



**BANDIRMA ONYEDİ EYLÖL
UNIVERSITY**

SCHOOL OF FOREIGN LANGUAGES

2025-2026 SPRING TERM ESP MATERIAL

MARITIME TRANSPORTATION MANAGEMENT DEPARTMENT

WEEKLY COURSE OUTLINE

Week	Weekly Theme	Language / Skill Focus	Template to Use
Week 17	Introduction to ESP & Professional Contexts	Introducing parts of a ship /game-based speaking practice	ESP Template – General Introduction & Speaking
Week 18	Workplace Roles & Responsibilities	Job-related vocabulary, present simple	ESP Template – Workplace Communication & Writing Practice
Week 19	Field-Specific Vocabulary in Context	Context-based vocabulary meaning-Types of Ships	ESP Template – Vocabulary & Speaking & Reading & Writing
Week 20	Merchant Shipping	Vocabulary related to Merchant shipping and quantifiers	ESP Template – Reading & Vocabulary & Grammar & Speaking
Week 21	The Crew in a Ship	Vocabulary related to the crew operating in a ship and time relaters	ESP Template – Listening & Reading & Vocabulary & Speaking & Grammar
Week 22	Navigation	Vocabulary related to navigation, distance, speed and prepositions of place	ESP Template – Reading & Writing & Vocabulary & Speaking & Grammar & Writing & Vocabulary
Week 23	Field Specific Vocabulary in Context	Vocabulary about navigation, ship structure, safety, and weather and sea	ESP Template – Speaking Vocabulary
Week 24	Describing Experiences	Modal Verbs Talking About Responsibilities on Ship	ESP Template – Speaking & Grammar & Vocabulary
Week 25	Studying Job-Related Speaking	If Clauses and Non-finite Clauses	ESP Template & Speaking- & Grammar & Vocabulary

		Communications at Sea	
Week 26	Types of emergency	Vocabulary related to emergencies	ESP Template – Reading & Writing & Vocabulary & Speaking & Grammar & E
Week 27	What weather is expected	vocabulary related to weather forecast	ESP TTemplate – Reading & Writing & Vocabulary & Speaking & Grammar &
Week 28	Shipboard Electronics	Vocabulary related to shipboard electronics	ESP Template – Reading & Writing & Vocabulary & Speaking & Grammar &

UNIT 1

Introduction to Maritime

SKILL FOCUS: Vocabulary & Speaking

SOURCES: Consemar Academy. (2019). *Maritime Technical English Course: 1st Module* (ss. 4-9). Consemar Academy. https://consemaracademy.com/wp-content/uploads/2019/04/Descargable_MaritimeTechnicalEnglishCourse_M1_CONSEMAR.pdf

Context: This lesson is designed for B1-level Maritime English students who need to develop essential technical vocabulary related to ship structure and directional terminology.

Students are introduced to key ship parts (funnel, stern, propeller, anchor, bulbous bow, bow, deck, superstructure, bridge, port side, starboard side) and practice them through interactive and communicative activities.

The lesson combines vocabulary presentation and game-based reinforcement to promote active participation, speaking practice, and long-term retention of maritime terminology.

Learning Objectives:

By the end of the unit, students will be able to:

- Identify and name the main parts of a ship accurately.
- Match ship parts with their functions.
- Use target vocabulary in simple present tense sentences.
- Distinguish between port side and starboard side correctly.
- Explain basic ship components clearly in short spoken responses.

TARGET VOCABULARY

- **Ship:** A ship is a vessel propelled by engines or sails for navigating on the water.
- **Funnel:** It is the smokestack or chimney on a ship used to expel boiler steam and smoke or engine exhaust. It is also commonly referred to as stack.
Example: The funnel releases smoke from the engine.
- **Stern:** The stern is the back or aft-most part of a ship or boat. It lies opposite of the bow. It is indicated with a white navigation light at night.
Example: The lifeboat is located at the stern of the ship.

- **Propeller:** A propeller is a rotating fan like structure which is used to propel the ship by using the power generated and transmitted by the main engine of the ship.
Example:The propeller moves the ship forward in the water.
- **Anchor:** It is a device, normally made of metal, used to connect a vessel to the bed of a body of water to prevent the craft from drifting due to wind or current.
Example:The captain dropped the anchor near the port.
- **Bulbous bow:** It is a protruding bulb at the bow (or front) of a ship just below the waterline.
Example:The bulbous bow is below the waterline at the front of the ship.
- **Bow:** The bow /bau/ is the forward part of the hull of a ship or boat, the point that is usually most forward when the vessel is underway.
Example: The crew is standing at the bow of the ship.
- **Deck:** A deck is a permanent covering over a compartment or a hull of a ship. The floor of a ship. It is a solid surface serving as a roof and floor.
Example: The passengers are walking on the main deck.
- **Superstructure:** The superstructure of a ship is the part of it that is above its main deck. It is the main area of the ship which holds the accommodation and navigation bridge of the ship.
Example:The superstructure is above the main deck.
- **Bridge:** The bridge of a ship is the room or platform from which the ship can be commanded.
Example:The ship is controlled from the bridge.
- **Port Side:** It is a nautical term for left. Port is the left-hand side of a vessel, facing forward
Example:The port side is the left side when you face forward.
- **Starboard Side:** It is a nautical term for right. Starboard is the right-hand side, facing forward.
Example:The starboard side is the right side when you face forward.

LESSON 1: SHIP FAMILIARIZATION (40 MINS)

Task 1) Warm-up (5 mins)

Q: ‘Name something you know about the ship parts.

Task 2) Presentation – Ship Familiarization- Parts of A Ship (15 Mins)

Show the presentation and analyze the visuals together.

Ask them to take note and get ready for the small trip to 1st floor.

Task 3) Visiting and Analyzing Model Ship (20 Mins)

Go and Analyze the Model Ship.

Ask them show the parts of the ship they have learned.

LESSON 2: 🚢 CLASS GAME: “MISSION: COMMAND THE SHIP” (40 mins)

Task 1) RAPID IDENTIFICATION (8 minutes)

Setup

Divide the class into **4 teams (5 students each)**.

Teams choose a ship name (e.g., Blue Ocean, Sea Star, Atlantic Wind, Ocean Queen).

How it Works

You read a definition.

Teams discuss for 10 seconds.

One student stands up and answers.

Correct answer = **1 point**

Full sentence = **2 points**

Questions

1. This is the back part of the ship.
2. This part pushes the ship through the water.
3. This part stops the ship from drifting.
4. This is the left side when facing forward.
5. This is the right side when facing forward.
6. This part is at the very front of the ship.
7. This part is above the main deck and holds accommodation and the bridge.
8. This is the room from which the ship is commanded.
9. This part reduces water resistance at the front of the ship.
10. This is the floor of the ship.

(Answers: Stern, Propeller, Anchor, Port side, Starboard side, Bow, Superstructure, Bridge, Bulbous bow, Deck)

Task 2) TABOO CHALLENGE (12 minutes)

Each team sends **one speaker** to the front.

The student explains the word without using the forbidden words.

Time limit: **45 seconds per round**

Correct guess = **2 points**

Cards:

FUNNEL

Forbidden: smoke / engine / chimney

STERN

Forbidden: back / bow / rear

PROPELLER

Forbidden: move / engine / fan

ANCHOR

Forbidden: metal / stop / water

BULBOUS BOW

Forbidden: front / waterline / drag

BOW

Forbidden: front / ship / forward

DECK

Forbidden: floor / top / walk

SUPERSTRUCTURE

Forbidden: above / deck / bridge

BRIDGE

Forbidden: control / captain / room

PORT SIDE

Forbidden: left / right / forward

STARBOARD SIDE

Forbidden: right / left / forward

Rotate speakers so more students participate.

Task 3) “WHERE ARE YOU?” MOVEMENT GAME (8 minutes)

Now students must **move physically**.

You give commands.

Teams must send one student to stand in the correct “imaginary location” in the classroom.

Example classroom setup:

- Front wall = Bow
- Back wall = Stern
- Left side of classroom = Port
- Right side = Starboard

Commands:

1. Go to the stern.
2. Stand on the port side.
3. Move to the bow.
4. Go to starboard side.
5. Stand on the deck.
6. Go to the bridge.

Students must say a full sentence when they arrive:

“I am standing at the stern.”

“We are on the port side.”

Correct movement + sentence = **2 points**

Task 4) CAPTAIN’S EMERGENCY (12 minutes)

Each team receives a situation.

They have **2 minutes to prepare** and must speak for **1 minute**.

Correct vocabulary use = up to **5 points**

Scenario 1

The ship is drifting because of strong wind.

What should you use and why?

(Expected: Anchor)

Scenario 2

The captain says:

“Go to the starboard side and check the propeller.”

Explain where you go and what the propeller does.

Scenario 3

A new cadet asks:

“What is the difference between the bow and the stern?”

Explain clearly.

Scenario 4

The captain asks:

“Where is the superstructure and what is inside it?”

Explain using at least two sentences.

UNIT 2

DAILY LIFE AT SEA

SKILL FOCUS: LISTENING, VOCABULARY, READING, WRITING

SOURCES:

1: <https://youtu.be/rsglkYory8c?si=jPQWV1EXaNrEkEJF>

2: Papaleonida, P. L. (Yıl). *Maritime English: Volume 1*. Yayınevi. s. 45.

https://www.eef.edu.gr/media/3767/maritime_english_vol_i_site.pdf

Context: This lesson focuses on **life and safety on board a ship**. Students will learn and practice **maritime safety drills, crew roles, and ship areas** through a short video, a reading text, and a creative writing task. The lesson helps students understand **daily routines and emergency procedures on board** and use maritime vocabulary in a meaningful context.

Learning Objectives:

By the end of the unit, students will be able to:

- understand the meaning of key maritime safety and workplace vocabulary
- identify safety drills and crew duties from a video and a reading text
- use target words to describe life and safety procedures on board
- complete a short story about a day on a ship using their imagination

TARGET VOCABULARY

Fire drill: A practice exercise for a fire emergency.

Example: We have a fire drill on the ship every month.

Abandon ship drill: A practice exercise to leave the ship safely in an emergency.

Example: The crew joined the abandon ship drill in the morning.

Drill review meeting: A meeting to talk about a drill and see what went well or badly.

Example: The captain held a drill review meeting after the exercise.

Lifeboat release hook: A device used to release the lifeboat into the sea.

Example: The lifeboat release hook must be checked before use.

Crew: The people who work together on a ship.

Example: The crew works as a team to keep the ship safe.

Boiler suit: A one-piece working uniform worn on board for protection.

Example: He wears a boiler suit when he works on deck.

The officer mess room: A room where ship officers eat and relax.

Example: The officers have lunch in the officer mess room.

The duty mess room: A room where crew members on duty eat their meals.

Example: The duty mess room is open all day for the working crew.

The under-deck passage :A corridor below the deck used to move around the ship.

Example: We used the under-deck passage to go to the engine room.

The engine room: The part of the ship where the engines and machines are located.

Example: The engineer works in the engine room during his watch.

LESSON 1: DAILY LIFE OF A MARINE ENGINEER (40 MINS)

Task 1) Warm-up (5 mins)

Q: “Imagine yourself as a marine engineer and tell me something about your daily life

Task 2) Watch the video ((00-06.50) (7 mins)

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Task 3) Answer the Questions (13 mins)

Who is Alan, and what is his position on the ship?

Why is Alan also called “Ip Man” or “IT Man” by the crew?

What time does Alan usually wake up, and why?

What type of clothing do engineers wear for work, and what color is the company’s boiler suit?

List at least five items Alan carries with him for work every day.

Where is Alan’s cabin located, and how far is the galley from it?

Why does Alan choose to take the stairs instead of the elevator?

What is the difference between the officer mess room and the duty mess room?

What is the purpose of the morning meeting (also called the two-box meeting)?

Why is the under-deck passage important for engineers?

What tasks are included in Alan’s morning rounds in the engine room?

Why is sounding the fuel tanks an important daily task?

How long does the entire morning round usually take, and what happens afterward?

Task 4) Vocabulary Practice

Task 4/A)Match the Words

Match the words with their meanings.

1. Crew
 2. Boiler suit
 3. Officer mess room
 4. Duty mess room
 5. Under-deck passage
 6. Engine room
-
- a. A working uniform
 - b. A room where officers eat
 - c. The people working on a ship
 - d. A corridor below the deck
 - e. A room for engines and machines
 - f. A room for crew on duty

Task 4/ B) Fill in the Blanks

Complete the sentences using the correct word.

1. The _____ works together to keep the ship safe.
2. He wears a _____ when he is working.
3. The captain eats in the _____.
4. We use the _____ to move below the deck.
5. The engineer checks the machines in the _____.

LESSON 2: DUTIES OF ENGINEER CADETS (40 MINS)Task 1) Ranks and Roles: Duties of Deck/Engineer Cadets (5 MINS)

C) Look at the pictures and match them to the following titles.

Fire drill
Abandon ship drill
Drill review meeting
Lifeboat release hook

5. Ranks and roles: Duties of deck/engineer cadets

A. "My Life at Sea"

a) Lead-in. Look at the pictures and match them to the following titles.

Fire drill Abandon ship drill Drill review meeting Lifeboat release hook



Write your answers here:

- (a) _____
- (b) _____
- (c) _____
- (d) _____

Answer the questions:

1. Have you ever joined a **fire drill**? Where?
2. How do you feel during an **abandon ship drill**?
3. Do you think **drill review meetings** are useful? Why / Why not?
4. Who checks the **lifeboat release hook** on a ship?

Task 2) Read the text and complete YOUR DAY (: (30 MINS)

Instruction:

Everyone, please read the text carefully.

After reading, imagine the rest of the day on board the vessel and **complete the story using your own imagination**.

Think about what happens after the drills, what duties the cadet has, and how the day ends.

TEXT:

This is my first experience on a merchant vessel. I study Nautical Studies and my curriculum requires seagoing service for a period of 12 months. I will be on board M/V Aurora Leigh for 6 months. I live and work with an international crew, speaking English 24 hours a day. I enjoy my work on board and look with anticipation into the next weeks on board the vessel.

What are the duties of a deck cadet on board? There are two parts in my working day. First I assist on the bridge; and the other part of my activities has to do with the maintenance of the ship.

Every week there are fire drills and abandon ship drills. I have my station bill card where I read what my duties are in emergency situations. Equipped with helmet and life jacket, I go to the muster station. After every fire drill we have an abandon ship drill. During this drill everybody learns how to use the lifeboats, start the engine and use the release hook. Afterwards everybody meets on the

Task 2/ Step 2 – Pair Sharing (5 minutes)

Students work in pairs:

- Read their texts to each other
- Ask one follow-up question (e.g. “*What happened next?*”)

UNIT 3

TYPES OF SHIPS

SKILL FOCUS: VOCABULARY, READING, WRITING

SOURCES: Van Dokkum, K. (2008). *Ship knowledge: A modern encyclopedia*. Dokmar.

Context: This lesson focuses on different types of ships and their functions in maritime transportation. Students are introduced to key vocabulary related to ship types such as container ships, tankers, cruise ships, and heavy-cargo ships. Through vocabulary activities, interactive games, text analysis, and a guided writing task, students explore how different vessels serve various purposes in global trade, tourism, and industry. The lesson integrates reading, speaking, and writing skills while reinforcing subject-specific terminology in meaningful contexts.

Learning Objectives

By the end of the lesson, students will be able to:

- identify and define at least 10 different types of ships,
- explain the main function of each ship type using complete sentences,
- analyze a short informational text about ship types,
- compare two ship types by identifying similarities and differences,
- write a structured paragraph (120–150 words) using appropriate maritime vocabulary.

Target Vocabulary-Types of Ships

Multipurpose ships: They are vessels that can carry different types of cargo, such as containers, bulk goods, and heavy items.

Example: The multipurpose ship carried both containers and large machines.

Container ships: They are large vessels that transport goods in big metal boxes called containers.

Example: The container ship arrived at the port with hundreds of containers.

Heavy-cargo ships: They carry very large and heavy items like machines, cranes, or industrial parts.

Example: The heavy-cargo ship transported a huge wind turbine.

Refrigerated ships: They are also called reefers, carry food and other goods that must stay cold.

Example: The refrigerated ship delivered fresh fruit from South America.

Tankers are ships designed to carry liquid cargo such as oil, gas, or chemicals.

Example: The tanker transported crude oil across the ocean.

Bulk carriers: They transport large amounts of unpacked goods like coal, grain, or iron ore.

Example: The bulk carrier was full of coal for the power station.

Roll-on/roll-off ships (Ro-Ro ships): They carry vehicles that can drive on and off the ship.

Example: Cars and trucks drove onto the roll-on/roll-off ship.

Cruise ships: They are large passenger ships used for holidays and travel for fun.

Example: Many tourists enjoyed their vacation on the cruise ship.

Cattle ships: They transport live animals, especially cows and sheep, across the sea.

Example: The cattle ship carried hundreds of cows to another country.

Yachts: They are small to medium-sized boats used for sport or pleasure.

Example: The family spent the weekend sailing on their yacht.

Fishing vessels: They are boats used to catch fish and other seafood.

Example: The fishing vessel returned to the harbor with fresh fish.

Tugs, or tugboats: They are small powerful boats that help move large ships in ports.

Example: The tug helped the big ship dock safely.

Icebreakers: They are ships designed to move through ice-covered waters.

Example: The icebreaker cleared a path for other ships in the Arctic.

Dredgers: They are ships that remove sand and mud from the bottom of rivers and seas.

Example: The dredger cleaned the harbor to make it deeper.

Cable laying ships: They place underwater cables for electricity or internet communication.

Example: The cable laying ship installed a new internet cable under the sea.

Navy vessels: They are military ships used by a country's navy for defense and security.

Example: The navy vessel patrols the coast every day.

LESSON 1: TYPES OF SHIPS (40 MIN)

Task 1) Warm up Questions (5 mins)

- **What different types of ships do you know? Can you name at least three?**
(Teacher follow-up: What do they carry?)
- **What is the difference between a cargo ship and a cruise ship?**(Encourage full sentences: “A cargo ship carries..., but a cruise ship...”)
- **Why do countries need different types of ships?**(Example idea they might say: trade, tourism, fishing, defense)
- **Which type of ship do you think is the most important? Why?** (Students must give one reason.)

Task 2) Presentation (10 mins)

The instructor shows them a presentation about types of ships. It includes visuals and brief information of the ship types. (week 3-types of ships pptx)

Task 3) GAME: “Ship Mission Challenge” (25 mins)

STAGE 1 – “Find Your Ship”

Preparation: **Print 16 ship names on separate cards. Give each student one card.**

Instructions:

Students walk around and ask:

- *“What do you carry?”*
- *“Do you transport people?”*
- *“Do you carry liquids?”*
- *“Do vehicles drive onto you?”*

They must **guess each other’s ship type** by asking yes/no questions.

Example:

Student A (Tankers)

Student B: “Do you carry oil?”

A: “Yes, I do.”

B: “Are you a tanker?”

A: “Yes!”

When they guess correctly, they switch partners.

STAGE 2 – “Emergency at Sea!”

Divide class into **4 teams**.

Tell them:

“There is an emergency. Different cargos and situations need the correct ship. Choose the best ship and explain why.”

Situation Cards (Teacher reads aloud)

1. A company wants to transport 5,000 cars.
2. Fresh bananas must arrive cold from Brazil.
3. The navy needs to protect the coast.
4. A country wants to export coal.
5. There is oil transport across the ocean.
6. Tourists want a luxury holiday.
7. The port is too shallow and needs cleaning.
8. Fishermen go to sea every morning.
9. The Arctic route is frozen.
10. Electricity cables must be placed under the sea.
11. Farmers export 800 cows.
12. A very large industrial machine must be transported.

Students must answer like this:

“We choose a bulk carrier because it transports unpacked goods like coal.”

LESSON 2: COMPARING TWO DIFFERENT SHIP TYPES (40MIN)

Task 1) Reading Texts (20 mins)

Students are divided into two different groups and assigned two different texts. They are asked to read and understand these texts. They must complete the comprehension questions related to texts.

TEXT 1: Heavy Cargo Ships

Heavy cargo ships are special vessels designed to transport very large and heavy items across the sea. These ships carry equipment such as wind turbines, factory machines, cranes, and even parts of bridges. Unlike container ships, heavy cargo ships transport items that are too big or too heavy to fit inside standard containers.

They have strong cranes and special lifting equipment on board. This equipment helps load and unload cargo safely. Some heavy cargo ships can carry thousands of tons of weight. Because the cargo is often expensive and delicate, the crew must be very careful during transportation.

Heavy cargo ships play an important role in international trade and construction projects. For example, when a country builds a power plant, the large machines are often transported by heavy cargo ships. Without these ships, it would be very difficult to move oversized industrial equipment between countries.

Please answer the questions below.

- . Circle the correct answer.
1. What do heavy cargo ships transport?
 - a) Tourists
 - b) Very large and heavy equipment
 - c) Fresh food
 - d) Animals
 2. Why are special cranes important on heavy cargo ships?
 - a) To clean the ship
 - b) To carry passengers
 - c) To load and unload heavy cargo safely
 - d) To move containers

B) True / False

0. ___ Heavy cargo ships carry goods inside standard containers.
0. ___ The cargo on these ships is usually cheap and simple.
0. ___ Heavy cargo ships are important for construction projects.

C) Short Answer

0. Why must the crew be very careful during transportation?

0. Give one example of cargo carried by heavy cargo ships.

TEXT 2:Cruise Ships

Cruise ships are large passenger ships used for holidays and travel. Instead of carrying goods, they carry people who want to enjoy a vacation at sea. Cruise ships usually have restaurants, swimming pools, theaters, shops, and many other entertainment facilities.

A cruise can last from a few days to several weeks. Passengers visit different cities and countries during the trip. They sleep in comfortable cabins and enjoy activities on board. Some modern cruise ships can carry more than 4,000 passengers.

Cruise ships are important for tourism. They create jobs and bring money to port cities. However, they must also follow environmental rules to protect the sea. Today, many cruise companies try to use cleaner energy and reduce pollution.

Please answer the questions below.

A)Circle the correct answer.

1. What is the main purpose of cruise ships?
 - a) Transporting oil
 - b) Carrying containers
 - c) Providing holidays and travel
 - d) Fishing

2. What can passengers find on a cruise ship?
 - a) Factories
 - b) Swimming pools and restaurants
 - c) Farms
 - d) Airports

B) True / False

Write T (True) or F (False).

0. ___ Cruise ships only travel for one day.
0. ___ Some cruise ships can carry more than 4,000 passengers.
0. ___ Cruise ships are important for tourism.

C) Short Answer

0. How do cruise ships help port cities?
0. Why must cruise ships follow environmental rules?

Task 2) Write a paragraph (120–150 words) comparing heavy cargo ships and cruise ships. (20 mins)

In your paragraph:

- Explain the purpose of each ship.
- Describe what they carry.
- Mention at least two differences.
- Say which one you think is more important and explain why.

Helpful Language

You can use these sentence starters:

- Heavy cargo ships are mainly used for...
- Cruise ships are designed to...
- One important difference is...
- Unlike heavy cargo ships, cruise ships...
- In my opinion...

UNIT 4

Shipping

SKILL FOCUS: Reading & Vocabulary & Grammar & Speaking

SOURCES: Blakey, T. N. (1987). *English for maritime studies* (2nd edition), pp 1-14. Prentice Hall. <https://armcol.org/wp-content/uploads/2024/08/2665.-English-for-Maritime-Studies.pdf>

Context: This lesson is designed for B1-level Maritime English students to get familiar with merchant ships and how they operate.

Students are introduced to three basic ways of how merchant ships operate.

Students are aimed to study ten key vocabulary items from the reading text and quantifiers, and practice them with exercises and speaking activities.

Learning Objectives:

By the end of the unit, students will be able to:

- Comprehend how merchant ships operate.
- Understand key vocabulary items related to merchant shipping.
- Use quantifiers correctly in spoken practice.
- Describe the inventory of merchant ships.

Lesson 1: 40 minutes

How Merchant Ships Operate

Merchant ships are designed to carry cargo. Some are also designed to carry passengers. Nowadays, most merchant ships are built to carry cargo, but a few still carry passengers. Merchant vessels can operate in the following three basic ways.

They can operate as liners. These are employed on regular routes on a fixed timetable. A list of their arrival and departure dates is published in advance and they sail whether full or not. Liners can be classed as either deep-sea liners or short-sea liners. The former carry mainly containerized cargo across the oceans of the world; the latter carry containerized or conventional cargo on shorter routes. Ferries are also classed as liners. These offer a daily or weekly service for passengers and vehicles across channels and narrow seas. A few ships are still employed as passenger liners. They not only carry passengers but also some cargo on routes from Europe to North America and to the Far East. Nowadays the passenger trade is very small and passenger liners usually operate as cruise ships for part of the year.

Merchant ships also operate as tramps. These vessels do not sail on regular routes or keep to a fixed timetable, but are employed where there is cargo for them to carry. Tramps can be classed as deep-sea tramps or short-sea tramps. A number are classed as coasters. These ply on coastal routes and up rivers to inland ports. The traditional tramp cargoes are dry bulk cargoes, but some are designed to carry general cargoes.

A large number of merchant ships operate as specialized vessels. These are designed to carry a particular type of cargo. There are several types of specialized vessel. The most common are oil tankers. They are owned by the major oil companies or by independent operators. Two other types of liquid bulk carrier of growing importance are chemical carriers and liquefied natural gas (LNG) carriers.

Reading Comprehension Questions: Read the text and answer the questions below. (20 minutes)

A) Short-Answer Questions

1. What are merchant ships mainly designed to carry?

2. Do all merchant ships carry only cargo?

3. In how many basic ways can merchant vessels operate?

4. What is a liner?

5. Do liners sail only when they are full?

6. What is the difference between deep-sea liners and short-sea liners?

7. What service do ferries provide?

8. How do most passenger liners operate nowadays?

9. How do tramp ships differ from liners?

10. What is the most common type of specialized vessel?

B) Discussion Questions (10 minutes)

1. Why do you think passenger trade on liners has become very small today?

2. Do you think specialized vessels are more efficient than general cargo ships? Why or why not?

3. How might global trade patterns influence the demand for liners versus tramps?

4. What environmental concerns might be linked to oil tankers and LNG carriers?

5. In the future, do you think one type of merchant ship will become more important than the others? Explain your view.

6. Imagine you run a shipping company. Which type of merchant ship would you invest in and why?

C) Key Vocabulary & Meanings (Merchant Shipping) (10 minutes)

1. Merchant ship / Merchant vessel: A commercial ship used to carry cargo or passengers.

2. Cargo: Goods carried by a ship.
3. Liner: A ship that operates on regular routes with a fixed timetable and published schedules.
4. Tramp (ship): A ship that does not follow fixed routes or schedules and goes wherever cargo is available.
5. Ferry: A type of liner that regularly carries passengers and vehicles across channels or narrow seas.
6. Cruise ship: A passenger ship used mainly for leisure travel rather than transport.
7. Containerized cargo: Cargo packed and transported in large containers.
8. Conventional cargo: Cargo that is not containerized; carried in traditional forms (boxes, crates, bags, etc.).
9. Coaster: A small tramp ship that operates along the coast and up rivers to inland ports.
10. Inland ports: Ports located inside a country, usually reached by rivers.

D) Fill in the Blanks by choosing the correct word from the box.

(liner, tramp, coaster, ferry, tanker, containerized, bulk, specialized)

1. A ship that operates on a fixed route and timetable is called a _____.
2. A _____ ship has no fixed route and goes wherever cargo is available.
3. Oil is usually carried by a _____.
4. Cargo packed in containers is called _____ cargo.
5. Coal and grain are examples of _____ cargo.
6. A _____ operates along coastal routes and up rivers.
7. A ship built to carry only one type of cargo is a _____ vessel.
8. A _____ carries passengers and vehicles across narrow seas.

GRAMMAR

(A) Quantifiers

Quantifiers, or amount words, indicate the approximate quantity or amount of the noun they qualify or represent.

Study the table below which gives the most commonly used quantifiers.

Amount	Countables	Uncountables
a total amount	all	all
an almost total amount	most	most
a large amount	many a lot (of) a large number (of)	much a lot (of) a large amount (of)
a small amount	some several a few	some — a little
a very small amount	few	little
zero amount	no none	no none

Shipping 3

Study the following points and examples:

1. **All, most, many, much, some, several, (a) few, (a) little**, can be used without a noun to avoid repetition

e.g. *All liners* carry passengers or cargo. *All* follow regular routes.
Some cargo is carried in holds. *Some* is carried on deck.

(Note: **Much** is normally used in only negative and interrogative sentences.

e.g. He had not much money so he walked into town. Is there much cargo to be unloaded?)

2. When **a large number, a large amount** and **a lot** are followed by a noun, **of** must be used

e.g. A large number *of* merchant ships carry bulk cargo.

3. **No** and **none** are used as follows:

e.g. *No tankers* can carry passengers. *None* should discharge oil into the sea.

4. There is a **positive/negative** contrast between **a little** and **little** and between **a few** and **few**. *Study the difference in meaning in these sentence pairs:*

There was a little time before the ship sailed, so he stayed ashore longer.

There was little time before the ship sailed, so he went on board immediately.

A few people were sitting on deck, because the sun was shining.

Few people were sitting on deck, because the wind was cold.

Study the quantifiers above and do the exercises below. (20 minutes)

A) Complete each sentence with a suitable quantifier: All, most, many, much, some, several, a few, few, a little, little, a large number of, a large amount of, a lot of, no, none.

1. There are _____ ferries crossing this channel every day.
2. _____ tramp ships carry dry bulk cargoes such as coal and grain.
3. There is _____ containerized cargo on deep-sea liners.
4. Only _____ passenger liners still carry passengers across oceans.
5. The company has _____ experience in operating oil tankers.
6. There is _____ space left in the cargo hold.
7. _____ ships sail on fixed routes and timetables.
8. The port received _____ ships today because of bad weather.
9. The crew had _____ food left after the long voyage.
10. _____ of the specialized vessels carry LNG.

B) Meaning Check: Choose the sentence that matches the meaning in brackets.

- 1) (Almost none / negative meaning)
 - a) A few passenger liners still operate.
 - b) Few passenger liners still operate.
- 2) (A small but positive number)
 - a) Few tramps were available.
 - b) A few tramps were available.
- 3) (Zero ships)
 - a) No ships arrived today.
 - b) None of the cargo arrived today.
- 4) (Large quantity of uncountable noun)
 - a) A large number of oil was transported.

b) A large amount of oil was transported.

Speaking (20 minutes)

Grouping: Pairs or small groups (2–3 students)

A – Warm-Up (Guided Speaking)

Students take turns completing the sentences orally using a suitable quantifier. They must explain why they chose that quantifier.

1. _____ merchant ships today carry cargo rather than passengers.
2. There is _____ passenger trade on liners nowadays.
3. _____ ships in this port are specialized vessels.
4. There is _____ oil in the tanker.
5. _____ ferries cross this channel every day.
6. The crew has _____ food left after the long journey.
7. _____ tramp ships follow fixed routes.
8. _____ of the cargo has been unloaded.

B – Role Play: Port Briefing

Roles: Student A = Port Manager, Student B = Ship Captain

-Situation

The captain reports the ship's situation to the port manager. The manager asks questions about cargo, ships in port, fuel, and delays. Students must use at least 6 different quantifiers.

-Prompt Ideas

1. How many ships are waiting to dock?
2. How much cargo is still on board?
3. Are there any ferries operating today?
4. How many passenger liners arrived this week?
5. How much fuel and food does the ship have left?

6. Are all the containers unloaded?

C – Opinion Corners (Mini Debate):

Students answer and discuss the sentences below. Students must: -Choose a quantifier. - Give one reason. -Respond to a partner's opinion

Example:

“I think most merchant ships should be specialized vessels because they are more efficient.”

“_____ merchant ships should be specialized vessels.”

“_____ passenger liners will disappear in the future.”

“There is _____ pollution caused by oil tankers.”

“_____ countries depend on sea transport for trade.”

UNIT 5

Manning

SKILL FOCUS: Listening & Reading & Speaking & Vocabulary & Grammar

SOURCES: Blakey, T. N. (1987). *English for maritime studies* (2nd edition), pp 1-14. Prentice Hall. <https://armcol.org/wp-content/uploads/2024/08/2665.-English-for-Maritime-Studies.pdf>
https://www.youtube.com/watch?v=3Dcy_MevgZ0

Context: This lesson is designed for B1-level Maritime English students to get familiar with the crew operating in a ship.

Students are shown the life onboard.

Students are introduced the terms related to the crew in a ship.

Students are aimed to study key vocabulary items from the reading text and time relaters, and practice them with exercises and speaking activities.

Learning Objectives:

By the end of the unit, students will be able to:

- Understand key vocabulary items related to the crew operating in a ship.
- Use time relaters as, while and when correctly in spoken practice.
- Describe the roles of the crew in a ship.
- Discuss the solutions of the problems onboard.

Lesson 1: 40 minutes

Watch the video about careers in marine engineering and life at sea. Answer the comprehension questions related to the video below. (25 minutes)

https://www.youtube.com/watch?v=3Dcy_MevgZ0

A) Comprehension Questions

1. Why does a ship require a lot of power for propulsion and electricity?

0. What is the main function of the engine room on a ship?

0. Who are responsible for ensuring that machinery and equipment operate at optimal capacity?

0. What is the highest rank a marine engineer can achieve onboard a ship?

0. Why is becoming a chief engineer considered a difficult career path?

0. What is an engine cadet, and what is their role onboard a ship?

0. Why are engine cadets considered the least experienced members of the engine crew?

0. What challenges does Didrich mention about working in the engine department?

0. How did Didrich's perception of seafaring change after experiencing life onboard?

0. Why do people often misunderstand the role of marine engineers?

0. What responsibilities does a marine engineer have aside from maintenance work?

0. How does responsibility change as a marine engineer rises in rank?

0. What tasks is Didrich usually assigned as an engine cadet?

0. Why is mentorship important in training engine cadets?

0. According to the passage, why are academic grades not the most important factor for success onboard ships?

0. What personal qualities are emphasized as most important for career advancement in seafaring?

0. What are Didrich's future career goals?

0. What does the passage suggest determines whether an engine cadet will succeed or fail?

Reading (15 minutes)

Read the text below and answer the comprehension questions.

The Organization of a Ship's Crew

The man in charge of a ship is the Master. He is responsible for the ship, her cargo and the safety of the crew. He must be well qualified and an experienced navigator. Although his correct title is the Master, he is addressed as 'Captain'.

The organization of the crew of a cargo ship is changing, but it is still customary to find Deck, Engine, Catering and Radio Departments in ships of a reasonable size. Each department is made up of a varied number of officers, petty officers and ratings.

The Chief Officer, or First Mate as he is often called, is the Master's chief officer and head of the Deck Department. He is assisted by a Second Officer (Mate), a Third Officer (Mate), and sometimes a Fourth Officer (Mate). Several companies employ a First Officer as well as a Chief Officer. The Deck Department also includes a Boatswain (Bosun) and a Carpenter, both petty officers, and a number of ratings. These are made up of Able Seamen (AB), Ordinary Seamen (OS) and a middle grade known as Efficient Deck Hands (EDH). There are other grades of seamen. On some ships Navigating Cadets are carried for training purposes.

The Chief Engineer is head of the Engine Department. He is assisted by a Second, Third, Fourth and sometimes Fifth Engineer. An Electrical Officer may also be carried. The engine room petty officers are the Storekeeper and Donkeyman. On tankers there is also a Pumpman. He is also a petty officer. The engine room ratings are Firemen and Greasers. There may also be Engineer Cadets.

The Catering Department is under the Chief Steward. It is divided into a saloon and galley section. The former is headed by the Second Steward, the latter by the Ship's Cook. They are both usually petty officers. They are assisted by several stewards and cooks, and by a number of junior ratings.

The Radio Department often consists of only one man: the Radio Officer. On ships where continuous radio watches are kept there may be three radio officers: a Chief, Second and Third.

A) Answer the questions below.

1) Who is responsible for the ship, cargo, and safety of the crew?

2) Name the four main departments on a cargo ship.

3) Who is the head of the Deck Department?

4) Which department looks after engines and machinery?

5) Who is responsible for radio communication on board?

Lesson 2 (40 minutes)

Key Vocabulary & Meanings (15 minutes)

Master (Captain) – the person in charge of the ship

Cargo – goods carried by the ship

Crew – all the people working on the ship

Deck Department – department responsible for navigation and deck operations

Chief Officer / First Mate – head of the Deck Department

Second / Third / Fourth Officer (Mate) – junior deck officers

Boatswain (Bosun) – senior deck petty officer

Able Seaman (AB) – experienced deck worker

Ordinary Seaman (OS) – junior deck worker

Engine Department – department responsible for engines and machinery

Chief Engineer – head of the Engine Department

Donkeyman – petty officer responsible for auxiliary machinery

Pumpman – petty officer on tankers who operates pumps

Catering Department – department responsible for food and service

Chief Steward – head of catering

Ship's Cook – person who prepares food

Radio Officer – officer responsible for ship's communications

Petty officer – rank between officer and rating

Rating – non-officer crew member

Cadet – trainee officer

A) Fill in the blanks by using the words from the box.

(Master, Chief Officer, Deck Department, Engine Department, Bosun, AB, Chief Engineer, Radio Officer, Cook, Cadets)

1. The _____ is responsible for the ship, cargo, and safety of the crew.
2. The _____ is head of the Deck Department.
3. The _____ looks after navigation and deck work.
4. The _____ is head of the Engine Department.
5. The _____ is a petty officer in the Deck Department.
6. An _____ is an experienced seaman.
7. The _____ is responsible for ship-to-shore communication.
8. The Ship's _____ works in the galley.
9. Navigating _____ are carried for training purposes.
10. Engineers work in the _____.

Speaking (10 minutes)

A) Discuss the questions below.

1. Which department do you think is the most important on a ship? Why?
2. Would you prefer to work in the Deck, Engine, Catering, or Radio Department? Explain your choice.
3. Do you think modern ships need a Radio Department with several officers today? Why or why not?
4. Why is experience important for the Master and senior officers?

B) Problem on Board

Student A – Chief Officer

Student B – Chief Engineer

Student C – Radio Officer / Chief Steward

Situation: There is a small problem on board (e.g., equipment failure, shortage of crew in the galley, communication issue). Students must decide:

- which department should deal with it
- which officer or petty officer should take responsibility
- who should report to the Master

Example Prompts:

“This is a problem for the Engine Department because ...”

“The Bosun and ABs can help with ...”

“We should report this to the Master.”

“The Radio Officer needs to contact the port.”

Grammar (15 minutes) – Time Relaters – Simultaneous Time

-When we want to show that one event takes place at the same time as another we can link these events using **when**, **while** and **as**.

-**When** tells us what time two simultaneous actions happen. It also implies that the two events are completed, unless otherwise stated.

When the ship is launched, the crowds cheer.

-**While** tells us that one action is happening at the same time as another. It is often used with continuous tenses.

While the men were preparing for the launch, the people started to arrive.

-Clauses introduced by **when** and **while** can be reduced if the subject of the main clause is the same as the subject of the time clause.

While the ship is being built, she is constantly being tested.

While being built, the ship is constantly being tested.

-**As** can be used instead of **while** when two actions are closely connected; however, it cannot be reduced.

As the ship was leaving the harbour, she hit the jetty.

A) Choose when, while, or as to complete each sentence.

- 1) The Master was checking the documents _____ the Chief Officer was preparing the crew list.
- 2) _____ the ship arrived in port, the Radio Officer contacted the port authority.
- 3) The cadets were training _____ the Bosun was giving instructions on deck.
- 4) The Chief Engineer was inspecting the engines _____ the ship was sailing.
- 5) _____ the Captain addressed the crew, everyone listened carefully.
- 6) The cook was preparing lunch _____ the stewards were cleaning the saloon.
- 7) _____ the tanker was loading cargo, the Pumpman was operating the pumps.
- 8) The Radio Officer spoke to the port _____ the Master was on the bridge.

UNIT 6

Navigation

SKILL FOCUS: Reading & Vocabulary & Grammar & Speaking & Writing & Vocabulary

SOURCES: Blakey, T. N. (1987). *English for maritime studies* (2nd edition), pp 1-14. Prentice Hall. <https://armcol.org/wp-content/uploads/2024/08/2665.-English-for-Maritime-Studies.pdf>

Context: This lesson is designed for B1-level Maritime English students to get familiar with navigating and navigation techniques.

Students are introduced different navigation techniques and vocabulary related to navigation.

Students are aimed to study key vocabulary items from the reading text and prepositions of place, and practice them with exercises and speaking and writing activities.

Learning Objectives:

By the end of the unit, students will be able to:

- Understand key vocabulary items related to navigation and navigation techniques.
- Use prepositions of place correctly.
- Comprehend the terms describing compass, positions in relation to a ship, distance and speed.
- Describe the position of a ship, positions related to other ships, distance and speed.

Lesson 1: 40 minutes

NAVIGATION

It is the Deck Officer's job to take the ship safely from place to place as quickly and economically as possible. To do this he must have a thorough knowledge of navigation. From the moment a ship leaves a berth to her arrival at the next port, her position is constantly checked and plotted on a chart. To do this accurately, the navigator uses a number of instruments and techniques.

When out of sight of land, a ship's position can be found by using the techniques of celestial navigation. Celestial navigation involves taking observations of the sun, moon and stars with a sextant. This is an instrument which measures the angle between the celestial body and the horizon. The exact time that the sight is made must also be recorded. This is done on the ship's chronometer, which is a very accurate clock. With this information and the tables given in a book called a nautical almanac, the navigator is able to calculate the ship's position. The position is marked on the chart by a dot with a circle round it. A time is also given. By joining up the dots with a pencil line, the ship's track can be seen.

While in sight of land, the navigator uses the techniques of coastal navigation to find his position. Navigation in coastal waters is known as pilotage. At regular intervals the officer on watch takes observations of conspicuous landmarks, such as a lighthouse or a church spire, using the ship's compass and a sextant. By looking at the chart to find out the height of the object and by making adjustments for tide and the height of the bridge from sea level, he can calculate the distance of the ship from the object. The ship's position will now lie somewhere on the circumference of a circle with the object at its centre and the distance off as the radius. To find the exact position of the ship a compass bearing can be used. A position line showing the bearing of the ship from the object is drawn on the chart. The position of the ship is where the line cuts the circle. This is known as making a fix. There are other ways of making a fix. For example, two, or better still, three simultaneous compass bearings can be taken of different objects. The objects should not be too close together. Theoretically the lines from these objects should intersect at the same point. In practice they usually form a triangle, which is called a cocked hat. If this is small, the ship's position is assumed to be at the point of the triangle nearest any danger. If the triangle is large, the bearings should be taken again.

A fairly accurate estimation of a ship's position can be calculated by a technique known as dead reckoning (DR). To do this the navigator needs to know the ship's course, speed and distance run. A DR position is made more difficult to calculate by the effects of wind, tide and current.

Reading Comprehension Questions: Read the text and answer the questions below. (20 minutes)

A) Comprehension Questions

1) Describe the steps involved in finding a ship's position using celestial navigation.

2) How does a navigator find the ship's position using a landmark and a compass bearing?

3) Why are two or three bearings better than one when making a fix?

4) Why should bearings be taken again if the cocked hat is large?

5) How do wind, tide, and current affect dead reckoning?

6) Why is it important to check and plot the ship's position constantly?

B) Writing - Short Written Response: In 4–5 sentences, explain the difference between celestial navigation, pilotage, and dead reckoning. (5 minutes)

C) Key Vocabulary & Meanings (10 minutes)

Deck Officer – officer responsible for navigation

Berth – place where a ship is moored in port

Chart – nautical map used for navigation

Plot – to mark position on a chart

Celestial navigation – navigation using sun, moon, and stars

Sextant – instrument to measure angle between celestial body and horizon

Chronometer – very accurate clock on a ship

Nautical almanac – book of astronomical tables for navigation

Coastal navigation / Pilotage – navigation near land

Landmark – visible object used for position fixing (lighthouse, church spire)

Bearing – direction of an object from the ship

Fix – exact position of the ship on a chart

Cocked hat – small triangle formed by intersecting bearings

Dead reckoning (DR) – estimated position using course, speed, distance

Current / Tide / Wind – natural forces affecting position

D) Fill in the blanks using words from the box:

(sextant, chronometer, chart, fix, bearings, dead reckoning, landmarks, almanac)

1. The navigator plots the ship's position on a _____.
2. A _____ is used to measure angles between stars and the horizon.
3. The exact time is taken from the _____.
4. The nautical _____ contains tables for celestial navigation.
5. Two or three compass _____ can be used to find a position.
6. The ship's exact position is called a _____.
7. Lighthouses and church spires are _____.
8. Estimating position by course and speed is called _____.

E) Discussion Questions: Discuss the questions in pairs. (5 minutes)

1. Which navigation method do you think is the most reliable? Why?
2. How might modern GPS change the importance of these traditional methods?
3. Why should navigators still learn celestial and coastal navigation today?
4. What dangers could happen if the ship's position is plotted incorrectly?

Lesson 2: 40 minutes

Grammar (20 minutes)

GRAMMAR

(A) Prepositions of place (ii)

Study how the following prepositions are used to describe destination:

1. **To/from** – used with reference to a point

to → ●

They took the ferry to Calais.

● → **from**

The QE II sailed from Southampton.

2. **Onto/off** – used with reference to a line or surface

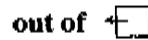
onto ↘

The case fell onto the deck.

↗ **off**

The launch took off the pilot.

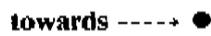
3. **Into/out of** – used with reference to an area or volume



The cargo was lowered **into** the hold. The cargo was lifted **out of** the hold.

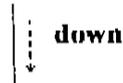
Now study how these are used to describe direction:

4. **Towards/away from** – express motion with reference to a directional path



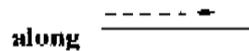
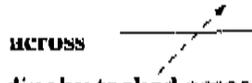
The ship was driven **towards** the rocks. The wood drifted **away from** the shore.

5. **Up/down** – express motion with reference to a vertical axis.



The sailor climbed **up** the mast. The flag was hauled **down**.

6. **Across/along** – express motion with reference to a horizontal axis or plane



The dinghy tacked **across** the bay. They sailed **along** the coast.

Now study how these are used to describe passage:

7. **over**



The people walked **over** the bridge.

under



The barge sailed **under** the bridge.

8. **behind**



The plane passed **behind** the lighthouse.

in front of



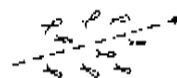
The gulls flew **in front of** the lighthouse.

9. **(a)round**



The diver swam **round** the shoal.

through



The diver swam **through** the shoal.

A) Read this description of a voyage made by the MV Diomedede. Then write similar descriptions of the other two voyages outlined below. Use the appropriate prepositions and the definite article (the) where necessary: (6 minutes)

-On 6 April, 1979 the general cargo vessel, the MV Diomedede, left the port of New Orleans in the USA for Hawaii in the Hawaiian Islands. She steamed across the Gulf of Mexico, through the Yucatan Channel and along the north coast of Jamaica, calling at Kingston. Then she sailed through the Panama Canal and across the Pacific Ocean to Hawaii.

-10/9/80 - bulk oil carrier-SS Enterprise - Nagasaki - Japan - Kharg Island - Gulf - east coast of China - Taiwan Straits - South China Sea - Singapore - Straits of Malacca - Indian Ocean - Kharg Island.

16/6/80 - passenger liner - MV Orient - Southampton - UK - Naples - Italy - English Channel - Bay of Biscay - west coast of Portugal – Lisbon - Straits of Gibraltar - Mediterranean Sea - Naples.

Applied Terminology (20 minutes)

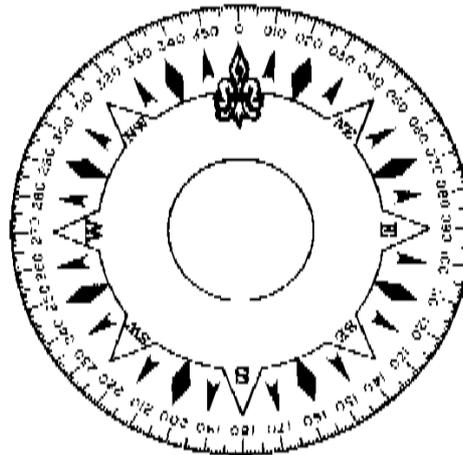
Terms relating to Compass Cards

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APPLIED TERMINOLOGY

(A) Terms relating to compass cards

Study the compass card below. It is divided up clockwise into 360 degrees. It also shows eight of the points of the compass (N, NE, E, etc.).



Exercise 1. Write out in full the eight points of the compass shown above (the first two have been done for you):

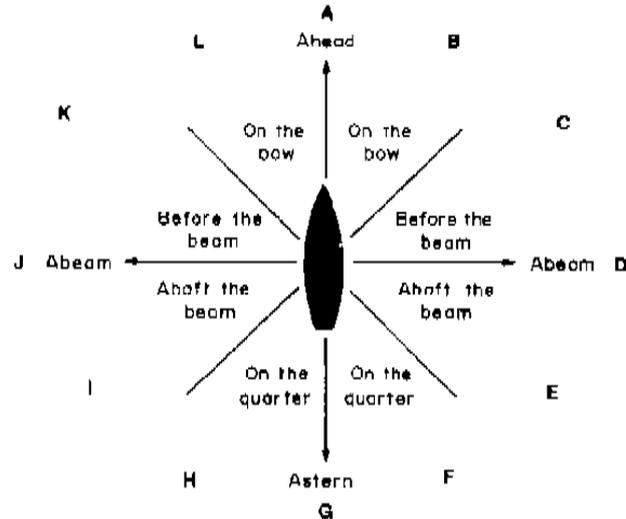
- | | |
|---------------------|----------------|
| (a) N = North | (e) S = |
| (b) NE = North-East | (f) SW = |
| (c) E = | (g) W = |
| (d) SE = | (h) NW = |

Exercise 2. What would the following points be in degrees?

- | | | | |
|--------|--------|--------|--------|
| (a) S | (b) NE | (c) NW | (d) E |
| (e) SW | (f) N | (g) W | (h) SE |

Terms describing position in relation to a ship

Study the diagram below



In order to describe the position of ships in relation to the tanker, they can be used as follows:

1. Ship A is (dead) ahead./Ship A is ahead of the tanker.
2. Ship B is on the starboard bow.
3. Ship C is before the starboard beam.
4. Ship D is abeam./Ship D is on the starboard beam.

Exercise 3. Now continue describing the position of the other ships:

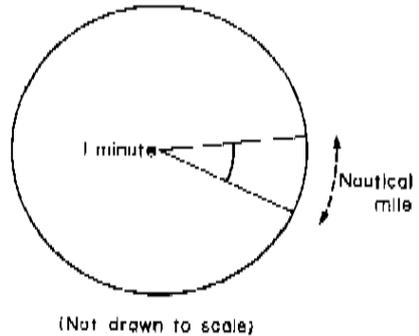
- (a) Ship E is
 - (b) Ship F is
 - (c) Ship G is
 - (d) Ship H is
 - (e) Ship I is
 - (f) Ship J is
 - (g) Ship K is
 - (h) Ship L is
- (Note: 'dead' in example 1 means directly ahead.)

(B) Measurement

(vii) Distance, speed

1. Nautical miles

Distance at sea is measured in nautical miles. 1 nautical mile is the length of an arc of a great circle which subtends an angle of 1 minute at the centre of the Earth. 1 nautical mile = 1.151 statute miles – 1.853 kilometres.)



Exercise 1. Convert the following angular distances into nautical miles:

- (a) 15° 36' (b) 42° 17' (c) 35° 35'
- (d) 21° 59' (e) 32° 30' (f) 45° 19'

2. Knots

At sea, speed is measured in knots. (1 knot – 1 nautical mile per hour.)

Exercise 2. Complete this chart, using the formula: $speed = \frac{distance}{time}$

MV <i>Panama</i>	Distance	Time	Speed
Monday	180 N Miles	12 hours	.....
Tuesday	.....	24 hours	14 knots
Wednesday	288 N Miles	24 hours	.....
Thursday	.....	8 hours	6.5 knots
Friday	.....	10 hours	11 knots
Saturday	312 N Miles	24 hours	.....
Sunday	152 N Miles	16 hours	.....

UNIT 7

Words about navigation, ship structure, safety, and weather and sea

Skill Focus: Speaking and Vocabulary Study

Context: This lesson is designed for B1 level Maritime English students to learn words about Maritime English

Students are aimed to study key vocabulary items.

Students are aimed to improve their speaking skills through communicative activities.

Learning objectives: By the end of the unit, students will be able to develop vocabulary.

They will be able to focus on the meanings of the words about Maritime English.

They will be able to group the words.

They will be able to use the target language in speaking activities. They can focus on functional language use.

They will be able to improve speaking skills through role play activities.

Lesson Time: One lesson hour

Activity 1: Putting the words into correct category

Vocabulary Activity

Navigation	Cre w	Weather/Sea	Safety	Ship Structure

For example, students can put these words into the correct category.

TARGET VOCABULARY

Bow	tide	chief		
officer	discharging	current	second	
officer	course			
Starboard	storm	chief engineer	compass	
Port	fog	deck cadet	underway	
Bridge	visibility	container	keel	
Anchor	captain	loading	radar	

For example,

Bow: front part of a ship

Deck: floor of a ship

Bridge: control room of a ship

Engine room: area where engines are located

Anchor: heavy object used to secure the ship

port: a place where ships load and unload cargo and passengers

discharging: unloading cargo from a ship at the port

compass: a navigation instrument that shows the direction relative to North

life jacket: also called a personal flotation device is a safety equipment

cargo: the goods and materials carried by a ship

crew: people who work on the ship

watch: scheduled period of duty on board

drought: the depth of water needed for a ship to float safely

Activity 2: Matching the words with their meanings

1. Course	removing cargo
2. Radar	standard cargo box
3. Anchor	putting cargo on board
4. Keel	navigation officer
5. Captain	rise and fall of sea level
6. Visibility	flow of water
7. Current	how far you can see
8. Tide	person in command
9. Second officer	main structural backbone of the ship
10. Loading	heavy object used to secure the ship
11. Container	detects objects using radio waves
12. Discharging	direction the ship is moving

Activity 3: Safety and Emergency Terms

Matching these words with their meanings

TARGET VOCABULARY

Lifeboat	personal flotation device
Life jacket	emergency boat
Abandon ship	leave the vessel in emergency
Distress signal	emergency call
Mayday	emergency signal

Lesson Time: One lesson hour

EXAMPLE SECOND LESSON

Activity 1 or 2 can be done.

Activity 1

Aim: Talking about weather and giving opinions

Talking about navigation, weather/sea, safety, and ship structure

Example Word List (words in the previous lesson can also be practiced)

Wind
Waves
Storm

Calm sea Forecast

Instructions:

Students work in pairs or groups.

Students will prepare a dialogue. Firstly, as an example, the teacher can show an example dialogue. Then, they will do a role-play activity. They can also use safety and emergency words.

Task:

Talking about today's weather and the forecast.

Example Questions:

How is the weather today?

How is the sea today?

Is it safe to work on deck?

Have you worked in bad weather before?

Students will study in pairs or groups. They will practice the words they have learned.

Activity 2

Aim: Practice problem-solving and simple discussions.

Instructions:

In small groups, students can talk about a problem and they can suggest solutions.

Example Situations:

The engine stops.

There is bad weather.

A crew member is sick.

Example Word Lists:

problem, help, repair, radio, captain, doctor, port

Example Questions:

What is the problem?

What should the crew do?

Example sentence:

We should call the captain and ask for help.

UNIT 8

Practicing Grammar Topic: Modal Expressions

Skill Focus: Speaking and Grammar Study

Context: This lesson is designed for B1 level Maritime English students to learn grammar topic “Modal Expressions”.

Students are aimed to improve their speaking skills through role play activity.

They can study in pairs or groups.

They can learn the target words and grammar structures in context.

Lesson Time: One lesson hour

Learning Objectives:

Students will be able to focus on grammar topic (modal verbs).

They will be able to focus on vocabulary about Maritime English, and they will be able to learn the meanings of the words and the use of Modal Verbs.

They will be able to learn English in context.

First, they will see the examples. Second, explanations will be given.

They will be able to improve their speaking skills through role play activities. These activities will include the grammar topic “Modal Verbs”.

Activity 1: Practicing Grammar Topic: Modal Expressions

Must- must have V3
Can't
Should- should have V3
Ought to
May- may have V3
Might
Could- could have V3

Fill in the blanks activity (Students can write appropriate modal verbs).

Examples: 1. She could have finished her project yesterday, but she decided to help her mother.

2. I should have listened to my father carefully.

3. You could have called my sister.

4. You must have been in the garden when my cousin called you.

The engine ____ be overheating; the temperature alarm is on.

The vessel ____ be underway because the speed is zero.

The captain ____ be on the bridge because I just saw him in the engine room.

The visibility ____ increase after sunrise.

The ship ____ maintain a safe distance.

The vessel ____ arrive earlier than expected.

The current ____ affect our course.
 The fog ____ reduce visibility.
 We ____ reach our destination before midnight.
 The lifeboat drill ____ be today, it is on the schedule.

Activity 2: After students see the examples about this topic, explanations can be given. The rules can be explained. Then students can write their own sentences using these modal verbs.

For example,
 The delay could cause a late arrival.
 There may be a storm approaching from the west.

EXAMPLE

SECOND LESSON

Lesson Time: One lesson hour

Activity 1 or 2 can be used.

Activity 1.

Aim: Studying modal verbs and describing experiences.

Instructions:

Students imagine they were on a ship journey last month. They talk in pairs.

Example Word List	Modals
Voyage	may-might
Sea	can-could
Weather	must/must have V3
Waves	could have V3
Storm	can't
Port	should have V3
Journey	should

Example Questions:

Where did the ship go?
 How was the weather?
 Was the journey easy or difficult?

Example Sentences

I must have listened to the captain.
 I should have brought a map.
 My father couldn't have joined to us because he was ill.

Activity 2

Aim: Talking about responsibilities on a ship.

Instructions:

Students speak in small groups. Each student chooses a job on a ship.

Jobs: captain, engineer, deckhand, cook

Example Word List

watch

tools

safety equipment

uniform

Aboard

dock

Anchor

depth

Barge

Bow

ship

sailboard

What is your job on the ship?

What do you do every day?

What time do you start work?

Students can use modal verbs in dialogues. They can prepare dialogues including modal verbs such as should, can, must, etc.

EXAMPLE WORDS

Container ship: ship which carries containers

Passenger ship: ship which carries passengers

Chief engineer: head of engine department

Berth: assigned place in port

voyage: a long journey, especially by ship or across the sea

weather: the condition of the air outside at a certain time

wave: a moving ridge of water on the surface of the sea or ocean

storm: a period of weather with strong wind, rain, thunder, or snow.

journey: the act of travelling from one place to another

dock: a structure where ships are tied up to load or unload goods and passengers

UNIT 9

Practicing Grammar Topic: If Clauses and Non-finite clauses

Skill Focus: Speaking, and Grammar/ Vocabulary Study

Context: This lesson is designed for B1 level Maritime English students to learn grammar topics “If Clauses” and “Non-finite Clauses”.

Students are aimed to improve their speaking skills through role play activity.

Students can learn vocabulary about communications at sea.

Time: One lesson hour

Learning Objectives:

Students will be able to learn grammar topics.

They will be able to learn vocabulary related to communications at sea.

They will be able to focus on the grammar topic “Non-finite clauses”.

They will be able to write a short story using them.

Grammar Activity 1.

The Use of Conditionals (If-clauses)

Zero Conditional

First Conditional

Second Conditional

Third Conditional

Fill in the blanks activity

Reduce increase work enter change worsen
Have delay continue be

If the wind speed ---, the vessel --- speed. (Zero Conditional)

If seawater --- the engine room, the alarm system ---. (Zero Conditional)

If the weather ---, the captain --- course. (1st conditional)

If the ship --- more fuel, it --- voyage. (2nd conditional)

If I --- the captain, I ----- departure due to the storm. (2nd conditional)

After the examples, the teacher can explain the grammatical rules and structures.

Other examples can be written on the board.

Students can write example sentences.

TARGET VOCABULARY

Communications at Sea

VHF Radio

MF and HF Radio

Satellite Communication

Ship to ship communication Ship to shore communication Challenges of communications at sea such as long distances, severe weather conditions, etc.
--

Students can learn the meanings of these words. Also, they can search the explanations.
The definitions and examples can be written on the board.
Students are aimed to learn the words.

Aim: Studying simple job-related speaking.

Instructions:

Students work in groups. One is a port officer, the others are ship crew members.
They role-play a short conversation at the ship.

EXAMPLE WORD LIST

Nautical chart	deck
Captain	compass
Engine room	life jacket
Knot	waist
Hull	course

Example Questions:

Why is the ship in the port?

Is everything safe on board?

They should prepare a dialogue.

EXAMPLE WORDS

Course: planned route
Tide: rise and fall of sea level
Current: flow of water
Hull: main body of a ship
bow: the front part of the ship

ship: a large boat designed to travel long distances on the sea or ocean

nautical chart: a special map used by sailors that shows depths, harbors, and navigation routes.

captain: a person in charge of a ship

knot: a unit used to measure speed at sea

deck: a flat surface on a ship where people can walk

course: the direction in which a ship is travelling

EXAMPLE

SECOND LESSON

Time: One lesson hour

GRAMMAR PRACTICE

GRAMMAR

Non-finite clauses

To+verb

Example Sentences

The captain ordered the engine to be stopped immediately.

It is important to follow safety procedures at sea.

Ing clauses

Approaching the port, the vessel reduced speed.

Working in rough seas, the sailors remained alert.

Past Participle Clauses

Damaged by the storm, the vessel returned to port.

Students can learn non-finite clauses.

Then, they can write a short maritime story using both structures.

UNIT 10

Types of emergency

SKILL FOCUS: LISTENING, VOCABULARY, READING, WRITING

SOURCES:

1:

<https://youtu.be/riHd6Ez5tBs?si=vhkBm6ZMkK9M3oFn>

2: Maritime English for the 2nd Semester – book p.11

Context: This lesson introduces students to common onboard emergencies and the correct terminology used to report and respond to them.

Learning Objectives

By the end of the lesson, students will be able to:

- ✓ Identify shipboard emergencies
- ✓ Use correct maritime terminology
- ✓ Report an emergency clearly in English
- ✓ Respond appropriately using standard phrases

TARGET VOCABULARY

Grounding: : When a ship runs aground and gets stuck on the seabed..

Example: The ship runs aground near the coast due to navigation error..

Sinking: : When a ship goes down below the surface of the water.

Example: The vessel is sinking after severe flooding in the engine room.

Man overboard: When a person falls into the sea from the ship.

Example: “Man overboard on the port side!” shouts the officer.

Collision: When a ship hits another ship.

Example: The vessel collides with a tanker in dense fog.

Oil spill: The accidental release of oil into the sea.

Example: An oil spill occurs after a tanker’s cargo tank is damaged in a collision.

LESSON 10: Types of emergency (40 MINS)

Task 1) Warm-up (5 mins)

- **Q:** “What is an emergency on board a ship?”
- Why is safety important at sea?

- Have you ever experienced an emergency situation?
- What should you do first in an emergency?
What types of emergencies can happen on a ship?

Task 2) Match the words (A–F) with the correct definitions (1–6). (5 minutes)

Words

- A. Oil spill**
- B. Sinking**
- C. Grounding**
- D. Man overboard**
- E. Collision**
- F. Fire onboard**

Definitions

- ___ When a ship hits another ship or object at sea.
- ___ When a ship goes down below the surface of the water.
- ___ When a ship runs aground and gets stuck on the seabed.
- ___ When oil is accidentally released into the sea.
- ___ When a person falls into the sea from the ship.
- ___ An uncontrolled burning situation on the vessel.

Task 3) Supply the correct heading and write it in the space provided.

There is one extra heading you will not need to use. (10 MINUTES)

- COLLISION, 2,500 mt OIL LEAK
- MISSING PERSONS AT SEA REQUIRE A SEARCH AND RESCUE
- CRUISE SHIP EVACUATION AFTER COLLISION
- A HISTORIC CRUISE SHIP SINKS

Text A

If the person is not quickly found on board the vessel, then the vessel should return to the last location at sea when the person was seen. As an example, if a passenger was last seen at 8 p.m., then the ship needs to back track to the location of the vessel at 8 p.m. to begin a search and rescue operation.

Text B On November 23, 2007, the Explorer, operating in the Antarctic, struck ice. Water started creeping in through a fist-sized hole punched into the ship's starboard. As it flooded the engine room, the power failed. The ship ceased responding. The ship was evacuated. The

captain and chief officer stayed to operate the bilge pumps. After hours of listing, the ship went down.

Text C

The 2,400-ton vessel was carrying 100 tourists in addition to a crew of 50 but no injuries were reported. (May 25, 2010) An oil tanker and a bulk carrier collided in waters between Malaysia and Singapore, spilling an estimated 2,500 tonnes of oil. The incident happened in the Traffic Separation Scheme (TSS) of the Singapore Strait but traffic in Asia's busiest shipping lane was not affected. Where is Alan's cabin located, and how far is the galley from it?

Task 4) Vocabulary Practice (10 MINUTES)

Fill in the Blanks

Man overboard - Collision - ice - bilge - location - fist - oil spill - grounding - sinking - power

- When a person falls into the sea, the situation is called _____.
- A ship hitting ice and going down is an example of _____.
- When two ships crash into each other, it is called a _____.
- Oil released into the sea from a ship accident is called and _____.
- The ship must return to the last known _____ of the missing person.
- Water entered the ship through a _____-sized hole.
- The ship struck _____ while sailing in cold waters.
- When the engine room flooded, the ship lost _____.
- The crew used _____ pumps to remove water from the ship.
- If a ship runs aground, the accident is called _____.

Task 5) Imagine you are a passenger on the Explorer. What can you hear on the public address system after the accident? Work in pairs. (10 minutes)

PART 2: Disabled Ship – Emergencies

<https://youtu.be/riHd6Ez5tBs?si=vhkBm6ZMkK9M3oFn>

(40 MINS)

40-Minute Lesson Plan: Ship Emergency Procedures

Learning Objectives

By the end of the lesson, students will be able to:

- Understand actions taken when a ship is disabled

- Use key maritime vocabulary (e.g., buoyancy, drift, towing)
- Explain emergency procedures clear

Lesson Timing Overview

- Warm-up: 5 min
- Before Watching: 8 min
- While Watching: 10 min
- After Watching: 10 min
- Speaking Activity: 7 min

◇ 1. Warm-up (5 minutes)

Activity: Discussion

Ask students:

- What problems can happen to a ship at sea?
- What should the captain do in an emergency?

 Write key words on board:
engine failure, flooding, grounding, drift, towing

◇ 2. Before Watching (8 minutes)

Activity 1: Match the Terms with Their Meanings

- A. Disabled ship
- B. Grounding
- C. Buoyancy
- D. Drift
- E. Towing

- ___ Ability of a ship to float
- ___ Movement caused by wind and current

- ___ Ship stuck on seabed
- ___ Ship that cannot operate
- ___ Pulling a ship

 Activity 2: Prediction (Fill in the blanks)

11. A disabled ship should be kept away from _____.
12. Flooding affects ship _____.
13. The ship may need help from another _____.
14. Wind and _____ affect drift.

◇ **3. While Watching (10 minutes)**

 Activity: Complete the Sentences

- The primary objective is to keep the ship away from _____ or shallow water.
- Assistance should be requested at an _____ stage.
- Flooding must be stopped to maintain _____.
- Drift is affected by wind, waves, and _____.
- Anchors can help reduce _____.

◇ **4. After Watching (10 minutes)**

 Activity: True / False

7. ___ A ship should delay asking for help.
8. ___ Flooding can reduce buoyancy.
9. ___ Drift can be controlled completely.
10. ___ Anchors can slow down the ship.
11. ___ Emergency towing systems are important.

 Activity: Short Answer

5. What should be done when engines fail?
6. Why is buoyancy important?
7. What affects ship drift?
8. What should the master do after grounding?

◇ **5. Speaking Activity (7 minutes)**

 Activity: Role Play

Scenario:

A ship has:

- Engine failure
- Flooding
- Risk of grounding

 Students work in pairs:

- Student A: Captain
- Student B: Officer

 Discuss:

- What is the problem?
- What actions will you take?
- Will you request assistance?

 Encourage use of:

- “We must...”
- “We should...”

- “The ship is...”

UNIT 11

What weather is expected

SKILL FOCUS: Reading & Vocabulary & Grammar & Speaking

SOURCES: Maritime English for the 2nd Semester – book5.1-5.2 <https://youtu.be/vkoqIKQJqWk?si=u8Mc24Vgi-2JA7Pm>

Context: This lesson is designed for **B1-level Maritime English students** to develop their understanding of **weather conditions and forecasting at sea**.

Students are introduced to different **types of weather**, including conditions that affect navigation such as wind, fog, storms, and sea state. They also explore the concept of **climate** and learn about extreme natural phenomena such as **tsunamis** and their impact on maritime operations.

Students are also aimed to understand how **weather forecasts are created and interpreted**. They will study **weather maps**, including current and predicted conditions, and learn how to read basic meteorological symbols.

In addition, students will focus on **language awareness**, particularly the use of **“will” and “going to”** for making predictions and describing future weather conditions.

The lesson introduces key maritime communication tools such as **maritime forecasts, VHF weather reports, and satellite charts**, helping students understand how weather information is transmitted and used at sea.

Students are aimed to learn **ten key vocabulary items related to weather and forecasting**, and practice them through **controlled exercises and speaking activities**, enabling them to describe weather conditions and respond to forecast information in real-life maritime situations.

Learning Objectives:

By the end of the unit, students will be able to:

- Understand different **types of weather** and their effects on maritime navigation.
- Comprehend the concept of **climate** and distinguish it from weather.
- Explain what a **tsunami** is and describe its impact on ships and coastal areas.
- Interpret **weather maps**, including current and anticipated weather conditions.
- Use **“will” and “going to”** correctly to describe weather predictions.
- Understand and interpret a **maritime weather forecast**.
- Identify key information in a **VHF weather forecast**.
- Recognize the purpose and use of **satellite charts** in weather prediction.

- Use key **weather-related vocabulary** in speaking and writing.
- Describe weather conditions and forecasts in basic **maritime communication contexts**.

Lesson 1: 60 minutes

Warm-up Activity (5 minutes)

Weather Categories

Instructions:

Look at the following words and put them into the correct category:

Words:

rain – dry – clear – hot – snow – cold – wet – overcast

Categories

Temperature  Precipitation  Sky Condition 

Weather conditions

I.Types of weather

a) Look at the words related to weather in the box below and fill in the chart. (5 minutes)

summer thunderstorm autumn wet season spring rain hail

tornado blizzard winter hurricane (tropical cyclone) dry season snow drizzle

Seasons

spring			
--------	--	--	--

Tropical seasons

--	--

Storms

--	--	--	--

Precipitation

drizzle			
---------	--	--	--

II. Read about the climate in Western Australia and do the exercises that follow. (10 minutes)

a)The Climate in Western Australia

The Western Australian climate is the most diverse in the country, and it is

divided into three main climatic zones: tropical, semi-arid and Mediterranean. The north is tropical, characterized by a sunny dry season (April to September) and a wet season (October to March) with its humidity, heavy rains and thunderstorms. The dry season has ideal temperatures, with hot days and mild evenings, and is perhaps the best time to travel to Western Australia. The central part of the state falls within the semi-arid zone and consists mostly of desert regions. A temperate, Mediterranean climate characterizes the south where the summers are warm and dry and the winters mild and wet. Perth lies within this zone and the hot summer days are cooled by the strong afternoon sea breeze. Perth has a very low rate of humidity. Winters (June to August) are mild, with the wettest month being July.

Reading Comprehension Questions: Read the text and answer the questions below. (10 minutes)

Multiple Choice

1. How many climatic zones are there in Western Australia?
 - a) Two
 - b) Three
 - c) Four
 0. Which climate is found in the north of Western Australia?
 - a) Mediterranean
 - b) Semi-arid
 - c) Tropical
-

0. When is the wet season in the north?
 - a) April to September
 - b) October to March
 - c) June to August

Short Answer Questions

0. What are the two seasons in the tropical north?
0. What is the weather like during the dry season?
0. What type of climate is found in central Western Australia?
0. What characterizes the Mediterranean climate in the south?
0. Why are summer days in Perth cooler?
0. Which is the wettest month in Perth?

 True / False

- 0. ___ The central part of Western Australia has a tropical climate.
- 0. ___ Summers in the south are dry.
- 0. ___ Perth has high humidity.

C) Key Vocabulary & Meanings (the climate in Western Australia) (10 minutes)

Glossary

diverse showing a great deal of variety; very different

arid having little or no rain, very dry

humidity the amount of water in the air

ideal perfect; most suitable

mild (of weather) not very cold, and therefore pleasant; moderately warm

temperate (of climate) having a mild temperature without extremes of heat or cold

sea breeze a wind blowing from the sea/ocean towards the land

Climate – The typical weather conditions of a region over a long period.

Humidity – The amount of moisture (water vapor) in the air.

Thunderstorm – A storm with thunder, lightning, and heavy rain.

D) Fill in the Blanks by choosing the correct word from the box.

(liner, tramp, coaster, ferry, tanker, containerized, bulk, specialized)

- 1. The weather in this region is very _____, with many different conditions.
- 2. Desert areas are usually _____ and receive very little rain.
- 3. The _____ in tropical regions is often very high.
- 4. Spring is the _____ time to visit because the weather is perfect.
- 5. Winters in this area are _____ not too cold and quite pleasant.
- 6. A _____ climate does not have extreme temperatures.
- 7. In coastal areas, a _____ helps cool the air in the afternoon.
- 8. _____ is the typical weather pattern of a place over many years.
- 9. _____ refers to the amount of water vapor in the air.
- 10. A _____ includes thunder, lightning, and heavy rain.

GRAMMAR will/going to (20 minutes)

Look at the following phrases, taken from weather forecasts:

Melbourne **is going to** be dry.

Showers **will** break out later in the evening.

We use both “going to” and “will” for weather forecast.

“going to” is used for pre-determined prediction about the weather:

e.g. The weather forecast says it is going to rain tomorrow.

Generally, we can use both “will” and “going to” to predict the future.

“going to” is used to predict the future when we have already got some evidence that something is certain or likely to happen. When we say “something is going to happen”, we know (or think) this because of the situation now.

e.g. It’s going to rain later. Look at those black clouds in the sky!

(I can see the clouds building up now, it is sure to happen)

“will” tends to be used when this evidence is not present, or at least is not as concrete.

e.g. I think it will rain later.

(It often does at this time of year)

a) Fill in the Blanks (Will / Going to)

1. It _____ rain later this evening. (prediction)
2. Look at those clouds! It _____ storm soon.
3. The temperature _____ drop tonight.
4. We think it _____ be sunny tomorrow.
5. The wind _____ increase to force 6.
6. Look at the sky! It _____ snow.
7. The weather report says it _____ be foggy in the morning.
8. Be careful! The sea _____ become rough.
9. According to the forecast, it _____ rain all day.
10. Watch out! That storm _____ hit the coast.

b) Today’s weather. Answer the following questions.

- What’s the weather like where you are now?
- Do you like the weather today? What’s your favourite weather?
- What is it going to be like later?

LESSON II MARINE WEATHER

ROUTING <https://youtu.be/vkoqIKQJqWk?si=u8Mc24Vgi-2JA7Pm>

Learning Objective

By the end of the lesson, students will be able to:

- Understand what **weather routing** is
- Identify its **advantages**
- Explain how weather affects voyage planning

1. Warm-up (3 minutes)

Discussion

Ask students:

- What affects a ship's journey at sea?
- Is the shortest route always the best? Why/why not?

Write on board:

weather – waves – wind – safety – speed

◇ 2. While Watching (6 minutes)

Activity 1: Fill in the Blanks

1. Weather routing helps ships sail more _____ between two points.
2. It reduces the risk of damage to the ship and _____.
3. The shortest route is called the _____ circle.
4. Wind, waves, and _____ affect ship speed.
5. Severe storms may require changing the _____ plan.

Activity 2: True / False

0. ___ The shortest route is always the fastest.
0. ___ Weather routing can improve arrival time predictions.
0. ___ Weather conditions do not affect ship safety.

◇ 3. After Watching (6 minutes)

Activity: Short Answer

0. What is weather routing?
0. Give two advantages of weather routing.
0. Why might a ship avoid the great circle route?

Speaking (Optional – if time allows)

In pairs:

“What would you do if a storm is ahead?”

UNIT 12

XIV Shipboard Electronics

SKILL FOCUS: Reading & Vocabulary & Grammar & Speaking

SOURCES: ENGLISH FOR MARITIME STUDIES SECOND EDITION UNIT XIV

Context: This lesson is designed for B1-level Maritime English students to develop their understanding of marine communication and electronic navigation equipment. Students are introduced to the structure and function of a Marine VHF FM transmitter and receiver, as well as key components of a VHF transceiver system.

The lesson focuses on building technical vocabulary related to electronic equipment, circuit diagrams, and measurement concepts such as AC waveforms. Students will learn how to describe component parts, their positions, and connections using appropriate grammar structures. In addition, they will practice giving clear instructions related to operating marine equipment.

Through reading comprehension activities, students will explore texts about devices such as echo sounders and communication systems, while also improving their ability to understand applied terminology in real maritime contexts.

The lesson also includes guided writing and note-taking practice to help students organize technical information effectively. By the end of the lesson, students will be able to describe marine communication devices, understand their functions, and use accurate technical language in both spoken and written tasks.

Learning Objectives:

By the end of the lesson, students will be able to:

- Understand how an echo sounder works
- Use key technical vocabulary related to echo sounding
- Describe the components and function of the device
- Solve simple depth calculation problems
- Demonstrate comprehension of the reading text

Lesson 1: 40 minutes

Shipboard Electronics

Lesson Duration: 40 minutes

Objectives

By the end of the lesson, students will be able to:

- Understand how a Marine VHF FM transmitter works

- Identify and describe its main components
- Use key technical vocabulary correctly
- Explain the signal process from microphone to transmission
- Complete functional descriptions of transmitter units

1. Warm-up (5 minutes)

Discussion questions:

- What is a VHF radio used for on ships?
- Why is communication important at sea?

Lead into transmitter function (sending signals)

2. Vocabulary Presentation (5 minutes)

Teach the following 10 key terms:

Word	Meaning
microphone	converts sound to electrical signals
amplifier	increases signal strength
limiter	controls signal amplitude
modulation	changing a signal to carry information
carrier wave	main signal that carries information
frequency	number of cycles per second
oscillator	produces electrical signals
mixer	combines signals
filter	removes unwanted signals
aerial	transmits radio waves

READ THE FOLLOWING TEXT AND ANSWER THE QUESTIONS

VHFFM transmitter .

The above block diagram shows the VHF transmitter in more detail. As the system is only for radio telephony, a microphone must be used to convert the sound energy into electrical energy. The signal is amplified in the audio frequency amplifier, but the amplitude is also limited to a pre-determined amount. This is to ensure that when frequency modulation occurs, the frequency of the unmodulated carrier wave does not vary by an excessive amount. In frequency modulation, the carrier is made to vary directly as a result of the amplitude of the audio signal. Thus, in the block diagram above a carrier signal at a radio frequency of 11.7 Mhz is frequency modulated by the audio signal. As the amplitude of the audio signal increases, the more the 11.7 Mhz carrier varies or deviates from its unmododulated value. The

pre-emphasis stage ensures that the higher audio frequencies are amplified in such a way that these components are not swamped in the noise level inherent in such systems. The frequency-modulated signal is mixed with a second carrier frequency generated in the channel oscillator. The output from the mixer contains several frequencies including the desired frequency of final transmission. Thus, the desired frequency is passed through a filter stage which rejects all the unwanted frequencies. The signal at the correct frequency is power amplified (to a maximum of 25 Watts) and the signal is radiated using the aerial. To change frequency, it is only necessary to change the channel oscillator frequency. Each frequency is allocated a channel number, for example Channel 16, is equivalent to 156.8 Mhz. Shipboard Electronics 207 Now complete these notes describing the function of each unit of the FM transmitter above. Use the first, which has been done for you, as a guide.

3. Vocabulary Exercise (10 items) (5 minutes)

Fill in the blanks using the words above:

1. A _____ changes sound into electrical signals.
2. An _____ makes signals stronger.
3. A _____ prevents the signal from becoming too strong.
4. _____ is the process of adding information to a signal.
5. The _____ carries the transmitted signal.
6. _____ determines how often waves repeat.
7. An _____ generates electrical frequencies.
8. A _____ combines two signals.
9. A _____ removes unwanted frequencies.
10. The _____ sends the signal into the air.

4. Reading & Understanding (10 minutes)

Students read the text and answer:

1. What is the function of the microphone?
2. Why is the signal limited?
3. What happens during frequency modulation?
4. What is the role of the mixer?
5. Why is a filter needed?
6. What is the maximum power output?
7. How can the transmission frequency be changed?

Pair check + teacher feedback

5. Guided Writing (5 minutes)

Complete the functions of each component:

- Microphone – Converts sound energy into electrical energy (given)
- Amplifier – _____

- Limiter – _____
- Pre-emphasis stage – _____
- Oscillator – _____
- Mixer – _____
- Channel oscillator – _____
- Filter – _____
- Power amplifier – _____

6. Speaking Practice (5 minutes)

Pair activity:

Student A explains:

- How the signal travels through the transmitter

Student B explains:

- The role of 3 components

7. Wrap-up (5 minutes)

Quick questions:

- What is a carrier wave?
- Why is filtering important?
- What does the aerial do?

Lesson 2: 40 minutes

Grammar (20 minutes)

GRAMMAR (A) Describing component parts, position and connection

The following verbs can be used when describing component parts, position and connection. Study their meaning and their use. Component parts: to comprise to consist of for specifying all the main parts of an object or system. to contain for saying what is inside an object. to include for giving some of the objects in a group- the list often ends with etc. to be grouped (into) placed together. Position: located situated } set or found in a particular place or position. 208 English for Maritime Studies mounted (in, on) Connection: fitted (with) installed connected to/with put, usually on a base or stand (implied), and fixed ready for use. supplied and held in place, often with bolts or screws. put into place and connected up ready for use. joined to or related to

Here is a complete **grammar exercise set with answer key** based on your topic *Describing component parts, position, and connection* (B1 Maritime English level):

Grammar Exercises: Describing Systems and Components

Exercise 1: Fill in the blanks

Choose the correct verb from the box.

(comprises / consists of / contains / includes / located / mounted / fitted / installed / connected to / grouped into)

1. The system _____ several important components.
2. The device _____ a transmitter, receiver, and antenna.
3. The box _____ electrical circuits and cables.
4. The equipment is _____ on the bridge.
5. The radar is _____ on top of the mast.
6. The unit is _____ with modern sensors.
7. The echo sounder is _____ below the ship.
8. The transmitter is _____ the power supply.
9. The components are _____ three main sections.
10. The system _____ a display screen, controls, etc.

Exercise 2: Multiple Choice

Choose the correct answer.

1. The system _____ three main parts.
 - a) contains
 - b) consists of
 - c) located
2. The antenna is _____ on the deck.
 - a) connected
 - b) mounted
 - c) consists
3. The unit is _____ with safety equipment.
 - a) fitted
 - b) grouped
 - c) located
4. The cables are _____ the main panel.
 - a) consists of
 - b) connected to
 - c) included
5. The equipment is _____ in the engine room.
 - a) mounted
 - b) located
 - c) consists

Lesson Aim

Students will understand the **basic functions of VHF radio, DSC, and AIS**, and how they improve **maritime safety**.

1. Warm-up (3 minutes)

Task: Quick Discussion

Ask students:

- What is VHF used for on a ship?
- Which channel is used for emergencies?

2. Listening / Reading Task (5 minutes)

Watch the video and answer the questions.

<https://www.youtube.com/watch?v=Zh58RA1oQi4>

Task 1: True or False

Read or summarize the video and ask students to decide:

1. VHF radios are only used for long-distance communication.
2. Channel 16 is used for emergency calls.
3. DSC allows sending digital distress messages.
4. AIS shows information about other ships.
5. VHF communication is private like a phone call.

3. Vocabulary Exercise (4 minutes)

Match the words with meanings:

- A. VHF
- B. Channel
- C. DSC
- D. AIS
- E. MMSI

1. ___ A system that shows ship position and movement
2. ___ A unique identification number for a vessel
3. ___ A radio communication system used at sea
4. ___ A specific frequency used for communication
5. ___ A digital distress alert system

4. Practice (2 minutes)

Fill in the blanks:

1. Channel ___ is used for distress calls.
2. DSC can send a _____ message automatically.

3. AIS helps avoid _____ at sea.

4. MMSI is like a _____ number for a ship.

5. Wrap-up (1 minute)

Ask:

↳ Why is VHF important for safety at sea?