CAREER PATHS

Merchant Navy

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CAREER PATHS

Merchant

Scope and sequence

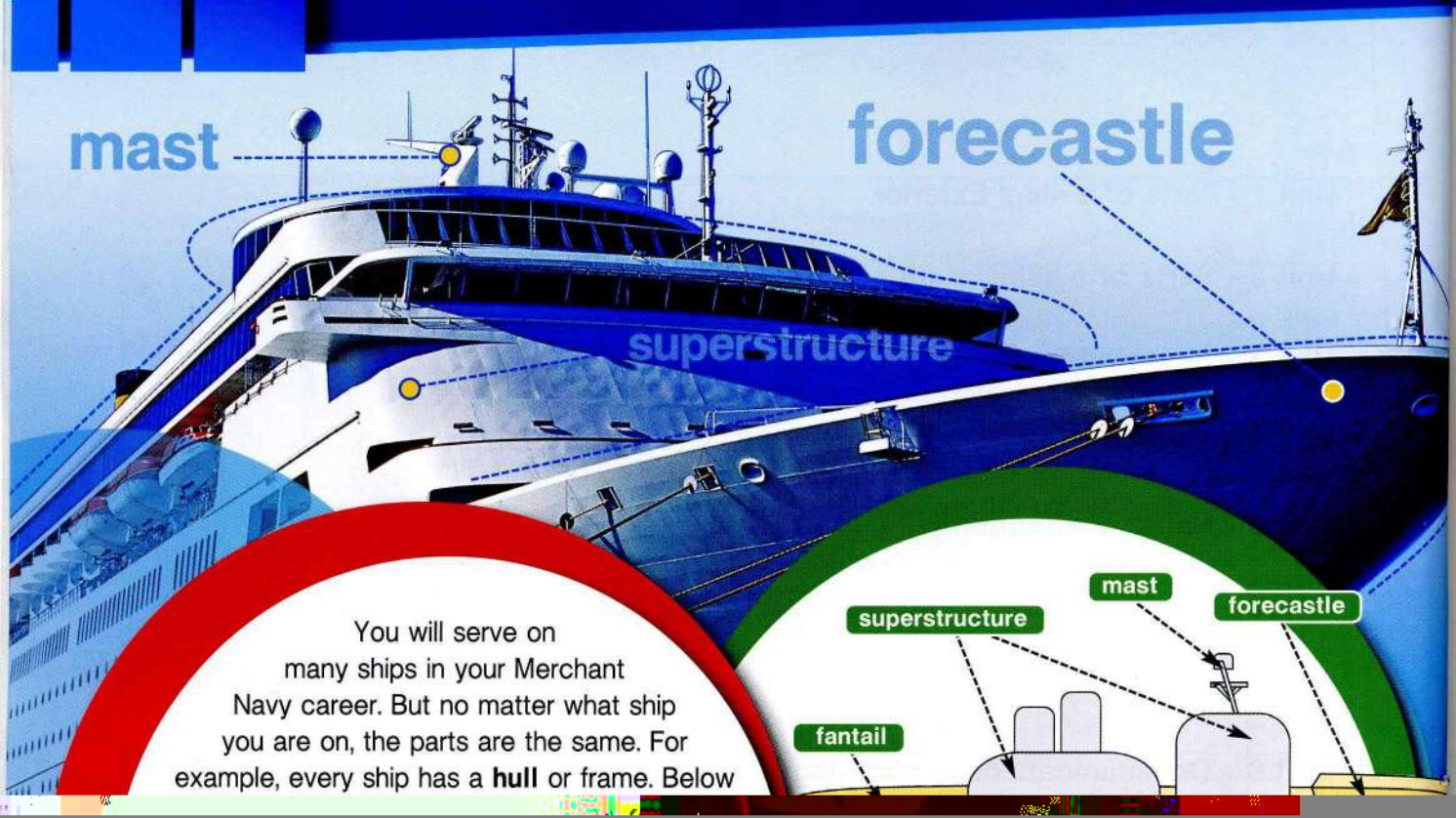
Unit	Topic	Reading context	Vocabulary	Function
1	Parts of a ship: Exterior	Book excerpt	bulwark, fantail, forecastle, hull, keel, mast, poop deck, propeller, screw, stem, sternpost, superstructure, waterline, weather deck	Describing duration
2	Parts of a ship: Interior	Book excerpt	bulkhead, compartment, deck, hatch, head, ladder, overhead, partition, passageway, watertight door	Giving directions

Table of contents

Unit 1 - Parts of a ship: Exterior 4

Unit 2 - Parts of a ship: Interior 8

1 Parts of a ship: Exterior



You will serve on many ships in your Merchant Navy career. But no matter what ship you are on, the parts are the same. For example, every ship has a **hull** or frame. Below

2 Parts of a ship: Interior



4 **Fill in the blanks with the correct words and phrases from the word bank.**

WORD BANK

head hatch watertight door
ladder deck

1 Always keep a _____ closed.
2 The _____ uses seawater to flush toilets.
3 A lower _____ was covered in water after the accident.
4 Go up this _____ to get to the weather deck.
5 The _____ was sealed and [illegible] the

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

Can you tell me where the ...
You're talking about ...
Turn ... out of this ...

Student A: You are a student. Talk to Student B about:

- the location and land-based name of an internal structure
- the correct name of the structure

3 Ship systems



4 Fill in the blanks with the correct words and phrases from the word bank.



Speaking

8 With a partner, act out the roles below based on Task 7

4 Ship stability

4 Read the sentence pairs. Choose which

Speaking

to back.

B A _____ runs along the hul

or a

uctures for ship stability

Listening

Listen to a conversation between an instructor and a student. Mark the following

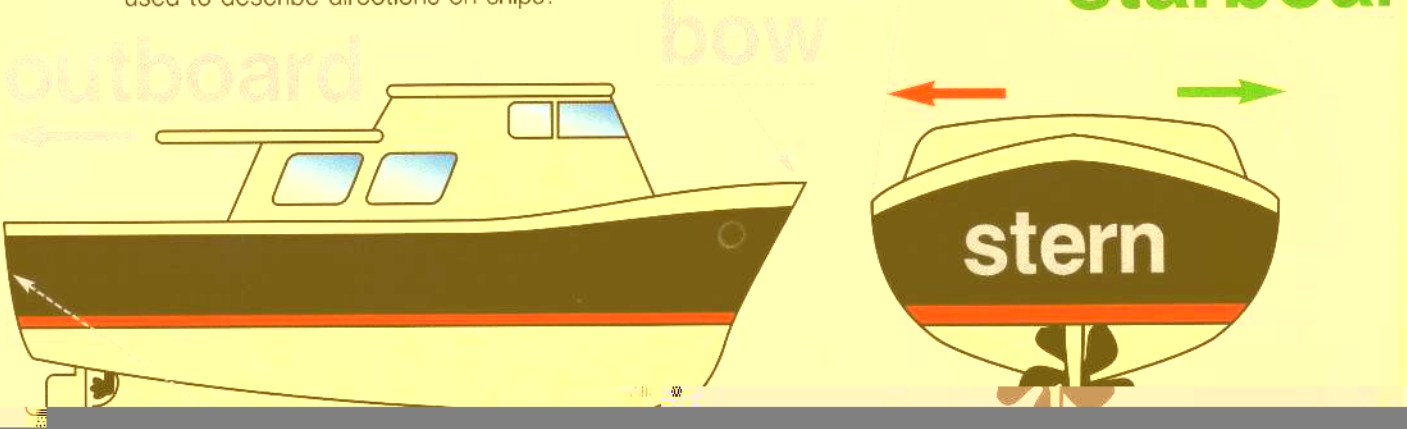
5 Nautical directions

Get ready!

1 Before you read the passage, talk about these questions.

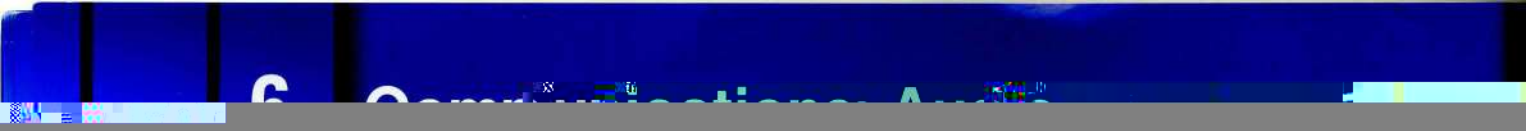
1 Why do sailors use different words to describe the "left" and "right" of a ship?

2 What are some of the most common words used to describe directions on ships?



4 Read the sentence pa

Speaking



4 **Fill in the blanks with the correct words and phrases from the word bank.**

WORD BANK

I spell out over say again roger

Speaker 1: SS Grant, this is SS Junebug. **1** _____.

Speaker 2: **2** _____ SS Junebug.

Speaker 1: SS Grant, do you have a crew member named Smith onboard?

Speaker 2: SS Junebug, I missed that name, **3** _____.

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

Can we get a ...

I missed that. Say again ...

Is there any storm activity?

Student A: You are

7 Communications: Visual

5 🎧 **Listen and read the article on visual communication again. What are the strengths and weaknesses of semaphore?**

Listening

6 🎧 **Listen to a conversation between a captain and an officer. Choose the correct answers.**

1 What is the purpose of the conversation?

- **A** to explain what a flashing light message means
- **B** to review methods of sending visual communications
- **C** to interpret a Morse code message
- **D** to schedule a visual communication exercise

2 Why does the woman suggest the non-directional method?

- **A** The information sent will not be secret.
- **B** The message must be sent over a long distance.
- **C** The sailors receiving the message speak a different language.

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

I want to run a ... exercise.

Should we practice ... or ... ?

... is fine.

Student A: You are a captain. Talk to Student B about:

- a visual communication exercise
- types of communication to use
- the information to be sent

Student B: You are an officer. Talk to Student A about a visual communication exercise.

Writing

9 **Use the article on visual communication and the conversation from Task 8 to fill in the blanks.**

Captain: Mr. Green, I want to run a 1 _____ exercise tomorrow.

5 🎧 **Listen and read the instructions on signal flags again. How is a medical code different from other signals?**

Listening

6 🎧 **Listen to a conversation between two seamen. Choose the correct answers.**

1 What information do the seamen need to send?

- **A** The captain ordered radio silence.
- **B** Urgent medical help is required.
- **C** We need assistance from another vessel.
- **D** We are helping another vessel repair a broken hull.

2 What will the woman likely do next?

- **A** look up a signal code
- **B** correct a signal error
- **C** prepare the halyard
- **D** confirm that WRVV needs help

7 🎧 **Listen again and complete the conversation.**

Seaman 1: The captain ordered **1** _____ _____. We're practicing sending messages with signal flags.

Seaman 2: Wow, I haven't used those **2** _____ _____ _____. What's the message?

Seaman 1: We need to tell vessel WRVV that **3** _____ _____ _____. The

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

We have to use ...

Here, use ...

There should be a ... we can use.

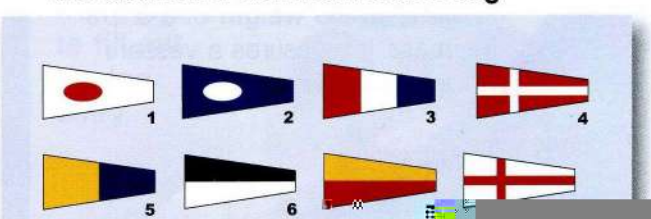
Student A: You are a seaman. Talk to Student B about:

- sending a signal flag message
- the type of message needed
- which code to use

Student B: You are a seaman. Talk to Student A about sending a signal flag message.

Writing

9 **Use the instructions on signal flags and the conversation from Task 8 to fill out the seaman's communication log.**



9 Nautical measurements



Seaman's Guide

As an up-and-coming seaman, you'll be flooded with new words. Some will seem odd, or difficult to remember. Given time, these terms will become second nature. Words for measurements show how different the language can be:

- **Distances** are measured in **nautical miles**, or 6,076 feet.
- Use **fathoms**, not **feet**, to measure **depths**. A fathom is equal to six feet, or 1.8 meters.
- The word **cable**, referring to

Get ready!

1 Before you read the passage, talk about these questions.

1 What are some challenges of learning nautical measurements?

2 How are measurements at sea different from those used on land?

Reading

2 Read the guide for new seamen on measurements. Then, choose the correct answers.

1 What is the article mainly about?

A what words are used for measurements at sea

B a comparison of the metric system and imperial system of measurement

Vocabulary

4 **Read the sentence pairs. Choose which word or phrase best fits each blank.**

1 **gross ton / depth**

A The _____ of the water is 6 fathoms.

B A _____ measures volume, not weight.

2 **distance / speed**

A The _____ to the next port is 150 nautical miles.

B A ship's _____ is measured in knots.

5 **Listen and read the guide for new seamen on measurements again. How is depth measured at sea?**

Listening

6 **Listen to a conversation about navigation. Mark the following statements as true (T) or false (F).**

1 __ The ship is behind schedule.

2 __ The ship is traveling at twelve knots.

3 __ The ship will reach the port at 1500 hours.

7 **Listen again and complete the conversation.**

Officer: Roberts, **1** _____ _____ finish your watch we should review our course.

Navigator: Sure thing. I've updated the ship's log already. It **2** _____ _____ we're on schedule

Officer: We ~~n~~eed to reach Newton by 1500

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

How far ...

We're traveling at ...

It'll take about ...

Student A: You are a ship's captain. Talk to Student B about:

- when you must arrive at port
- the distance to port
- how fast you are traveling

Student B: You are a navigator. Talk to Student A about when you will reach your next port.

Writing

9 **Use the guide for new seamen on measurements and the conversation from Task 8 to fill out the log entry.**



10 The crew





Job Posting

A U.K.-based shipping company is hiring for the following positions:

Chief Steward The chief steward will:

- oversee operations of the **steward's department**
- supervise the **chief cook**, **steward's**



4 **Read the sentence pairs. Choose which word best fits each blank.**

1 **boatswain / wiper**

A The _____ cleans and maintains the galley.

B A _____ is in charge of the deck crew.

2 **AB / OS**

A A sailor with no experience starts as an _____ .

B Becoming an _____ requires passing an exam and many hours at sea.

5 **Listen and read the job postings.**

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

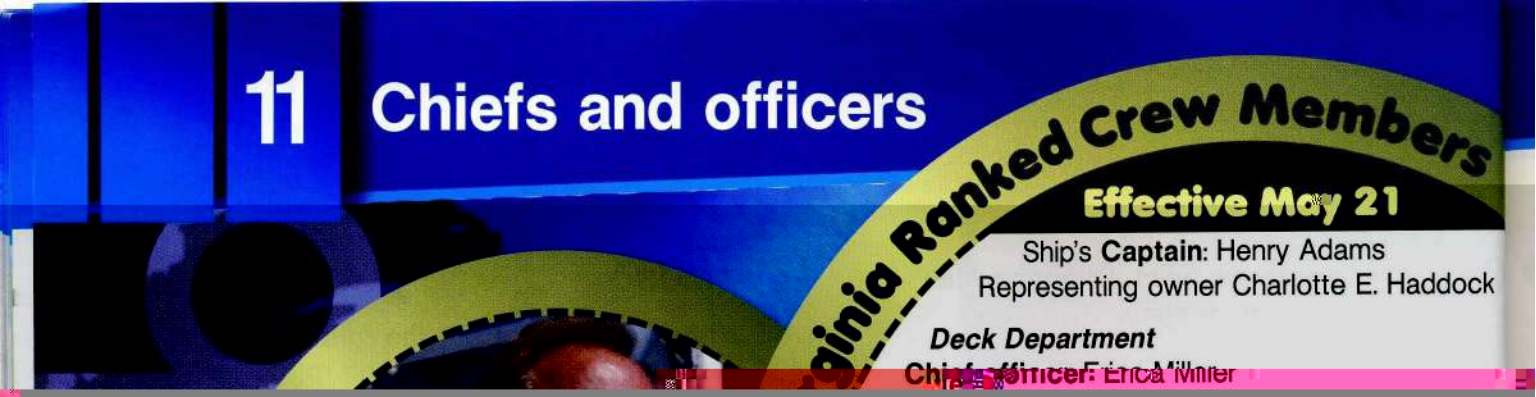
Please tell me ...

I spent ...

Describe ...

Student A: You are an interviewer for a shipping position. Talk to Student B about:

- what experience he or she has
- how much time she spent on a job
- [illegible] he or she received


11 Chiefs and officers
ginia Ranked Crew Members
Effective May 21
Ship's Captain: Henry Adams
Representing owner Charlotte E. Haddock
Deck Department
Chief Officer: Erica Miller


Speaking
4 Read the sentence pairs. Choose
phrase best fits each blank.
3 With a partner, act out
about new crew me
your duties.
again. What position did Captain Adams
hold previously?
Student B: You are a crew membe
Student A about which officer to speak with.
Talk to
Listening
Crew Member 1: Excuse me. I'm a new crew
member. I _____ _____ ask
you a question?
Crew Assignment Form
Crew Member 1

12 Canvas work



Get ready!

1 Before you read the passage, talk about these questi

4 **Read the sentence pairs. Choose which word or phrase best fits each blank.**

1 **treated / waterproof**

A The officer decided to make his canvas _____ so he could use it during rainstorms.

B Canvas can be _____ in a number of ways.

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

I'm trying to ...

Make sure ...

Next ...

Review these reminders before you start painting!



roller

Do ...

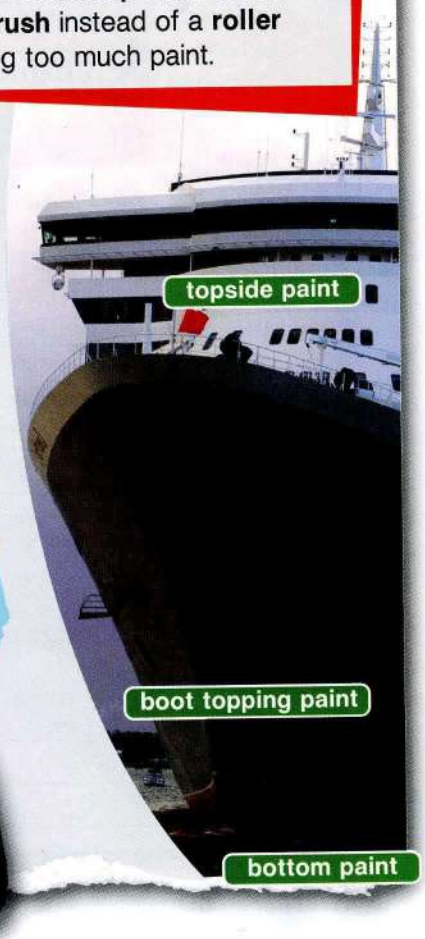
... use the correct paint for your project. **Topside paint** is designed to protect against wind and sun. **Bottom paint** is better for saltwater protection. For both types of protection, use **boot topping paint**.

... apply **primer** first. Primer ensures the paint adheres properly. It also contains anti-corrosion agents.

Don't ...

... paint over **rust**. Use a **scraper** to remove rust before painting. For deep or heavy rust, use a **grinder**.

... waste paint. **Touch up** small areas with a **flat brush** instead of a **roller** to avoid using too much paint.



Get ready!

1 Before you read the passage, talk about these questions.

1 What are some different types of marine paint?
2 When does paint need to be touched up?

Reading

2 Read the poster on painting. Then, choose the correct answers.

1 What is the poster mainly about?
- **A** different painting methods
- **B** tips for painting effectively
- **C** how to remove rust
- **D** ways to conserve paint

2 Which product is better for weather protection than underwater protection?
- **A** boot topping paint
- **B** topside paint
- **C** bottom paint
- **D** primer

3 Which is NOT an instruction from the poster?
- **A** Touch up small areas with a roller.
- **B** Always remove rust first.
- **C** Apply primer to prevent rust.
- **D** Use boot topping paint for wind, sun, and saltwater protection.

Vocabulary

3 Match the words (1-5) with the definitions (A-E).

1 __ rust
2 __ painting
3 __ touch up
4 __ bottom paint
5 __ boot topping paint

- **A** a coat applied to underwater areas only
- **B** a coat applied to areas along the waterline
- **C** a red substance formed when metal breaks down
- **D** the process of applying a coating
- **E** to reapply something in small areas

4 Place the words and phrases from the word bank under the correct headings.

WORD BANK

topside paint flat brush primer
roller scraper grinder

Coatings	Paint applicators	Rust removers
_____	_____	_____
_____	_____	_____

5 Listen and read the poster on painting again. What are some of the qualities of primer?

Listening

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

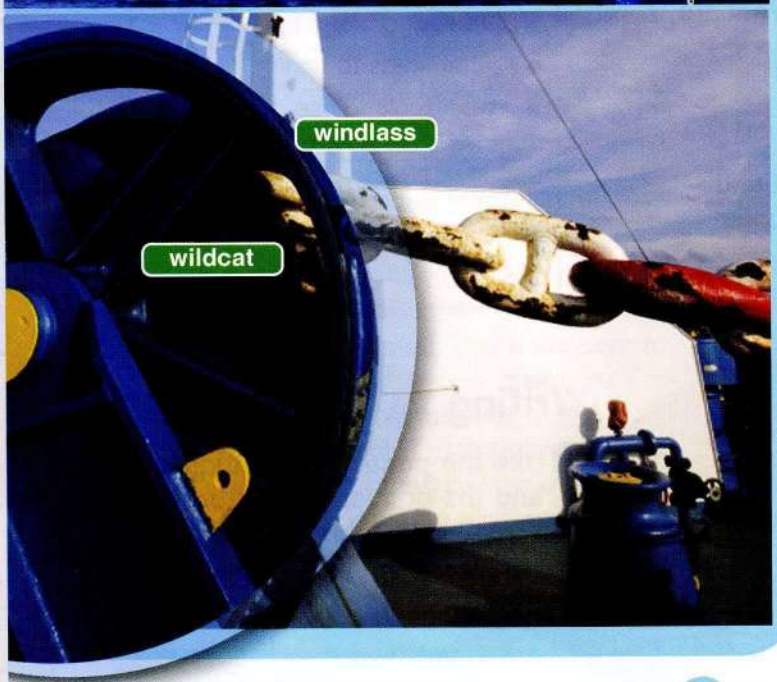
You need to ...
So I'll need ... paint.
Should I use ... ?

Student A: You are a lieutenant. Talk to Student B about:

- a painting project
- what steps to take
- what tools to use

Ground Tackle





By now, you probably know how a ship moves. This chapter tells you how to keep it stationary.

A ship's crew uses **ground tackle** to stop a ship while at sea. The **anchor** holds the ship in place. It connects to the ship with a **shackle** at the end of a sturdy **cable**. The crew lets out the anchor by turning the **wildcat** with the **windlass**. A **devil's claw** holds the anchor in place while underway.

The crew must know the appropriate **scope** of the anchor **chain**. Most ships carry ten to twelve **shots** per anchor. This is enough to moor safely in most anchorages. In crowded or busy areas, the crew might put a second anchor under foot. Its purpose is to reduce swing.

Get ready!

1 Before you read the passage

Vocabulary

3 Fill in the blanks with the correct words from the word bank.

word BANK

windlass shackle chain
devil's claw ground tackle

1 The _____ prevents the anchor from dropping unexpectedly.

2 When the _____ broke, the anchor came loose from its cable.

3 The _____ lets out the anchor and pulls it in again.

4 A series of strong metal links makes up the

5 🎧 **Listen and read the textbook chapter on ground tackle again. How does scope affect anchoring?**

Listening

6 🎧 **Listen to a conversation between an instructor and a student. Choose the correct answers.**

1 What is the main idea of the conversation?

A different methods for dropping anchor

B how a windlass is operated

C the right scope for a particular vessel

D determining how much chain to release

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

Do you have any questions about ground tackle?

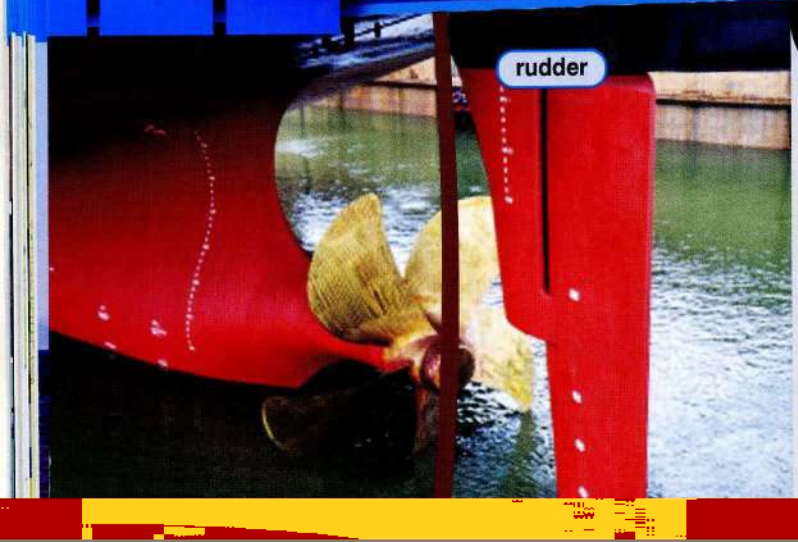
I'm not sure ...

What do you do after ...

Student A: You are a naval instructor. Talk to Student B about:

- ground tackle
- the process for dropping an anchor

15 Steering gear



Memo: Reminders for Helmsmen

These days, **helmsmen** often rely on **iron mikes**, or Ottos, to stay **on course**. But remember that you still have important responsibilities when in the **pilot house**. Your vessel's **steering gear** uses extremely powerful **electrohydraulic** systems. It must be operated with great care.

Even though **gyropilots** do most of the steering, you must sometimes take the **wheel** yourself. This usually happens in difficult conditions or emergencies. Always know which officer **has the conn** so you know whom to take directions from.

5 Listen and read the memo on steering responsibilities again. When does a helmsman take manual control of the steering?

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

Glossary

AB [N-COUNT-U10] An **AB (able seaman)** is a deck crew member who has received training and passed an exam.

abaft [PREP-U5] If something is **abaft** something else, it is closer to the stern of a ship.

affirmative [INT-U6] **Affirmative** is a radio proword meaning "yes."

aft [PREP-U5] If something is **aft**, it is toward the rear end of a ship.

anchor [N-COUNT-U14] An **anchor** is a heavy hook that is dropped [illegible] the sea floor and holds

depth [N-COUNT-U9] **Depth** is the measurement of distance downward, as in a body of water.

devil's claw [N-COUNT-U14] A **devil's claw** is a hook that secures the anchor chain when the anchor is not in use.

directional method [N-UNCOUNT-U7] The **directional method** is a method of the flashing light system in which the sender shines the light directly at the receiver.

displacement [N-COUNT-U4] **Displacement** is the weight or volume of water that a ship takes the place of.

distance [N-COUNT-U9] **Distance** is the measurement of space between two points.

draft [N-COUNT-U4] The **draft** of a ship's hull is the distance between the keel and the waterline.

drainage system [N-COUNT-U3] The **drainage syste**

electrical system

electrohydraulic

engineering department

fantail

fathom

flag halyard

flashing light

flat brush

foot

Glossary

International Code of Signals [N-COUNT-U8] The **International Code of Signals** is a system of communication

on mike [N-COUNT-U15] An **iron mike**, also known as a gyropilot, is a device that steers a vessel automatically under normal conditions.

l [N-COUNT-U1] A **keel** is a long beam along the bottom of a ship.

[N-COUNT-U9] A **knot** is a measure of speed expressed in nautical miles per hour.

r [N-COUNT-U2] A **ladder** is a series of steps that a person uses to move to a higher or lower deck.

tudinal stability [N-UNCOUNT-U4] **Longitudinal stability** is a ship's ability to resist turning over fore or aft.

tenance [N-UNCOUNT-U10] **Maintenance** is the act or process of keeping something in working condition.

proword [N-COUNT-U6] A **proword**, or procedural word, is a word used in radio communication to limit the amount of words a person must use and to eliminate misunderstandings.

adio communication [N-UNCOUNT-U5] **Radio communication** is the use of radio transmitters and receivers to eliver messages over distances.

failure [N-COUNT-U7] A **radio failure** is an event in which a radio does not work and audio communication impossible.

silence [N-UNCOUNT-U7] **Radio silence** is a condition or order in which all radio communications are not llowed for security reasons.

r [INT-U6] Roger is a **radio** proword acknowledging that the speaker received a message.

r [N-COUNT-U13] A **roller** is a cylindrical tool that is used to apply paint.

er [N-COUNT-U15] A **rudder** is a moveable flat part below a vessel that affects which direction the vessel is headed.

[N-UNCOUNT-U13] **Rust** is a reddish substance that forms where metal is broken down by air or moisture.

water system [N-COUNT-U3] The **saltwater system** pulls salt water from the sea into the ship for many uses. The water can be stored for firefighting, stored for ballast, used to flush the heads or used to cool the engines.

again [INT-U6] **Say again** is a proword requesting that a speaker repeat the previous transmission.

pe [N-COUNT-U14] A **scope** is a length of anchor chain needed, determined by water depth and weather conditions.

aper [N-COUNT-U13] A **scraper** is a hand tool that is used to rub something off the surface of something else.

ew [N-COUNT-U1] A **screw** is a device with rotating blades that moves a ship.

ond engineer [N-COUNT-U11] The **second engineer** is the second-highest ranked member of the engineering department after the chief engineer, and is responsible for day-to-day operations and maintenance of the engineering department.

ond officer [N-COUNT-U11] The **second officer** is the crew member in charge of a ship's navigation and is the second highest position within the deck department, after the chief officer.

naphore [N-UNCOUNT-U7] **Semaphore** is a system of communication in which words are communicated through the use of arm positions or flags that represent specific letters.

naphore flag [N-COUNT-U7] A **semaphore flag** is a small, brightly colored, hand-held flag used in semaphore communications.

w [V-I or T-U12] To **sew** is to join two pieces of material using stitches.

ckle [N-COUNT-U14] A **shackle** is a ring that attaches an anchor chain to something else, such as the anchor.

ot [N-COUNT-U14] A **shot** is a measure of the length of an anchor chain.

nal flag [N-COUNT-U8] A **signal flag** is one of a set of flags that represents a particular letter or number and is used for communication between ships.

nal lamp [N-COUNT-U7] A **signal lamp** is a powerful light with a lever and slats that can be opened and closed to send flashes of light.

gle letter signal [N-COUNT-U8] A **single letter signal** is a signal that uses one flag and usually represents messages for common or urgent situations.

eed [N-COUNT-U9] **Speed** is a measurement of an object's rate of movement.

bility [N-COUNT-U4] **Stability** is a ship's ability to float upright and resist overturning.

bilizer wing [N-COUNT-U4] A **stabilizer wing** is a fin that protrudes from a hull and when deployed is used to


Glossary

CAREER PATHS

Merchant

Scope and sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Tankers 1: Types	Manufacturer sheet	Aframax, chemical tanker, crude, crude tanker, DWT, liquefied gas tanker, LNG, LPG, OBO carrier, Panamax, product tanker, Suezmax, tanker, ULCC, VLCC	Introducing a point
2	Tankers 2: Loading and discharging	Poster	cargo hose, cargo pump, cargo vapor, discharge, inert gas system, load, ship/shore checklist, spill, top off, transfer, valve, vent	Listing steps
3	Container ships	Article	cargo crane, cargo hold, cell guide, container ship, feeder, feedermax, geared, gearless, hatch coaming, intermodal container, lashing system, ULCV	Describing experience
4	Wire	Manual	core, fishhook, galvanized, kink, lay, length of the lay, seizing, splice, spool, strand, wear, wire rope	Asking for an opinion
5	Marlinespike seamanship 1	Manual	against the sun, bight, bitter end, coil, coil down, fake down, fiber rope, flemish down, line, marlinespike seamanship, part, take a turn, whipping, wire, with the sun	Giving a warning
6	Marlinespike seamanship 2	Manual	bend, bowline, breaking strain, hitch, knot, loop, parcel, secure, SF, spar, SWL, turn, worm	Describing consequences

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1 Tankers 1: Types



BRYANT & Sons
SHIP MANUFACTURERS

HIGH-QUALITY MERCHANT NAVY PROVIDERS SINCE 1959

What do we offer?

Bryant & Sons manufactures a wide range of **tankers** and vessels. We classify our ships by the type of cargo they carry. You can also request a ship with a specific **deadweight tonnage (DWT)**, if necessary.

Crude tankers are our most popular products. We offer many sizes; always consult us about sizes before placing an order. We offer standard **Panamax**, **Aframax**, and **Suezmax** tankers. We also manufacture **VLCCs** and **ULCCs** for oversized cargo loads.

Specialized tankers are available for cargo other than **crude** oil:

- **Product tankers** for refined petroleum products

4 Read the sentence pairs. Choose which word or phrase best fits each blank.

Speaking

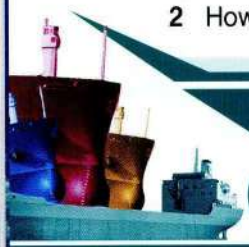
8 With a partner, act out the

2 Tankers 2: Loading and discharging

Get ready!

1 Before you read the passage, talk about these questions.

1 What are a few dangers of transferring cargo?
2 How can seamen avoid these dangers?



TANKER SAFETY

CARGO Transfer

You can never be too careful when **loading** or **discharging** cargo. Remember that **spills** present a major safety concern on any tanker. Before you help **transfer** cargo, make sure you understand the procedure. Ask your officer for a copy of the Transfer Plan and the **ship/shore checklist**. Repeat safety inspections in your part

Reading

2 Read the tanker safety poster. Then, choose the correct answers.

1 What is the purpose of the poster?
- **A** to improve the speed of cargo transfer
- **B** to describe the proper methods to clean up spills
- **C** to provide guidelines for loading and discharging cargo
- **D** to identify common errors made during cargo transfer

2 Which of the following does NOT take place during loading?
- **A** checking vents
- **B** monitoring tank levels
- **C** topping off slowly
- **D** checking the inert gas

4 Write a word or phrase that is similar in meaning to the underlined part.

1 One problem with <u>a device for controlling the flow of oil</u> is that it might become stuck. v _ _ _ _

2 There was an <u>overflow</u> at the port yesterday. _ p _ _ _

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS

3 Container ships

Shipping: Past and Present



In the past, shipping was not as simple or efficient as it is today. Cargo was unpackaged and had to be

system. The cargo in the ship's hold is protected from water by **hatch coaming**.

5 🎧 **Listen and read the article on container ships again. What holds containers in place on board a ship?**

Listening

6 🎧 **Listen to a conversation between a seaman and a captain. Choose the correct answers.**

1 What is the purpose of the conversation?

A to discuss the [illegible]'s experience

B It is geared.

about his or her time on container ships.

Listen again and complete the

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

Excuse me, I'm looking for ...

I see you have experience ...

What were your duties?

Student A: You are a seaman. Talk to

appointment with a ca

4 Wire

rope

Introduction to wire:
Construction and Splicing

4 Fill in the blanks with the correct words from the word

5 Marlinespike seamanship 1

Speaking

4 Place the words and phrases from the word bank ... roles below based on Task 7.

Word BANK

6 Marlinespike seamanship 2

5 🎧 **Listen and read the chapter on marlinespike seamanship again. Why would a seaman worm and parcel a line?**

Listening

6 🎧 **Listen to a conversation between a naval instructor and a student. Choose the correct answers.**

1 What is the conversation mainly about?

A how to secure lines safely
B different types of connections
C why parceling is important
D calculating strain limits

2 What aspect of line protection does the man remind the woman about?

A calculating the safe working load
B worming and parceling the line
C checking the breaking strain
D choosing the right connection

7 🎧 **Listen again and complete the conversation.**

Instructor: Ingrid, let's see what you've learned about **1** _____ _____. What's the best way to form an eye around a spar?

Student: Hmm. A **2** _____ _____ would probably be easiest.

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

What's the best ...
How do you avoid ...
You can calculate ... based on ...

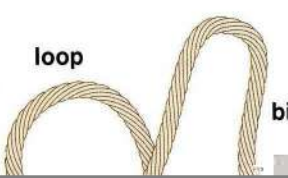
Student A: You are a naval instructor. Talk to Student B about:

- securing lines
- avoiding overload
- line protection

Student B: You are a student. Talk to Student A about securing lines.

Writing

9 **Use the chapter on marlinespike seamanship and the conversation from Task 8 to fill out the student's notes.**



7 Blocks and tackles



Get ready!

1 Before you read the passage, talk about

4 Read the sentences and choose the correct words.

1 The block had a single **sheave / shell** to guide the rope.
2 Except for a single-whip, every **purchase / fall** will multiply power by some amount.
3 A block with three sheaves is a **luff / fall**.
4 The **falls / purchases** run through the tackle.
5 A **shell / luff** covers the sheaves.

5 Listen and read the chapter on blocks and tackles again. What equipment is needed for a twofold purchase?

Listening

6 Listen to a conversation between an officer and a seaman. Mark the following statements as true (T) or false (F).

1 __ A single-whip has twice the mechanical advantage of a runner.
2 __ The woman planned to use a gun tackle.
3 __ The man recommends using a twofold purchase.

7 Listen again and complete the conversation.

Officer: Let's take a look at how to **1** _____ _____ a tackle. You're familiar with the single-whip, right?
Seaman: Yes, sir. The single-whip has the rope **2** _____ _____ the sheave.
Officer: And how is a runner different?
Seaman: **3** _____ _____ is reversed. This doubles the mechanical advantage.
Officer: What tackle would you use for the load **4** _____ _____ _____ us?
Seaman: Sir, I would use a gun tackle.
Officer: Do you know how much this load weighs?
Seaman: Not exactly, sir. I was estimating, and **5** _____ _____ _____ a gun tackle would do it.
Officer: You'd **6** _____ _____ rely on estimates alone. Remember that safety is the number one priority here.
Seaman: Yes, sir.
Officer: The best tackle for this load would be a **5** _____ _____. So what do you need for that?
Seaman: Two blocks, and each block should have two sheaves.

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

Let's look at ...
What tackle would you ...
Remember that ...

Student A: You are an officer on a Merchant Navy ship. Talk to Student B about:

- how to set up a tackle
- what type you would recommend
- reminders about safety

Student B: You are a seaman. Talk to Student A about the tackle needed for a load.

Writing

9 Use the chapter on blocks and tackles and the conversation from Task 8 to fill out the descriptions for each tackle.

Types of tackles

Single-whip: _____
_____
_____

Runner: _____
_____
_____

Gun tackle: _____
_____
_____

8 Loading equipment

4 Read the sentence pairs. Choose which word or phrase best fits each blank.

1 **rig / draft**

A The officer used a _____ because she needed to move several cargo items at once.

B The crew feared that the _____ might be too weak to support the mast.

2 **truck lift / gemini crane**

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

I want to talk about ...

He's got ...

What kind of ...

9 Cargo handling and storage



Get ready!

1 Before you read the passage, talk about these questions.

1 What are some types of goods that are commonly transported?

2 Which types of goods might require special care when they are being transported?

Reading

2 Read the poster on cargo handling. Then, choose the correct answers.

1 What is the main purpose of the poster?

4 Fill in the blanks with the correct words and phrases from the word bank.

WORD BANK

live cargo　dusty goods　dunnage
currency　odorous goods　shift

1 The shipment of _____ left a fine residue over the stowage deck.
2 Strong, dry wood makes the best sort of _____.
3 Keep _____ and other highly valuable items locked up during transport.
4 We have several horses among the _____.
5 Some cargo might _____ and alter the vessel's weight distribution.
6 _____ like toxic chemicals should be kept away from other cargo.

5 Listen and read the poster on cargo handling again. How should stowage be prepared for new c[illegible]?

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

I understand we have ...
I hope those shipments are ...
I inspected the ... to make sure ...

Student A: You are a captain. Talk to Student B about:

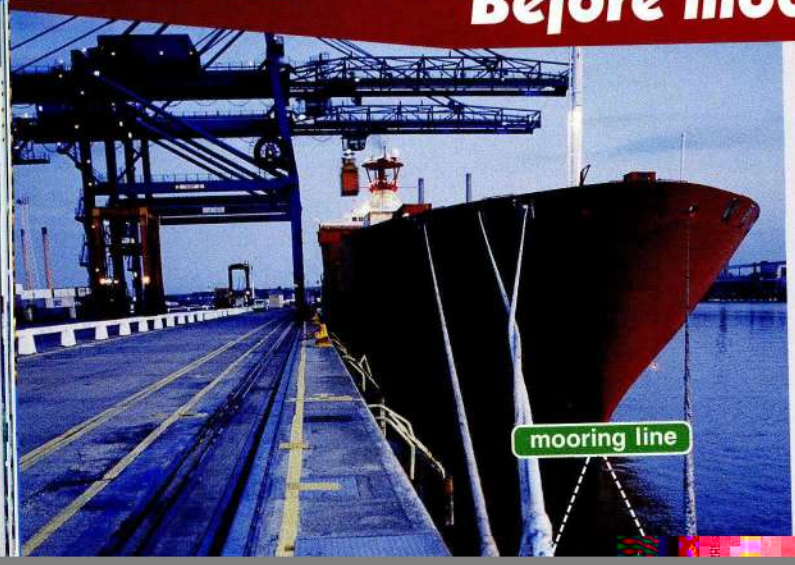
- a cargo shipment
- types of goods being transported
- how goods are stored

Student B: You are an ensign. Talk to Student A about a cargo

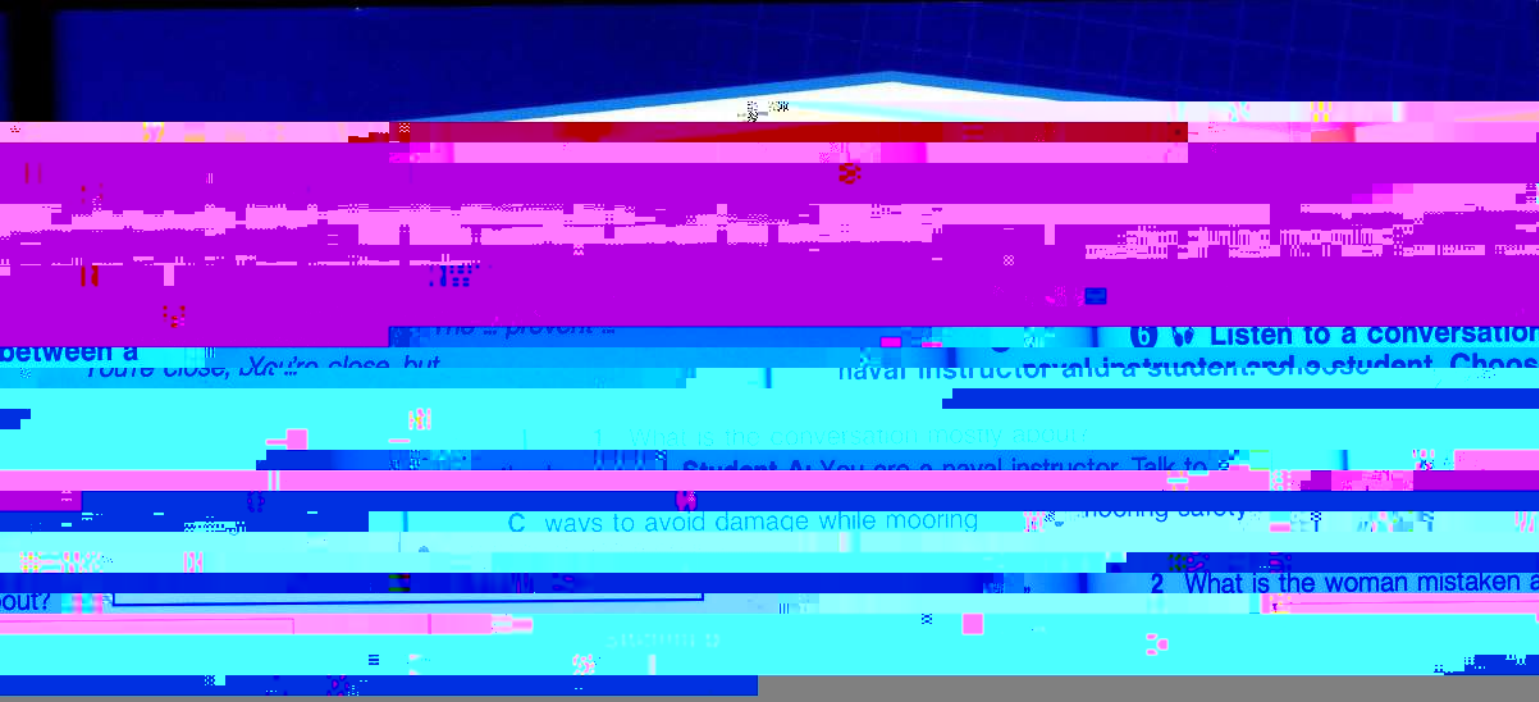
[illegible] Listening

10 Mooring

Before mooring, READ THIS FIRST!



It's everyone's responsibility to avoid damage to ships and piers. Please take a moment to brush up on steps for **mooring**.
ARRIVING AT PORT: **Mooring lines** should be made ready to be sent to the **pier**. They should be faked down on deck or taken off the spool and the eye run through a chock. A **closed chock** or **roller chock** provides a smooth surface for mooring lines to move across and change direction on. A roller chock has one or two cylinders that roll when a line moves across them to reduce abrasion. Most **fenders** and **camels** will be in place on the pier prior to the ship's arrival.
AT PORT: When the ship is along side of the pier, lines are lowered to the pier, passed around a **cleat** or **bollard**. When given the command to "**heave around**" all slack is taken out of the mooring line. When the ship is stable and in position, the mooring line is **belayed** to a set of **bitts** by using a "round turn"



11 Anchoring



4 Write a word or phrase that is similar in meaning to the underlined part.

1 The captain ordered us to bring the anchor to a <u>position just</u>

Speaking

8 With a partner, act out the roles below based on Task 7

12 Towing

Speaking

4 Read the sentence pairs. Choose which word

With a partner, act out the

roles below based on Task 7.

lose to each other.

USE LANGUAGE SUCH AS:


13 Weather
WEATHER REPORTS

4 Fill in the blanks with the correct words from the word bank.

WORD BANK

precipitation hurricane typhoon hail

1 A _____ is only found in the Pacific Ocean.
2 A _____ is only found in the Atlantic Ocean.
3 Rain, fog, and snow are types of _____.
4 Pellets of ice falling from the sky is called _____.

5 Listen and read the weather reports on a website again. What type of weather conditions are expected in Thames Waters?

Listening

6 Listen to a conversation between a ship owner and a captain. Choose the correct answers.

1 What is the conversation mainly about?
A a possible typhoon

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

There's a ... forming in the ...
It looks like conditions will ...
When do you think ...

Student A: You are a captain. Talk to Student B about:

- weather conditions
- ship safety
- estimated shipping times

Student B: You are a ship owner. Talk to Student A about the weather.

14 First aid



This guide contains basic first aid information for emergency use. With serious injuries, professional medical personnel

4 Write a word or phrase that is similar in meaning to the underlined part.

1 Apply <u>manual simulations of a heartbeat</u> until the medical personnel arrive. _ h _ _ t c _ _ _ r _ s s _ _ _ s

2 After she cleaned the burn, the doctor wrapped it with a <u>cloth covering</u>. _ a _ _ a _ e

3 The oil fire gave Jones a third degree <u>injury from heat</u>.

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

What happened ...

Did you ...

15 The day of an officer

Journal
June 14

Carol Aimes, Third Officer



Today was my first day **aboard** the SS Youngstown as Third Officer. I **addressed** Captain Peters immediately. We kept



4 __ sweep

8 __ underway

radar **sweep**. Fortunately,

Officer Thomas reports the

r sweep will not get an

around it

disappoint him on the first day.

H moving through the water

h

4 Read the sentence pairs. Choose whic

1 escort / watch for

Read the officer's journal. Then, mark the

e depart.

before w

5 🎧 **Listen and read the officer's journal again. What tasks will the woman complete the next day?**

Listening

6 🎧 **Listen to a conversation between an officer and a captain. Choose the correct answers.**

1 What is true about the woman?

- **A** She must serve as the lookout.
- **B** She expects to come aboard at 0800.
- **C** She will perform the duties of a pilot.
- **D** She will escort the pilot aboard.

2 What will the woman do first?

- **A** escort the pilot aboard
- **B** hoist the colors
- **C** prepare the ship for Mr. Anderson
- **D** arrange a lookout

7 🎧 **Listen again and complete the conversation.**

Officer: Well, we're **1** _____ _____ at 0800 tomorrow, right?

Captain: Yes. Was that your question?

Officer: No, sir. I need to know if I should arrange a lookout for the operation.

Captain: I see. That's already **2** _____ _____ _____, but thank you for checking.

Officer: Of course. And when should

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

We're getting underway at ...
Should I arrange a ...
I'll see to ...

Student A: You are a new officer. Talk to Student B about:

- when you will get underway
- arrangements you could make
- another task you'll complete

Student B: You are a Captain. Talk to Student A about what tasks to do before departing.

Writing

9 **Use the officer's journal and the conversation in Task 8 to fill out the officer's journal entry.**



Glossary

aboard [ADJ-U15] If something is **aboard**, it is on a ship.

address [V-T-U15] To **address** someone is to speak to him or her.

Aframax [N-COUNT-U1] An **Aframax** is a mid-size crude oil carrier.

against the sun [ADJ-U5] If a rope is coiled **against the sun**, it is coiled counterclockw

anchorage [N-COUNT-U11] An **anchorage** is an area used by ships when anchoring.

anchoring [N-UNCOUNT-U11] **Anchoring** is the process of stopping mid-ocean by drop

se.

ing a hook and chain into

the water.

the water

cast off [V-I-U10] To **cast off** is to release a line from a pier.

catenary [N-COUNT-U12] A **catenary** is a deep curve a towline forms under water to reduce tension on the line.

cell guide [N-COUNT-U3] A **cell guide** is a vertical structure that organizes containers in the cargo hold of a ship.

chafing chain [N-COUNT-U12] A **chafing chain** is a chain used to protect towing lines from excessive wear.

chain stopper [N-COUNT-U1] A **chain stopper** is a shackle and a pelican hook used to keep a housed anchor in place.

Glossary

fall [N-COUNT-U7] A **fall** is a rope or chain pulled upon to hoist an object.

feeder [N-COUNT-U3] A **feeder** is a small capacity container ship that is likely to have a cargo crane.

feedermax [N-COUNT-U3] A **feedermax** is the largest classification of feeder ship.

fender [N-COUNT-U10] A **fender** is a cushion made of rubber or line that hangs from the side of a ship and acts as a shock absorber between the ship and pier.

fiber rope [N-COUNT-U5] A **fiber rope** is a rope made out of natural or synthetic materials such as nylon or hemp.

first aid [N-UNCOUNT-U14] **First aid** is emergency treatment given to a sick or injured person before professional medical care arrives.

fishhook [N-COUNT-U4] A **fishhook** is a broken wire on the outer strands of a rope.

intermodal container [N-COUNT-U3] An **intermodal container** is a reusable steel box of a standardized size that is used to transport cargo.

kink [N-COUNT-U4] A **kink** is a tight bend, crimp, or twist in a rope.

knot [N-COUNT-U6] A **knot** is a configuration of one line that secures it around an object.

lashing system [N-COUNT-U3] A **lashing system** is a set of wires, rods, or chains used to hold containers in place aboard a ship.

lay [N-UNCOUNT-U4] The **lay** of a rope is the direction of its spiral.

length of the lay [N-UNCOUNT-U4] The **length of the lay** is the interval it takes for a strand of wire to make a complete revolution around the rope.

line [N-COUNT-U5] A **line** is a piece of rope that has been cut for a specific purpose.

liquefied gas tanker [N-COUNT-U1] A **liquefied gas tanker** is a vessel that is designed to carry materials that have been turned into liquid from their natural vapor state.

live cargo [N-UNCOUNT-U9] **Live cargo** is animals being transported.

LNG [N-UNCOUNT-U1] **LNG**, or liquefied natural gas, is a substance that is created when natural gas vapor is cooled and turned into a liquid.

load [V-T-U2] To **load** cargo is to transfer the cargo onboard a vessel for transport.

lookout [N-COUNT-U15] A **lookout** is a person who stands on the deck to search for obstructions or other potential problems in a ship's course.

loop [N-COUNT-U6] A **loop** is a round opening formed by crossing a line over itself.

LPG [N-UNCOUNT-U1] **LPG**, or liquefied petroleum gas, is a substance that is created when petroleum gas vapor is cooled and turned into a liquid.

luff [N-COUNT-U7] A **luff** is a tackle with an odd number of sheaves.

make fast [V-T-U15] To **make** a rope **fast** to something is to tie it securely.

marlinespike seamanship [N-UNCOUNT-U5] **Marlinespike seamanship** is the process of working with rope or with a line.

mooring [N-UNCOUNT-U10] **Mooring** is the process of attaching or tying a ship to a pier.

mooring line [N-COUNT-U10] A **mooring** [illegible]

Glossary

Suezmax [N-COUNT-U1] A **Suezmax** is a crude tanker which can pass through the Suez canal.

sweep [N-COUNT-U15] A **sweep** is the rotating radar a ship uses to scan the area around it.

swell [N-COUNT-U13] A **swell** is a long wave.

swinging crane [N-COUNT-U8] A **swinging crane** is a crane that can swing in a complete 360-degree arc and therefore reach any part of the hatch.

tackle [N-COUNT-U7] A **tackle** is the set of ropes and blocks used to increase the mechanical advantage.

take a turn [VERB PHRASE-I-U5] To **take a turn** is to loop a line around an object.

take in [V-T-U10] To **take in** a line is to bring it back to a ship.

tanker [N-COUNT-U1] A **tanker** is a ship that carries large amounts of liquids, such as petroleum.

top off [V-T-U2] To **top off** a tank is to finish loading by carefully filling it to the top.

towing [N-UNCOUNT-U12] **Towing** is the act of pulling a ship or other vehicle behind another one.

towing hawser [N-COUNT-U12] A **towing hawser** is a heavy cable used to tow a ship.

towing rig [N-COUNT-U12] A **towing rig** is a structure on a ship that is used to tow another ship.

towing-pad eye [N-COUNT-U12] A **towing-pad eye** is a part that attaches a towing chain to the towing rig of a ship.

towline [N-COUNT-U12] A **towline** is the total length of the hawser and chafing chain used to tow a ship.

transfer [V-T-U2] To **transfer** cargo is to move the cargo on or off a vessel.

truck lift [N-COUNT-U8] A **truck lift** is a powerful mobile vehicle that transports cargo weighing up to eighty tons.

tug [N-COUNT-U14] A **tug** is a ship that is designed to tow or pull other ships.

turn [V-T-U6] To **turn** something is to wrap it tightly around the outside of a line's parceling, in the opposite

ocess of handing responsibility/a position to a new person

is similar to a gun tackle, but with double blocks (two sheaves).

c/c Ocean with winds greater than 74 miles per hour.

(Ultra Large Crude Carrier) is a crude tanker that can

turnover [N-UNCOUNT-U15] **Turnover** is the p

twofold purchase [N-COUNT-U7] A **twofold purchas**

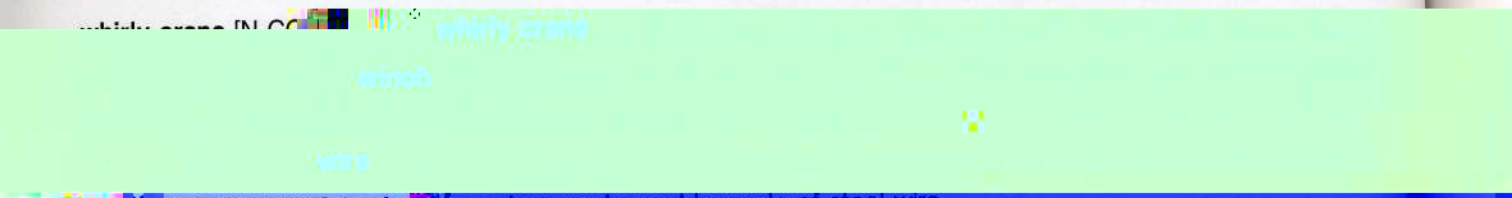
typhoon [N-COUNT-U13] A **typhoon** is a storm more than

Glossary

weigh [V-T-U11] To **weigh** anchor is to lift the anchor from the sea floor so that a ship may depart.

whipping [N-COUNT-U5] A **whipping** is a piece of tape or some other material that is tied around the end of a line to keep it from unraveling.

whirly crane [N-C



wire rope [N-COUNT-U4] A **wire rope** is a cord or cable made of steel wire.

with the sun [ADJ-U5] If a rope is coiled **with the sun**, it is coiled in a clockwise direction.

worm [V-T-U6] To **worm** a line is to wrap a thin length of material between the lays of a line to create a smooth, round surface.

CAREER PATHS

Merchant Navy

Scope and sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Ship business	Email	cargo ship safety construction certificate, certificate of documentation, certificate of financial responsibility, certificate of inspection, certificate of insurance, crew list, deadweight certificate, derat, international load line certificate, IOPP, register of cargo gear, shipping articles, tonnage certificate, tonnage tax receipts, TOVALOP	Estimating time
2	Log books	Guide	bell book, conviction, course recorder, deck log, draft readings, heavy weather, injury, investigation, medical log, official logbook, oil record book, punishment, radio messages, test, wages	Disagreeing with a claim
3	Inspections	Email	boiler inspection, deficiency, dry dock, embarked, inspection, interval	Expressing

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Unit 2 - Log books 6

Unit 3 - Inspections 8

Unit 4 - Drills and station bills 10

Unit 5 - Rules of the road 1 12

Unit 6 - Rules of the road 2 14

Unit 7 - International ports 16

Unit 8 - Safety 18

Unit 9 - Firefighting 20

Unit 10 - Maintenance and repair 22

Unit 11 - Survival craft 24

Unit 12 - Elements of navigation 26

Unit 13 - Navigation methods 28

4 Place the words and phrases from the word bank in the correct box.

word BANK

international load line certificate
crew list
deadweight certificate
certificate of insurance
certificate of documentation
shipping articles
tonnage tax receipts

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

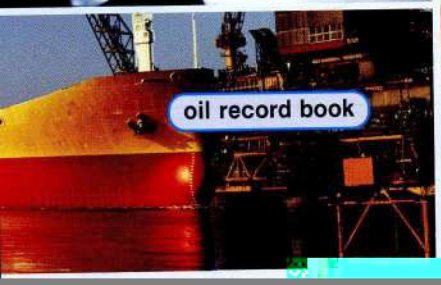
The inspection is ...

Did you get the ...

It will be renewed ...

2 Log books







S GUIDE

Get ready!

1 Before you read the passage, talk about these questions.

1 What are some different logs kept on ships?

2 Why must ship crews keep accurate and detailed logs?

Reading

2 Read the sailor's guide. Then, mark the following statements as true (T) or false (F).

1 __ Draft readings are recorded in the bell book.

2 __ Injuries to crew members are recorded in two separate logs.

4 **Read the sentence pairs. Choose which word or phrase best fits each blank.**

1 **conviction / punishment**

A The _____ for missing watch duty is a loss of wages.

B The man was charged with theft, but there was not enough evidence for a _____.

2 **deck log / official log book**

A The officer recorded strong winds in the _____.

B Only the captain and first officer can place entries in the _____.

3 **oil record book / bell book**

A After reviewing the _____, the

7 **Listen again and complete the conversation.**

Captain: Hello Mr. White. Thanks for coming.

Investigator: Of course. Let's get right **1** _____ _____ _____.

Captain: Good idea. Basically, a tug is claiming we left port **2** _____ _____ last month.

Investigator: Yes. They say that your wake caused it to **3** _____ _____ the pier.

Captain: Exactly. But that's **4** _____ _____ _____.

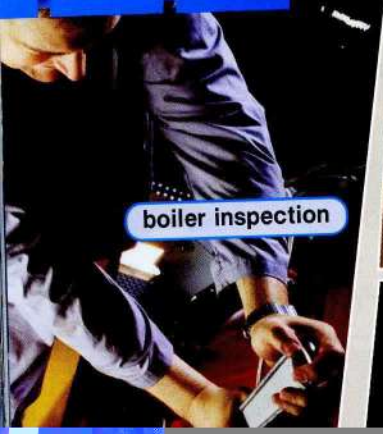
Investigator: So, what did happen?

Captain: We were at the appropriate speed. But that tug wasn't moored properly.

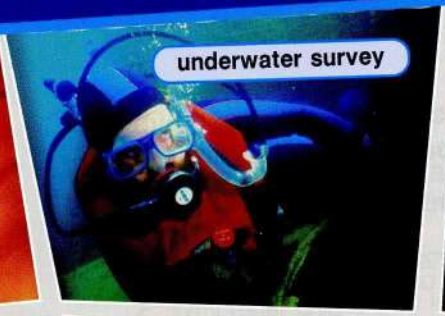
Investigator: And do you have any record to **5** _____ _____ _____?

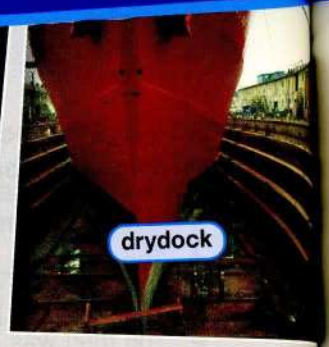
Captain: Our speed is recorded in the

3 Inspections











Reading

2 Read the email to a ship's captain. Then, choose the correct answers.

4 Read the sentence pairs. Choose which word or phrase best fits each blank.

1 **structural integrity / underwater survey**

A A(n) _____ was performed because there was no drydock available.

B The vessel was well-constructed and had good _____.

2 **deficiency / minimum manning certificate**

A The officer noticed a small _____ in the lifesaving equipment.

B The _____ stated that the ship needed at least six engineers.

3 **embarked / up-to-date**

A The inspector counted thirty _____ crew members.

B The log book was not _____.

4 **interval / inspection**

A The S.S. Maria has an _____ due within two months.

B Every ship must be examined after a two-year _____.

5 Listen and read the email to a ship's captain again. What should the captain do if he or she notices a deficiency prior to an inspection?

Listening

6 Listen to a conversation between a captain and an inspector discussing an inspection. Mark the following statements as true (T) or false (F).

1 __ The woman noticed a problem with a boiler room door.

2 __ The log book was not up-to-date.

3 __ There is a problem with the ship's structural integrity.

7 Listen again and complete the conversation.

Inspector: Good morning, Captain Jameson. Ready to **1** _____ _____ the inspection?

Captain: Sure. **2** _____ _____ _____ it's good news!

Inspector: Overall, it is. There are just **3** _____ _____ _____ we'll need to check up on.

Captain: Okay, bad news first. What kinds of deficiencies **4** _____ _____ _____?

Inspector: Well, one of the boiler room doors jams easily. That could be a problem for **5** _____ _____.

Captain: Right. Actually, we noticed that and we have a new hinge **6** _____ _____ _____.

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

I just hope ...

What kinds of ...?

Actually, we noticed that ...

Student A: You are an inspector. Talk to Student B about:

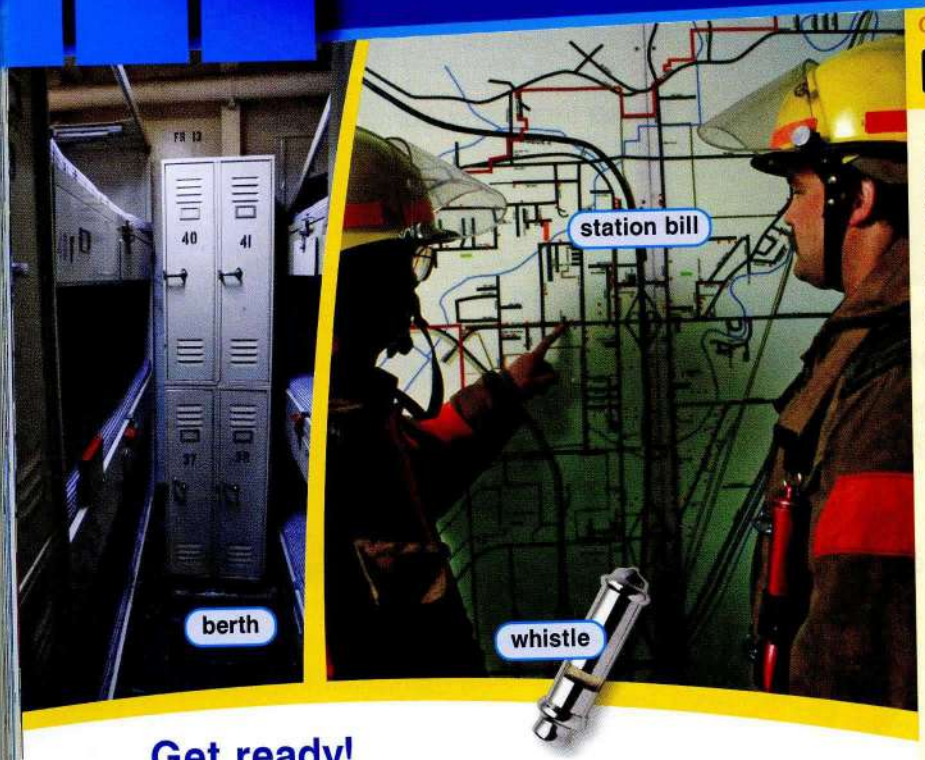
- deficiencies
- ordering new equipment
- structural integrity

Student B: You are a captain. Talk to Student A about your ship's inspection.

Writing

9 How the email to a ship's captain and the

4 Drills and station bills



Chapter Nine:

Drills & Station Bills

One crucial duty of any crew member is to always be prepared for emergencies. **Drills** are one important way to prepare both crew members and passengers for a **disaster** or emergency. Crew members are responsible for understanding proper drill procedures onboard their vessel. On a passenger vessel, the **life boat drill** is especially important. All passengers should know their muster locations and **life boat stations**.

Crew members should also be familiar with a ship's **alarm signals**. Vessels may use **whistles** or intercom alarm systems, or both. Different patterns of whistle or alarm **blasts** signify different procedures. Use of these signals should become second nature to sailors.

Sailors should also familiarize themselves with **station bill** and **muster list** locations. Both documents should be posted in **conspicuous** locations throughout the vessel. Many ships now use standard station bills for listing **emergency duties**. Rather than using names, standard station bills list duties according to a sailor's **berth** or **article number**. A well-prepared sailor should memorize the information on these documents before sailing. This allows for quicker response time in case of emergency and a safer voyage in general.

Get ready!

1 Before you read the passage, talk about these questions.

1 Why are drills so important for crew members?

2 What documents outline a ship's emergency procedures?

Reading

2 Read the chapter from a sailor's guide.

Vocabulary

3 Read the sentence pairs. Choose which word or phrase best fits each blank.

1 **emergency duties / article number**

A Every sailor should know how to complete

4 Write a word or phrase that is similar in meaning to the underlined part.

1 The location of the muster list was not <u>obvious</u> enough. _ o _ _ p _ _ _ _ u s

2 The captain used <u>an instrument that makes a high-pitched sound</u> to issue an alarm. _ _ _ s _ l _

3 The sailor heard the <u>loud noise indicating an emergency</u> and flew to action. a _ _ _ m _ i _ _ _ l

4 The captain revised the <u>document explaining alarm signals and emergency duties</u> before sailing. _ t _ _ _ o _ b _ _ _

5 The hurricane was an <u>event causing major damage or injury</u>. _ _ _ a _ t _ _

5 Listen and read the chapter from a sailor's guide again. Where should a station bill and muster list be posted?

Listening

6 Listen to a conversation between a sailor and an officer. Mark the following statements as true (T) or false (F).

1 __ The man already knows his emergency duties.

2 __ The station bill uses names to list emergency duties.

3 __ The man thinks the alarm signals are the same as on his last vessel.

7 Listen again and complete the conversation.

Sailor: Excuse me, can I ask you a **1** _____ _____?

Officer: Of course! Are you new? I haven't **2** _____ _____ _____ before.

Sailor: Actually, yes, **3** _____ _____.

Officer: Welcome aboard! What are you **4** _____ _____?

Sailor: It's just that I still don't know the **5** _____ _____ for this ship. I don't even know what my emergency duties are supposed to be.

Officer: No one has explained emergency procedures to you?

Sailor: Not **6** _____ _____.

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

I still don't know ...
You're kidding!
You just have to ...

Student A: You are a sailor. Talk to Student B about:

- being new on the ship
- the location of station bills
- emergency duties

Student B: You are an officer. Talk to Student A about the station bill and the muster list.

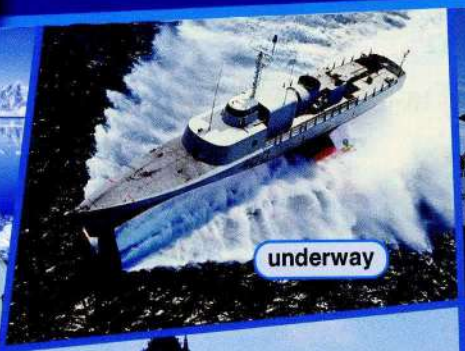
Writing

9 Use the chapter from a sailor's guide and the conversation from Task 8 to summarize a new crew member's emergency duties. Include: the crew member's department, primary emergency duties, and secondary emergency duties.



5 Rules of the road 1











Reading

2 Read the guide on rules of the road. Then, choose the correct answers.

1 What is the purpose of the article?

A to explain why COLREGs are different for

4 **Read the sentence pairs. Choose which word or phrase best fits each blank.**

1 **international rules / Unified Inland Rules**

[redacted]

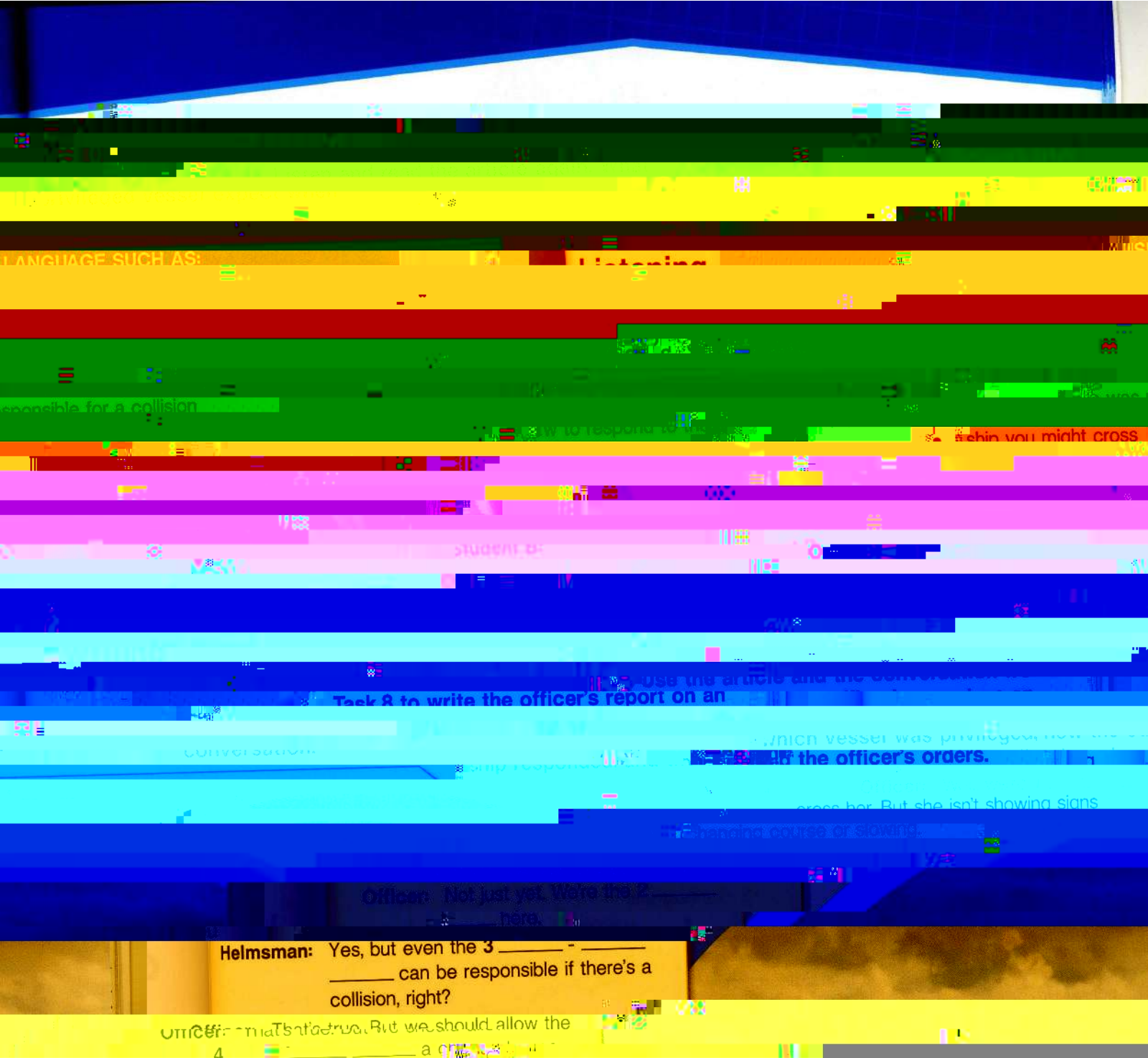
7 **Listen again and complete the conversation.**

Instructor: I know you've reviewed the COLREGs, Perkins. What **1** _____ _____ _____ me about them?

Student: Let's see. They were developed by the International Maritime Organization in 1972.

[redacted]

6 Rules of the road 2


Helmsman: Yes, but even the 3 _____ - _____ _____ can be responsible if there's a collision, right?

7 International ports

Get ready!

1 Before you read the passage, talk about these questions.

1 What happens when people go through customs?

2 What documents must be presented at a port of call?



Reading

2 Read the notice. Then, choose the correct answers.

1 What is the purpose of the notice?

A to prepare crew members for travel to international ports

B to explain how to fill out documents

C to assign tasks for arrival at a port

D to show the difference between international and domestic ports

2 What is NOT a required document?

A a crew effects list

B a stores list

C a shot record

D a maritime declaration of health

4 Write a word or phrase that is similar in meaning to the underlined part.

1 The crew must hand in their <u>documentation of immunizations</u> before the ship departs. _ _ o _ r _ c _ _ d s

2 In some ports, it is customary to give a <u>small amount of money</u> to officers. _ r _ _ u _ _ y

3 When a ship pulls into the <u>harbor of a foreign country</u>, it flies a courtesy flag. _ _ r _ o _ c _ _ l

4 It's important to remember that legal goods in one country might be <u>prohibited substances</u> in another. c _ n _ _ _ b _ n _

5 Since the item being shipped was <u>not from my native country</u>, I had to pay a tariff. _ o _ e _ g _

6 The crew was placed in <u>isolation</u> because of an outbreak of measles. _ u _ _ a _ t _ _ e

5 Listen and read the notice again. What document might a[redacted]

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

Do we have ...
Has everyone ...
Good point ...

Student A: You are a ship's captain. Talk to Student B about:

- preparation for arrival at a port
- what documents are required
- what the crew needs to know

Student B: You are a ship's

8 Safety



4 Read the sentence pairs. Choose which word or phrase best fits each blank.

1 **dogged / hooked**

A Keep watertight doors shut and _____ when not in use.

B If a door is open, make sure it is also _____.

2 **toxic / explosive**

A Never light matches near _____ gases.

B A(n) _____ gas can kill in minutes, even if you can't smell it.

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

Did you check ...

Have you ventilated ...

It's very important ...

9 Firefighting





Get ready!

1 Before you read the

4 Fill in the bla[illegible]th the [illegible] Listen

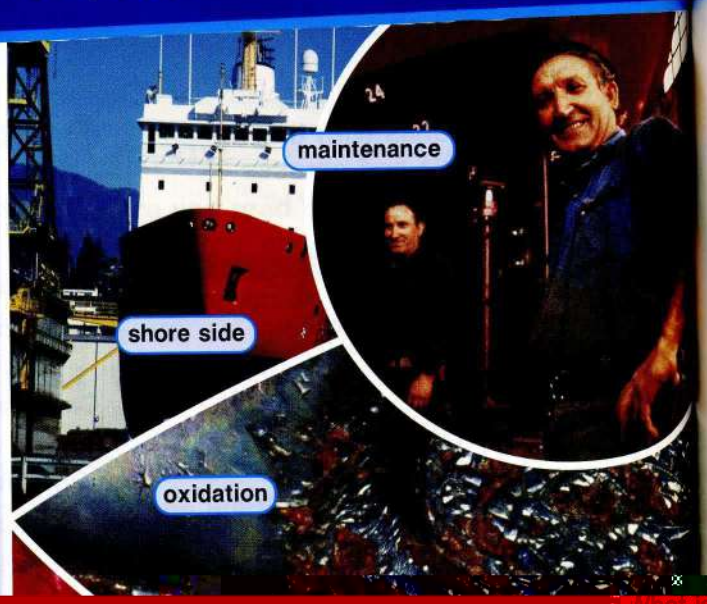
10 Maintenance and repair

Get ready!

1 Before you read the passage, talk about these questions.

1 What are some repairs and maintenance tasks a ship commonly requires?

2 What kinds of coating are used on the hulls and decks of ships?



Reading

2 Read the email. Then, choose the correct answers.

e main purpose of the email?

B to cancel a scheduled dry dock

4 **Fill in the blanks with the correct words and phrases from the word bank.**

WORD BANK

coating epoxy maintenance
sea valve sea chest oxidized
plastic coating breakdown

1 The captain needed to decide what kind of _____ to use on the deck.

2 The ship was in dry dock for routine _____.

3 The _____ was closed to keep out water.

Speaking

8 **With a partner, act out the roles below based on Task 7. Then switch roles.**

USE LANGUAGE SUCH AS:

I'd rather ...
What do you think ...
I'd go with ...

Student A: You are a ship's

11 Survival craft

Get ready!

1 Before you read the passage, talk about these questions.

1 What are some different types of survival craft?

2 How can survival craft be used in case of an emergency?

Reading

2 Read the pamphlet from a lifeboat company. Then, choose the correct answers.

1 What is the main purpose of the pamphlet?

A to give step-by-step instructions on operating lifeboats

B to describe different types of survival

4 Read the sentence pairs. Choose which word or phrase best fits each blank.

1 **signaling mirror / survival craft**

A A _____ is used for getting the attention of rescuers in an emergency.

B A _____ is used for escape from a ship

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

12 Elements of navigation



4 Place the words and phrases from the word bank in the correct box.

WORD BANK

degree Equator parallel
Prime Meridian minute second
longitude meridian latitude

Lines not touching poles	_____ _____ _____
Lines from pole to pole	_____ _____ _____
Measuring units	_____ _____ _____

5 Listen and re[illegible]

7 Listen again and complete the conversation.

Officer: It **1** _____ _____ _____ got pretty banged up in that storm. The radio signal indicated hull damage and a disabled engine.

Captain: Well, we'd better **2** _____ _____ _____ and get over there to assist. What's their position?

Officer: They're at 14° 36' 17" N, 178° 32' 59" E.

Captain: So how long will it take us **3** _____ _____ _____?

Officer: Well, let's see ... We're about 120 **4** _____ _____ away. How fast can we go in these conditions?

Captain: With our current load, we can **5** _____ _____ _____ about 30 knots.

Officer: In that case, it'll take us **6** _____ _____ _____ to get there.

13 Navigation methods

4 Place the words and phrases from the word bank in the correct box.

WORD BANK

satellite fix dead reckoning
GPS line of position piloting radar
time, speed, and distance formulas

Measurements	
Modern navigation	

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

It's important to ... in case ...
What method ... ?
I thought you could use ...

Student A: You are a naval instructor. Talk to Student B about:

- navigation methods

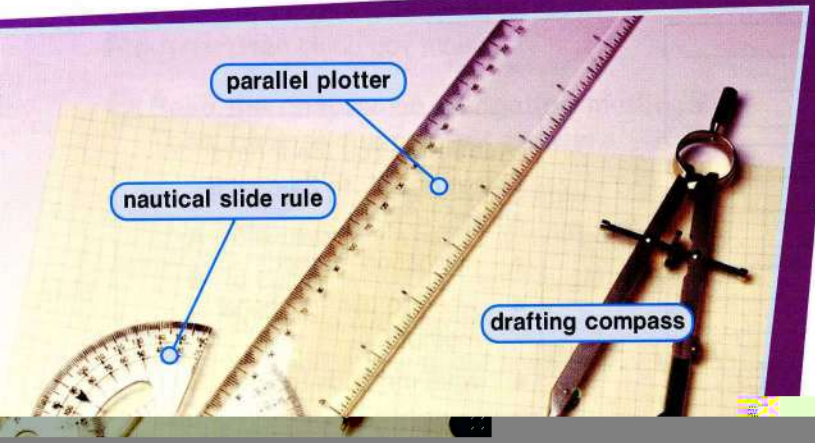
14 Navigation instruments and equipment

Get ready!

1 Before you read the passage, talk about these questions.

1 What are some tools for measuring a vessel's heading?

2 How do navigators plot courses on maps?





Reading

2 Read the guide on navigation equipment. Then, mark the following statements as true (T) or false (F).

4 **Place the words and phrases from the word bank in the correct box.**

word BANK

magnetic compass parallel ruler
sextant telescopic alidade repeater
divider parallel plotter gyrocompass

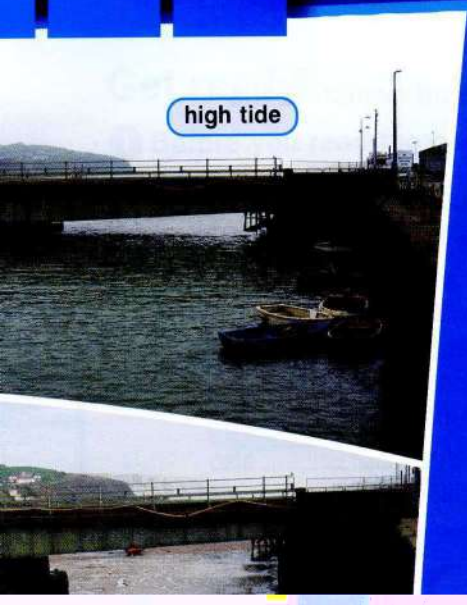
Measuring	_____

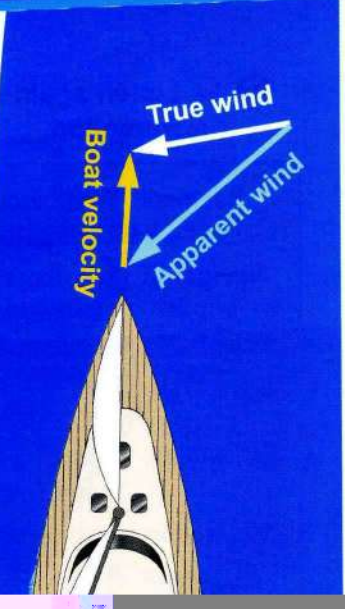
7 **Listen again and complete the conversation.**

Seaman: What about this device? It **1** _____ _____ to the divider.

Navigator: Yes, that's a compass, and it works basically the same way. You use the compass **2** _____ _____ _____ a particular position once you have measured the distance

15 Tides, currents, and winds





Get ready!

1 Before you read the passage, talk about these questions.

1 How do tides affect vessels near the shore?

2 What are some different types of wind measurements?

Reading

2 Read the report on tides, currents, and winds. Then, choose the correct answers.

1 What is the purpose of the report?

A to record conditions when leaving port

4 Place the words and phrases from the word bank in the correct box.

word BANK

flood apparent wind drift true wind veer ebb relative velocity

Air movement	
Water movement	
Vessel movement	

5 🎧 Listen and read the report on tides, currents, and winds again. How can currents affect navigation?

Listening

6 🎧 Listen to a conversation between an officer and a pilot. Mark the following statements as true (T) or

Speaking

8 With a partner, act out the roles below based on Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

I hear that ...

There's a ... as you enter ...

You have to keep an eye on ...

Student A: You are an officer. Talk to Student B about:

- the port where you will be docking
- conditions at the port
- dangers to watch out for

Student B: You are a pilot. Talk to Student A about conditions at the port.

Writing

fill out an officer's memo to a

Glossary

alarm signal [N-COUNT-U4] An **alarm signal** is a

certificate of insurance [N-UNCOUNT-U1] A **certificate of insurance** is an international certificate that shows that the vessel and its contents are insured.

chart [N-COUNT-U12] A **chart** is a type of map marked with latitude and longitude lines that pinpoint positions on oceans, shorelines, and waterways.

classification [N-COUNT-U9] A **classification** is a grouping by type.

clearance [N-COUNT-U7] A **clearance** is a written document giving permission to proceed.

CO_2 [N-UNCOUNT-U9] **CO_2** is carbon dioxide gas.

coating [N-COUNT-U10] A **coating** is a layer of something that covers an object.

collision [N-COUNT-U5] A **collision** is an instance where two or more objects violently run into each other.

COLREGs [N-UNCOUNT-U5] **COLREGs** are the International Regulations for Preventing Collisions at Sea, and is the set of rules for sea navigation, intended to prevent collisions.

compass [N-COUNT-U12] A **compass** is a device with two pointed sticks connected by a hinge at the top used for drawing distances from a fixed point on a map.

compass [N-COUNT-U12] A **compass rose** is a symbol on a map that shows the cardinal directions.

Glossary

departure permit [N-COUNT-U7] A **departure permit** is a document allowing a vessel to leave the port.

derat [N-UNCOUNT-U1] A **derat** is a form that shows that a ship has been inspected for rats or recently fumigated.

deteriorate [V-I or T-U10] To **deteriorate** is to wear out or worsen.

disaster [N-COUNT-U4] A **disaster** is an event that causes serious damage, injury, or loss of life.



Glossary

lifeline [N-COUNT-U9] A **lifeline** is an anchored line used to pull a firefighter out of an enclosed space in case of an emergency.

line of position (LOP) [N-COUNT-U13] A **line of position (LOP)** is a line on a map between one's own location and another object within sight. Multiple LOPs are used to determine one's exact location.

longitude [N-COUNT-U12] A **longitude** is one of the vertical lines that make up an imaginary grid system that covers the earth.

low tide [N-COUNT-U15] A **low tide** is a period when the ocean waters are lowest on the shore.

magnetic compass [N-COUNT-U14] A **magnetic compass** is a compass made up of a floating card with magnetic needles that naturally align themselves with the magnetic field of the Earth.

magnetic north [N-UNCOUNT-U14] **Magnetic north** is north according to the Earth's magnetic field, and differs slightly from the true geographic north pole.

maintenance [N-UNCOUNT-U10] **Maintenance** is the repair and upkeep of machinery or other property.

maritime declaration of health [N-COUNT-U7] A **maritime declaration of health** is an international document relating to the health of the crew.

medical log [N-COUNT-U2] A **medical log** is a document that records the cause, extent, and treatment of illnesses befalling crew members on a vessel.

meridians [N-COUNT-U12] A **meridian** is an imaginary circle on the earth that runs vertically through the North and South Poles and connects to given points on the Earth.

minimum manning certificate [N-COUNT-U3] A **minimum manning certificate** is a document indicating the crew members that must be aboard a vessel, their necessary qualifications, and a profile of the ship (with information such as size and owner).

minutes [N-COUNT-U12] A **minute** is a unit of measurement indicating increments between degrees. There are 60 minutes in a degree.

muster list [N-COUNT-U4] A **muster list** is a document stating what each person onboard a vessel (both crew members and passengers) should do in case of emergency.

nautical mile [N-COUNT-U12] A **nautical mile** is a unit of measurement used at sea, equal to about 2,000 yards or 6,076 feet.

nautical slide rule [N-COUNT-U14] A **nautical slide rule** is a circular mathematical instrument with a sliding piece that is marked with scales used to simplify calculations of time, distance, and velocity.

navigation [N-UNCOUNT-U12] **Navigation** is the act of charting and directing the course of a ship from one point to another.

OATH [N-UNCOUNT-U9] **OATH** is a memory aid for pull signals where each letter indicates the meaning of a series of pulls.

official logbook [N-COUNT-U2] An **official logbook** is an official and legal record, kept by the master, of occurrences and crew members on a merchant vessel.

oil record book [N-COUNT-U2] An **oil record book** is a legal document tracking how a ship transfers and discharges oil.

open lifeboat [N-COUNT-U11] An **open lifeboat** is a lifeboat that provides no covering or only partial covering.

oxidize [V-I or T-U10] To **oxidize** is to rust.

parallel [N-COUNT-U12] A **parallel** is an imaginary horizontal line that runs north and south of the equator that never crosses or meets another parallel.

parallel ruler [N-COUNT-U14] A **parallel ruler** is two rulers joined together by hinged arms in order to plot and measure direction.

Pilot Rules [N-UNCOUNT-U5] **Pilot Rules** are a set of regulations for operators which supplement the Inland Rules.

piloting [N-UNCOUNT-U13] **Piloting** is a method of navigation in which the navigator relies on sight of land or manmade markers to determine location.

plastic coating [N-COUNT-U10] A **plastic coating** is a layer of plastic covering an object.

plot [V-T-U12] To **plot** a course is to mark out present or planned positions on a map.

pole [N-COUNT-U12] A **pole** is one of the two fixed points at the top and bottom of a spinning planet.

port of call [N-UNCOUNT-U7] A **port of call** is any port where ships dock.

position [N-COUNT-U12] A **position** is the specific location of something, as measured with maps and navigational equipment.

Prime Meridian [N-UNCOUNT-U12] The **Prime Meridian** is a line of longitude at 0 degrees that divides the Earth into eastern and western halves, or hemispheres.

privileged [ADJ-U6] If a ship is **privileged**, it is expected to continue course while a burdened vessel avoids a collision.

pull signals [N-UNCOUNT-U9] **Pull signals** are tugs on a lifeline used by firefighters to communicate.

punishment [N-COUNT-U2] A **punishment** is an action taken against someone who has committed a crime and been found guilty.

quarantine [N-UNCOUNT-U7] **Quarantine** is a period of enforced restriction or isolation usually because of a contagious illness.

radar [N-UNCOUNT-U13] **Radar** is a system for determining position or speed by means of radio waves.

radio beacon [N-COUNT-U13] A **radio beacon** is a means that is broadcast from a fixed station that helps navigators calculate their bearings.

radio message [N-COUNT-U2] A **radio message** is a means of communication between ships.

rainwater collection device [N-COUNT-U11] A **rainwater collection device** is an instrument carried on survival craft which is used to catch rainwater that can be us

Glossary

satellite [N-COUNT-U13] A **satellite** is a machine that is launched into space and transmits information back to receivers on Earth.

SCBA (Self-Contained Breathing Apparatus) [N-COUNT-U8] An **SCBA (Self-Contained Breathing Apparatus)** is a device that provides breathable air.

sea anchor [N-COUNT-U11] A **sea anchor** is a device that drags behind a lifeboat or life raft to prevent drifting.

sea chest [N-COUNT-U10] A **sea chest** is a screened-in depression in a ship's hull that permits water to flow in and out of the ship.

sea valve [N-COUNT-U10] A **sea valve** is a device that controls the flow of water into a ship.

seaworthy [ADJ-U3] If a ship is **seaworthy**, it is in good condition and ready to sail.

seconds [N-COUNT-U12] A **second** is a unit of measurement indicating increments between minutes. There are 60 seconds in a minute.

set [N-UNCOUNT-U15] The **set** of a current is the direction in which it is flowing.

sextant [N-COUNT-U14] A **sextant** is a precise instrument used to determine latitude and longitude by measuring angles in degrees, minutes, and seconds.

shipping articles [N-UNCOUNT-U1] **Shipping articles** are legally binding agreements that list crew expectations, crew information, and voyage details.

shore side [ADJ-U10] If something is **shore side**, it is located on the shore, rather than at sea.

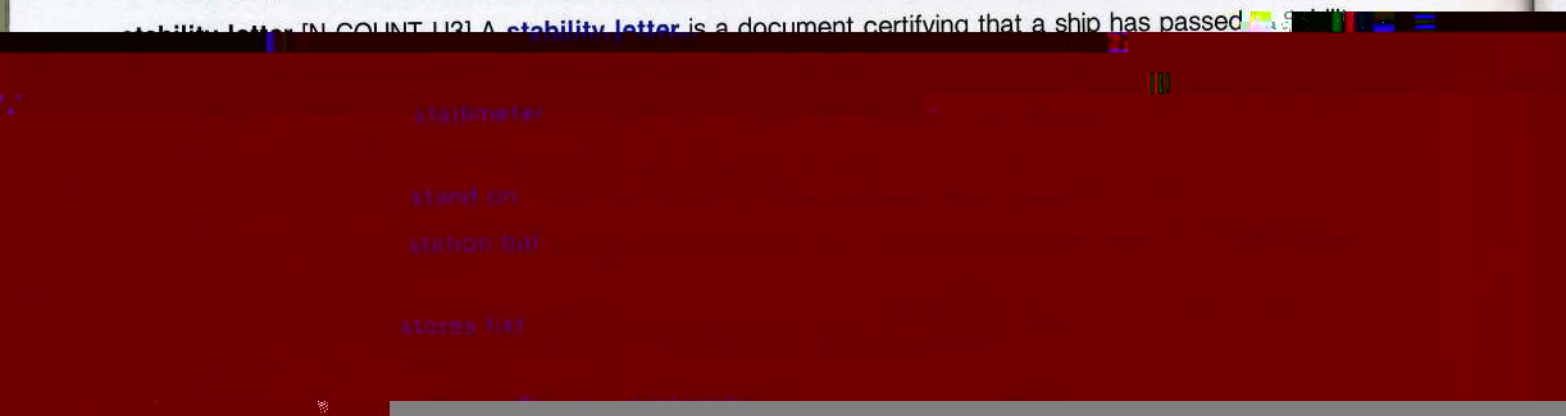
shot record [N-COUNT-U7] A **shot record** is a document that provides proof of vaccinations.

signaling mirror [N-COUNT-U11] A **signaling mirror** is a mirror that can be used to reflect the sun's light and attract the attention of rescuers.

slush [V-T-U10] To **slush** a wire rope is to reapply a coating to it.

sprinkler system [N-COUNT-U9] A **sprinkler system** is mechanical equipment that automatically sprays water over an area.

stability letter [N-COUNT-U3] A **stability letter** is a document certifying that a ship has passed



tonnage certificate [N-UNCOUNT-U1] A **tonnage certificate** is a document that tells a vessel's net and gross tonnage for the purposes of calculating a vessel's taxes.

tonnage tax receipts [N-UNCOUNT-U1] **Tonnage tax receipts** are receipts that show the taxes a vessel paid on its cargo.

TOVALOP (Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution) [N-UNCOUNT-U1] The **TOVALOP (Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution)** is an agreement that guarantees compensation for anyone who suffers because of oil pollution.

toxic [ADJ-U8] If a material is **toxic**, it is poisonous and can cause illness, injury, or death.

true wind [N-UNCOUNT-U15] **True wind** is the natural flow of air at any given time, when a person or object is standing still.

underwater survey [N-COUNT-U3] An **underwater survey** is an examination of the area below a vessel's waterline that is completed with underwater equipment.

underway [ADJ-U5] If a ship is **underway** it is not anchored to the shore.

Unified Inland Rules [N-UNCOUNT-U5] **Unified Inland Rules** are the set of laws governing navigation in inland waters of the United States.

up-to-date [ADJ-U3] If a log book is **up-to-date**, it contains the latest information.

veer [V-I-U15] To **veer** is to change direction to the right, or clockwise.

ventilate [V-T-U8] To **ventilate** an area is to cause air to circulate through it.

ventilation [N-UNCOUNT-U9] **Ventilation** is the act or process of moving air throughout a space.

vessel [N-COUNT-U6] A **vessel** is any craft that operates in or on water.

visaed [ADJ-U7] If a document is **visaed**, it is verified and stamped by an official.

wage [N-COUNT-U2] A **wage** is the amount of money a person earns at work.

water light [N-COUNT-U8] A **water light** is a powerful light designed for use in water with life boats or life rafts.

watertight integrity [N-UNCOUNT-U3] **Watertight integrity** is a ship's ability to keep out water or to prevent flooding from spreading between compartments.

whistle [N-COUNT-U4] A **whistle** is a small instrument that makes a high-pitched sound, often used for issuing alarms.

wind [N-COUNT-U15] A **wind** is a stream of air in natural motion, moving along the surface of the Earth.

wind speed [N-UNCOUNT-U15] **Wind speed** is the strength and speed with which the wind is blowing, measured in knots.

zinc [N-COUNT-U10] **Zinc** is a kind of metal that is used in coatings to prevent rust.


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Merchant Navy

Career Paths: Merchant Navy is a new educational resource for merchant seamen who want to improve their English communication in a work environment. Incorporating career-specific vocabulary and contexts, each unit offers step-by-step instruction that immerses students in the four key language components: reading, listening, speaking, and writing. ***Career Paths: Merchant Navy*** addresses topics including the parts of a ship, types of merchant ships, marlinespike seamanship, nautical directions, and navigation methods.

The series is organized into three levels of difficulty and offers a minimum of 400 vocabulary terms and phrases. Every unit includes a test of reading comprehension, vocabulary, and listening skills, and leads students through written and oral production.

Included Features:

- A variety of realistic reading passages
- Career-specific dialogues
- 45 reading and listening comprehension checks
- Over 400 vocabulary terms and phrases