required for safe navigation during different conditions of the marine or operational environment

Part 3 – Common Unit Assessments

- NNDCC academics
- Formative and Summative assessments
- Self-assessment: Review / grade own work; reflections
- Peer assessment: Peer feedback/input
- Personal Inspection
- Drill (not drill teams)
- Projects/Homework/Research

- Physical fitness participation.

Part 4 – Common / Assured Learning Experiences

Students will participate in:

- Group activities
- Modeling
- Peer assessment
- Monitoring, guidance, support
- Student-led class presentations
- Field work
- Encourage student leadership and teaching
- Direct instruction

Unit 6 - General Military Training (GMT)

Grade: 11	Subject: NNDCC/NJROTC	Course: NS-3	Length of Unit: 9 weeks
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NNDCC/NJROTC Standards

- Cadet Field Manual (11th Edition revised) NAVEDTRA 37116-K
- Naval Ceremonies, Customs and Traditions
- Cadet Reference Manual
- The Bluejacket’s Manual

Part 2 – Standards

Key Performance Expectations (Content Knowledge and Concepts / Skills)

<p>The students will know:</p> <ol style="list-style-type: none"> 1. NJROTC Uniform Regulations 2. Personnel Inspection 3. NJROTC Rates/Ranks and U.S. Navy Rates/Ranks 4. Military Chain of Command 5. Military Customs, Courtesies, Etiquette and Ceremonies. 6. Orders To the Sentry 7. Code of Conduct 8. UCMJ 	<p>The students will be able to:</p> <ol style="list-style-type: none"> 1. Understand how to properly wear the NNDCC/NJROTC uniform 2. Understand the rank structure within the unit and within the U.S. Navy 3. Understand the Chain of Command within the organization 4. Understand Customs, Courtesies, Etiquette and Ceremonies of the Naval Service 5. Understand the 11 General Orders of a sentry 6. Know preparatory commands for facing, marching commands as individuals, groups 7. Know how to present and march with “colors” 8. Know the grooming standards within the organization 9. Know the manual of arms with rifle or sword.
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Big Idea

- **Big Ideas**
 - **See Part 2 above**

Part 3 – Common Unit Assessments

- NNDCC academics
- Formative and Summative assessments
- Self-assessment: Review / grade own work; reflections
- Peer assessment: Peer feedback/input
- Personal Inspection
- Drill (not drill teams)
- Projects/Homework/Research
- Physical fitness participation.

Part 4 – Common / Assured Learning Experiences

Students will participate in:

- Group activities
- Modeling
- Peer assessment
- Monitoring, guidance, support
- Student-led class presentations
- Field work
- Encourage student leadership and teaching
- Direct instruction