



English for Specific Purposes available NOW!

www.expresspublishing.co.uk



**CAREER
PATHS**



Express Publishing

**Get the *Passport to a Promising
International Career***



**CAREER
PATHS**



Express Publishing

Career Paths available NOW!

Tourism

Hotels & Catering

Law

Engineering

Information Technology

Business English

Accounting

Secretarial

Nursing

Beauty Salon

Banking

Agriculture

Medical

Mechanics

Finance

Construction I - Buildings

Plumbing

Architecture

Petroleum I

Petroleum II

Civil Aviation

Electronics

Electrician

Merchant Navy

Environmental Science

Sports

Command & Control

Air Force

Police

Navy

Flight Attendant

Environmental Engineering

Management I

Management II

Call Centers

Art & Design

Computing

TAXI Drivers

Construction II - Roads & Highways

FOOD SERVICE Industries

Cooking

Software Engineering

Natural Resources II - Mining

Science

Insurance

Fishing & Seafood Industry

World Cup

Mechanical Engineering

Agricultural Engineering

Computer Engineering

MBA English

Natural Gas I

Natural Gas II

Security Personnel

Natural Resources I - Forestry

Nuclear Engineering

Kindergarten Teacher

Sales & Marketing

Physician's Assistant

Au Pair

Physiotherapy

Fitness training

**CAREER
PATHS**

Tourism

Virginia Evans
Jenny Dooley
Veronica Garza



Express Publishing

Table of Contents

Book

1

Unit 1 – About your guest	4
Unit 2 – On the phone	6
Unit 3 – Types of Restaurants	8
Unit 4 – Lodging	10
Unit 5 – At the airport	12
Unit 6 – Cruise ships	14
Unit 7 – Train travel	16
Unit 8 – Bus travel	18
Unit 9 – Renting a car	20
Unit 10 – How do you pay?	22
Unit 11 – Where to get money	24
Unit 12 – At the currency exchange office	26
Unit 13 – How much does it cost?	28
Unit 14 – Giving warnings about crime	30
Unit 15 – Avoiding illness abroad	32
Glossary	34

Book

2

Unit 1 – Cultural differences	4
Unit 2 – Travel packages	6
Unit 3 – Giving directions	8
Unit 4 – Getting to and from the airport	10
Unit 5 – Talking about the weather	12
Unit 6 – International travel	14
Unit 7 – Airport security	16
Unit 8 – Airport procedures	18
Unit 9 – Travel delays	20
Unit 10 – Where's my baggage?	22
Unit 11 – Explaining the bill	24
Unit 12 – Negotiating prices	26
Unit 13 – Locating help	28
Unit 14 – Emergency!	30
Unit 15 – Talking about symptoms	32
Glossary	34

Book

3

Unit 1 – Communicating by email	4
Unit 2 – Taking a message	6
Unit 3 – Taking reservations	8
Unit 4 – Changing a reservation	10
Unit 5 – Problems with reservations	12
Unit 6 – Difficult customers	14
Unit 7 – Farewell	16
Unit 8 – Methods of transportation	18
Unit 9 – Local attractions	20
Unit 10 – On a tour	22
Unit 11 – Discussing rules and policies on a tour	24
Unit 12 – Release forms	26
Unit 13 – Job advertisements	28
Unit 14 – Preparing your curriculum vitae	30
Unit 15 – Getting a job	32
Glossary	34



cabin

cruise director

cruise ship

Welcome to Poseidon Cruises!

BIG BOAT
BIG FUN

porter

Do you want a mix of **relaxation** and **adventure**? Then Poseidon Cruises is perfect for you! At **embarkation**, show your boarding pass and we'll do the rest. Our **porters** take your luggage right to your **cabin**. And cruise directors tell you about activities on the ship. Do you want to relax? Then spend time on your private **balcony** or visit the pool. Do you want to have fun? Make new friends on the **upper deck**. We also offer many **shore excursions**. Passengers **disembark** at several **ports of call**. How do you get to land? We take you to land on **tenders**. Call us today to learn more.

upper deck

tender

Get ready!

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

- 1 Why do people take cruises?
- 2 You win free tickets for a cruise. Where do you go? Why?

Reading

2 Listen and read a part of a brochure for a cruise ship. Where can you make new friends? Choose the correct answers.

- 1 What does the brochure mainly talk about?
 - A how to buy a cruise ship ticket
 - B the types of rooms available on a ship
 - C the fun parts of traveling on a cruise ship
 - D why cruise ships are good for families
- 2 One of the porter's duties is to ...
 - A pack your luggage.
 - B put your bags in your room.
 - C inform about activities on the ship.
 - D help passengers get on tenders.
- 3 According to the passage, what does a person do on the upper deck?
 - A visit the pool
 - B get on a tender
 - C have lunch
 - D meet people

Vocabulary

3 Read the sentence pairs. Choose where the words best fit in the blanks.

- 1 relaxation / adventure
Mick does not want a lot of activity. He wants _____ during his holiday.
Rita climbs a mountain because she enjoys the _____.
- 2 embarkation / shore excursion
Penny visits a new city. She is on a(n) _____.
Oscar shows his ticket at _____.
- 3 porter / cruise director
Ulysses is a _____. He handles the passenger's luggage.
Miranda is a _____. She tells passengers about activities.

4 Match the words (1-6) with the definitions (A-F).

- 1 ___ cabin 4 ___ disembark
 2 ___ balcony 5 ___ port of call
 3 ___ upper deck 6 ___ tenders

- A to get off of a ship
 B a place where ships stop
 C the top part of a ship
 D a room on a ship where passengers sleep
 E small boats that take passengers from the cruise ship to land
 F a small outdoor area that is attached to cabins

Listening

5 Listen to a cruise director make an announcement. Then answer the questions.

- 1 What does the cruise director talk about?
 A a stop at a port of call
 B a shore excursion
 C things to do on the ship
 D problems with the dining area
- 2 According to the announcement, what activity takes place at 10 am?
 A games on the upper deck
 B lunch in the dining room
 C passengers watch a movie
 D a play in the theater

6 Listen again. Fill in the blanks.

Cruise Director: Hello, ladies and 1 _____. Welcome to the Grande Dame. This is your 2 _____. There are many activities on the Grande Dame today. At 10 am, join us on the 3 _____ for games. Then we have lunch at 4 _____. At 2 pm, watch a movie at the ship theater. The theater is on 5 _____. Finally, dinner is at 6 pm. The 6 _____ is on Deck 10. Have a wonderful day on our cruise ship!

Speaking

7 With a partner, act out the roles below, based on the announcement from Task 6. Decide who Student A and Student B are. Then switch roles.

USE LANGUAGE SUCH AS:

At 10 am, join us on the ... for ...
We have ... at 6 pm
The theater is on the Deck ...

Student A: You are a passenger on a cruise ship. Ask Student B about:

- activities on the ship
- times of the activities
- location of the activities

Student B: You are a cruise director on a cruise ship. Answer Student A's questions.

Writing

8 Use the conversation in Task 7 to fill out the schedule for the cruise ship.

Grande Dame		
Schedule of Events for Monday		
Time	Activity	Location
8:00 AM	Breakfast	Dining room
12:00 PM	Lunch	Dining Room

Glossary

adventure [N-COUNT or UNCOUNT-U6] **Adventure** is fun and exciting activities.

affordable [ADJ-U8] Something that is **affordable** is something that you have enough money to buy.

arrivals terminal [N-COUNT-U5] An **arrivals terminal** is where people who land at the airport enter through.

ATM [N-COUNT-U11] An **ATM** (automatic teller machine) is a machine that you use to access and withdraw money from your bank account.

attendant [N-COUNT-U7] An **attendant** is a train worker.

baggage claim [N-COUNT-U5] A **baggage claim** is where you pick up your bags in an airport.

balcony [N-COUNT-U6] A **balcony** is an outdoor area that is attached to the cabin.

bank [N-COUNT-U11] **Banks** are places where people keep their money.

bed and breakfast [N-COUNT or UNCOUNT-U4] A **bed and breakfast** is small house or hotel that offers lodging and a morning meal.

benefit [N-COUNT-U8] A **benefit** is something good about a thing.

berth [N-COUNT-U7] A **berth** is a type of bed that is on a train.

boarding pass [N-COUNT-U5] A **boarding pass** is a paper that allows you to get on a plane or bus.

boarding time [N-UNCOUNT-U5] The **boarding time** is when passengers get on the plane.

bottled water [N-UNCOUNT-U15] **Bottled water** is clean water that is in a container.

branch [N-COUNT-U11] A **branch** is an office that is part of a bigger company.

break-in [N-COUNT-U14] A **break-in** is when a person enters a home or building without permission.

budget hotel [N-COUNT-U4] A **budget hotel** is a sleeping and resting place that is inexpensive and has few services.

bug spray [N-UNCOUNT-U15] **Bug spray** is a chemical substance that kills bugs.

business hours [N-UNCOUNT-U11] A company's **business hours** are the times that the company is open.

business traveler [N-COUNT-U1] A **business traveler** takes a trip for business.

buy-back [N-COUNT-U12] A **buy-back** is a policy. A business buys back something they previously sold you.

by bus [PREP PHRASE -U8] To go **by bus** is to travel somewhere on a big vehicle that carries a lot of people.

by rail [PREP PHRASE-U7] To travel **by rail** is to travel on a train.

cabin [N-COUNT-U4] A **cabin** is a small wooden house where visitors stay.

cabin [N-COUNT-U6] A **cabin** is a room on a ship.

campsite [N-COUNT-U4] A **campsite** is a sleeping and resting place where people stay in tents.

cash register [N-COUNT-U13] A **cash register** is a machine that holds a shop's money. It shows and records each transaction.

cash-only [ADJ-U10] A **cash-only** business only accepts cash as a method of payment.

catch the train [V PHRASE-U7] To **catch the train** is to ride on a train.

celebrate [V-I or T-U1] To **celebrate** is to have fun on an important day.

charge card [N-COUNT-U10] A **charge card** is a small card from a bank or shop that allows you to buy items and pay for them later.

cheaply [ADV-U8] Something that can be purchased **cheaply** is purchased for a little money.

check in [PHRASAL V-U5] To **check in** is to get the boarding pass from the airport worker.

checking account [N-COUNT-U10] A **checking account** is a type of bank account. You can withdraw money using checks.

collectible [N-COUNT-U13] A **collectible** is a valuable object that a person buys and collects.

commission [N-COUNT-U12] A **commission** is the amount of money a business charges for some types of service.

compact [ADJ-U9] A **compact** car is a small car.

conference [N-COUNT-U1] A **conference** is a group of people who come together to talk about business, education, etc.

connect [V-T-U2] To **connect** is to let a telephone caller communicate with someone else.

convert [V-T-U12] To **convert** is to change money from one currency to another.

cost [N-COUNT-U13] The **cost** of an item is the amount of money you pay for it.

coupon [N-COUNT-U13] A **coupon** is a piece of paper that allows you to buy something at a lower price.

courteous [ADJ-U2] Someone who is **courteous** is polite and nice.

credit card [N-COUNT-U10] A **credit card** is a small card that allows you to buy things and pay for them later.

criminal [N-COUNT-U14] A **criminal** is a person who breaks the law.

cruise director [N-COUNT-U6] A **cruise director** is a worker who organizes activities on the ship and tells passengers about the activities.

cuisine [N-COUNT-U3] A **cuisine** is a style of cooking from a certain place.

currency [N-COUNT-U12] **Currency** is a word for money from a particular place, like the euro and the dollar.

currency exchange office [N-COUNT-U12] A **currency exchange office** is a place where you can change money for another country's money.

cuts [N-COUNT-U3] A **cut** is meat from a certain part of an animal.

debit card [N-COUNT-U10] A **debit card** is a small card that takes money out of a bank account.

departure lounge [N-COUNT-U5] A **departure lounge** is where passengers wait to get on their plane.

departures terminal [V-I-U5] A **departures terminal** is a part of the airport that people who fly to a different place use.

direct a call [V PHRASE-U2] To **direct a call** is to decide who the caller speaks to next.

disembark [V-I-U6] To **disembark** is to get off a ship

drivers license [N-COUNT-U9] A **drivers license** is a card that says you are allowed to drive a car.

drive-through [N-COUNT-U3] **Drive-through** service is a type of service in which customers order and receive food in their car.

duty-free shop [N-COUNT-U5] A **duty-free shop** is a store where you buy items and do not have to pay tax for them.

economy car [N-COUNT-U9] An **economy car** is inexpensive.

**CAREER
PATHS**

Hotels & Catering

Virginia Evans
Jenny Dooley
Veronica Garza



Express Publishing

Table of Contents

Book

1

Unit 1 – Meet our staff	4
Unit 2 – Welcome!	6
Unit 3 – Hotel amenities	8
Unit 4 – Family-friendly lodging	10
Unit 5 – Valet service	12
Unit 6 – The guest room	14
Unit 7 – Checking in	16
Unit 8 – Meet the restaurant staff	18
Unit 9 – Taking a reservation	20
Unit 10 – Breakfast service	22
Unit 11 – At the bar	24
Unit 12 – Meet the kitchen staff	26
Unit 13 – Utensils	28
Unit 14 – Food service equipment	30
Unit 15 – Food preparation	32
Glossary	34

Book

2

Unit 1 – Making a room reservation	4
Unit 2 – Loyalty programs	6
Unit 3 – Confirming a reservation	8
Unit 4 – Housekeeping	10
Unit 5 – Concierge	12
Unit 6 – Airport transfers	14
Unit 7 – Evacuation	16
Unit 8 – Checking out	18
Unit 9 – Greeting and seating guests	20
Unit 10 – Explaining the menu	22
Unit 11 – Taking an order	24
Unit 12 – Room service	26
Unit 13 – Banquets	28
Unit 14 – Food storage	30
Unit 15 – Ordering food supplies	32
Glossary	34

Book

3

Unit 1 – Special functions	4
Unit 2 – Business travelers	6
Unit 3 – Responding to requests	8
Unit 4 – Reservation problems	10
Unit 5 – Broken!	12
Unit 6 – Responding to complaints	14
Unit 7 – Hotel safety	16
Unit 8 – Money matters	18
Unit 9 – Making suggestions	20
Unit 10 – Problems in the dining room	22
Unit 11 – How will you pay?	24
Unit 12 – Working together	26
Unit 13 – Kitchen safety and sanitation	28
Unit 14 – Writing a résumé	30
Unit 15 – Job interviews	32
Glossary	34

Success Magazine / Page 14

Getting the Job

Tips for a Successful Interview

Job interviews can be stressful; however, with the proper planning and preparation, you can get the job. Read these tips to help you survive the interview and get a job offer!

Before the Interview

- Research the company and prepare **relevant** questions. Interviewers appreciate when job candidates demonstrate interest in the company and the available position.
- Organize all **paperwork**, including your résumé, official transcripts, and references from previous employers.
- Plan responses to common interview questions and practice interviewing with a friend.
- Prepare for questions about your **salary** expectations by finding out how much employees in the position you are applying for are typically paid.

During the Interview

- Make a good first impression by arriving on time for the interview. Make sure to dress in clean and professional **attire**. Finally, be polite and use the interviewer's name when speaking.
- Respond to all questions clearly. Interviewees should provide solid examples of how their previous experience relates to skills needed for the new position. Also, be sure to explain your future career goals.

After the Interview

- Follow up immediately with a **thank-you note** restating your interest in the position.
- Employers may request a **call-back** to obtain more information.



Get ready!

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

- 1 How do people prepare for a job interview?
- 2 What items do people bring to job interviews?

Reading

2 Read the article from a magazine, and then mark the following statements as true (T) or false (F).

- 1 ___ A job candidate should ask about the company during an interview.
- 2 ___ Interviewees make a good impression by dressing professionally for the interview.
- 3 ___ A call-back is a typical way for job candidates to follow up after an interview.

Vocabulary

3 Complete the sentences with words or phrases from the word bank.

word bank

interview relevant followed up
salary interviewee

- 1 Mac _____ by thanking his interviewer.
- 2 After the _____, Ms. Mills wasn't sure if Tara was right for the position.
- 3 Mr. Jones is paid a good _____.
- 4 The _____ arrived early and waited until the manager was ready.
- 5 Mr. George didn't write his height on the application because it was not _____.

4 Choose the correct words/phrases to go in the blanks.

1 transcript / résumé

- A Mary's _____ lists her professional background.
B Steve requested a _____ from his university.

2 interviewer / job candidate

- A The _____ was impressed by Ms. Jones and offered her the job.
B Mr. Cruz decides to interview the _____.

3 attire / paperwork

- A The dress code requires professional _____.
B Ms. Jessup had to fill out some _____ before she could begin her new job.

4 reference / call-back

- A Traci received a _____ after the interview.
B Jason asked Ms. Watson if he could list her as a _____ on his job application.

5 thank-you note / job offer

- A Bob declined the _____ because he found a position at another company.
B Paige sent Mr. Trujillo a _____ for helping her complete the project.

5 Listen and read the article again. How should you address the interviewer?

Listening

6 Listen to a conversation between an interviewer and a job candidate. Then mark the following statements as true (T) or false (F).

- ___ The man wants a job as a manager.
- ___ The man has never worked in the hotel business before.
- ___ The man helps train new employees at his current job.

7 Listen again, and fill in the blanks.

- Candidate:** Well, I'm currently working as an assistant hotel manager, but I'm looking to 1 _____.
- Interviewer:** Okay. According to your résumé, you've 2 _____ for five years, right?
- Candidate:** That's correct.
- Interviewer:** And what would you say has been your 3 _____ during those five years?
- Candidate:** Last year I created a very successful 4 _____ for new hotel employees.
- Interviewer:** Really? That's great.
- Candidate:** Yes, it's really helped our hotel run 5 _____.

Speaking

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

USE LANGUAGE SUCH AS:

Why are you interested in working as...?

I'm currently working as a...

What would you say has been your greatest accomplishment?

Student A: You are an interviewer at the Royal Point Hotel. Ask Student B questions about:

- work experience
- relevant job skills
- future goals

Student B: You are a job candidate in an interview. Respond to Student A's questions.

Writing

9 You are an interviewer. Use the article and the conversation to write an article giving advice on how to prepare for an interview (100-120 words). Make sure to talk about the following:

Interview advice

- *Preparing before an interview*
- *Making a good first impression*
- *Common interview questions*

**CAREER
PATHS**

Law

Virginia Evans
Jenny Dooley
David J. Smith - J.D.

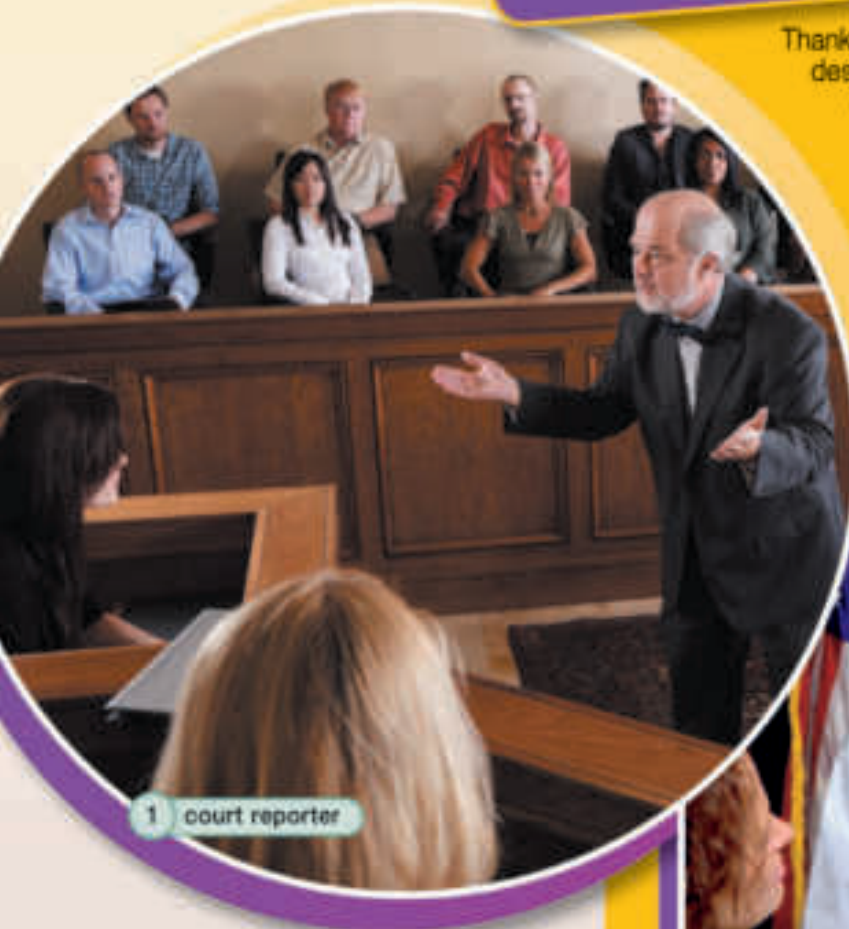


Express Publishing

Table of Contents

Book 1	Unit 1 – Basic legal terms	4
	Unit 2 – Basic legal concepts	6
	Unit 3 – Legal resources	8
	Unit 4 – Sources of law	10
	Unit 5 – Preliminary documents	12
	Unit 6 – Court structure	14
	Unit 7 – Jurisdiction	16
	Unit 8 – In the courtroom	18
	Unit 9 – Court process	20
	Unit 10 – Court etiquette	22
	Unit 11 – Criminal law	24
	Unit 12 – Civil law	26
	Unit 13 – Administrative law	28
	Unit 14 – Initial client interview	30
	Unit 15 – Interviewing witnesses	32
Glossary	34	
Book 2	Unit 1 – Discovery documents	4
	Unit 2 – Affidavits	6
	Unit 3 – Legal memorandums	8
	Unit 4 – Legal documents	10
	Unit 5 – Motions	12
	Unit 6 – Intentional torts	14
	Unit 7 – Negligent torts	16
	Unit 8 – Nuisance	18
	Unit 9 – Strict liability	20
	Unit 10 – Product liability	22
	Unit 11 – Contracts	24
	Unit 12 – Elements of a valid contract	26
	Unit 13 – Types of contract litigation	28
	Unit 14 – Professional conduct	30
	Unit 15 – Attorney-client privilege	32
Glossary	34	
Book 3	Unit 1 – Time management	4
	Unit 2 – Calendars	6
	Unit 3 – Document retention	8
	Unit 4 – Legal billing	10
	Unit 5 – Criminal procedure	12
	Unit 6 – Juvenile crime	14
	Unit 7 – Types of evidence	16
	Unit 8 – Physical and biological evidence	18
	Unit 9 – Testimonial evidence	20
	Unit 10 – Relevant evidence	22
	Unit 11 – Alternative dispute resolution	24
	Unit 12 – Arbitration	26
	Unit 13 – Mediation	28
	Unit 14 – International law	30
	Unit 15 – International court of justice	32
Glossary	34	

Jury Duty Rules and Expectations



1 court reporter

Thank you for reporting for jury duty. The following is a description of what to expect today.

You will receive a number. Enter the courtroom when the **clerk of the court** calls that number.

In the courtroom, have a seat in the **jury box**. The **bailiff** will direct you.

Attorneys for the **defense** and **prosecution** will then ask you questions. A judge **presides** over the **proceedings** and the **court reporter** records your answers. The

goal is to select **jurors** for a trial. It is important that you answer their questions honestly. This provides the defendant with a fair trial. Potential jurors may leave after questioning if not selected.



2 clerk of the court



3 jury box

Get ready!

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

- Who must be in a courtroom during a trial?
- How can lawyers be sure that jurors will be fair?

Reading

2 Read this court pamphlet. Mark the following statements as true (T) or false (F).

- ___ A judge asks potential jurors questions to check if they are biased.
- ___ Jurors' answers are recorded by an employee of the court.
- ___ Every person that reports for jury duty listens to a trial.

Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- | | |
|--------------------------|-------------------|
| 1 ___ clerk of the court | 4 ___ prosecution |
| 2 ___ court reporter | 5 ___ juror |
| 3 ___ defense | 6 ___ bailiff |

- A the side of a case that attempts to prove innocence
 B the side of a case that attempts to prove guilt
 C a person who assists a judge
 D an officer who keeps order in court
 E a person that types everything that is said in court
 F a person who listens to a trial and decides if a defendant is guilty or not

4 Check (✓) the sentence that uses the underlined parts correctly.

- 1 — A The proceedings took place in the courtroom on the second floor.
— B The defense brought the lawsuit against the corporation.
- 2 — A The judge took his seat in the jury box when the trial started.
— B Judge Williams is presiding over the upcoming trial.
- 3 — A Mary isn't going to be at work because she has jury duty.
— B The bailiff typed the attorney's words very quickly.
- 4 — A The court reporter sat at the table with her client and waited for the trial to start.
— B The attorney stood close to the jury box as he made his argument to the jurors.

5 Listen and read the text again. Say what happens when you report for jury duty.

Listening

6 Listen to a conversation between a judge and a defense attorney. Choose the correct answers.

- 1 What is the conversation mostly about?
A removing a juror C selecting a new juror
B questioning a juror D protesting a juror's decision
- 2 What is the judge's opinion?
A He thinks young people often commit crimes.
B He plans to release the defendant.
C He doubts the juror would be fair.
D He agrees with the attorney's argument.

7 Listen again and complete the conversation.

- Attorney:** Your Honor, I don't believe that 1 _____ four should sit for this trial.
- Judge:** For what 2 _____?
- Attorney:** One of his answers to my questions. He believes that young people are more likely to commit crimes these days.
- Judge:** And you're worried that he will be 3 _____ toward the defendant?
- Attorney:** Yes. My client is only seventeen years old.
- Judge:** The 4 _____ has a point. We'll release him.
- Attorney:** Thank you, Your Honor.
- Judge:** We'll continue the 5 _____ after the 6 _____ of the court calls in another juror.

Speaking

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

USE LANGUAGE SUCH AS:

Your Honor, I don't believe that ...
He believes that ...
My client is only ...

Student A: You are a defense attorney. You see a problem with a juror. Talk to Student B about:

- the juror
- a question and answer
- your client

Student B: You are a judge. Talk to Student A about a juror and make a decision.

Writing

9 Use the conversation from Task 8 to complete the notes about selecting a jury for a trial.

Today, we _____ a juror. I thought he would be _____

I believe this because he _____

The judge _____

and _____

JURY NOTES

**CAREER
PATHS**

Engineering

Charles Lloyd
James A. Frazier - Jr. MS



Express Publishing

Table of Contents

Book

1

Unit 1 – What is engineering?	4
Unit 2 – Shapes	6
Unit 3 – Materials	8
Unit 4 – Tools	10
Unit 5 – Energy	12
Unit 6 – Simple Machines	14
Unit 7 – Working with numbers	16
Unit 8 – Types of measurement	18
Unit 9 – The scientific method	20
Unit 10 – Safety precautions	22
Unit 11 – Civil engineering	24
Unit 12 – Chemical engineering	26
Unit 13 – Mechanical engineering	28
Unit 14 – Electrical engineering	30
Unit 15 – Aerospace engineering	32
Glossary	34

Book

2

Unit 1 – History of engineering	4
Unit 2 – Traits of an engineer	6
Unit 3 – An engineer’s education	8
Unit 4 – Presenting information	10
Unit 5 – Problem solving	12
Unit 6 – Creativity	14
Unit 7 – Tables and graphs	16
Unit 8 – Dimensions and drawings	18
Unit 9 – Materials and properties	20
Unit 10 – Working with numbers	22
Unit 11 – Sales engineering	24
Unit 12 – Agricultural engineering	26
Unit 13 – Industrial engineering	28
Unit 14 – Software engineering	30
Unit 15 – Genetic engineering	32
Glossary	34

Book

3

Unit 1 – Newton’s laws	4
Unit 2 – Laws of thermodynamics	6
Unit 3 – Rate processes	8
Unit 4 – Statics and dynamics	10
Unit 5 – Electricity	12
Unit 6 – SI System of Units	14
Unit 7 – Engineering design method	16
Unit 8 – Models	18
Unit 9 – Accounting	20
Unit 10 – Statistics	22
Unit 11 – Computer engineering	24
Unit 12 – Materials engineering	26
Unit 13 – Environmental engineering	28
Unit 14 – Nuclear engineering	30
Unit 15 – Biomedical engineering	32
Glossary	34

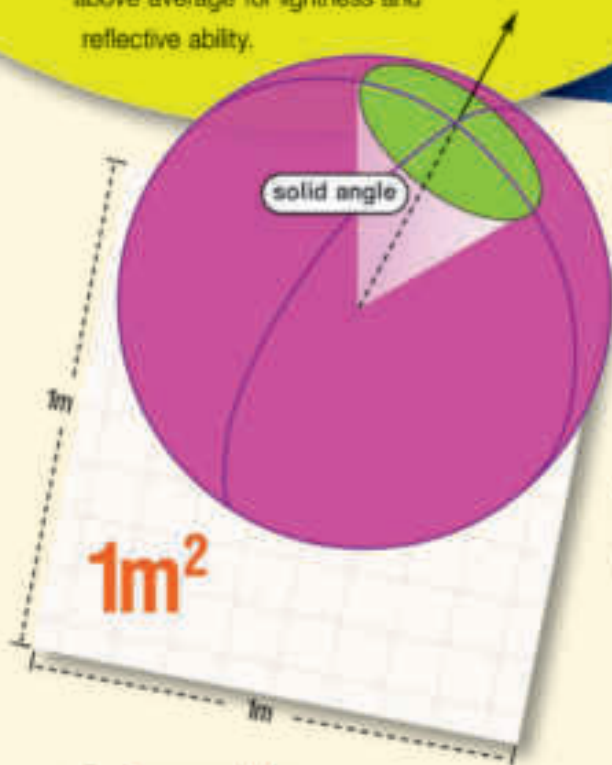
Light-Reflecting Material: Summary and Specifications

Engineers here at Parker Engineering have developed a new, lightweight material that reflects light. This report details the experiment process and results.

The aim of the project was to construct a material that was both lightweight and highly reflective. Following the development of the prototype, **measurements** of the material's weight and reflective ability were recorded. We are submitting all measurements in accordance with the **SI system of units**, commonly known as the metric system. The weight of the material was measured in **grams per square meter**. The **luminous intensity** was measured with a **base unit** of **candelas**. The light reflected back was measured on a **solid angle** of one square meter. This **supplementary unit** was used for ease of calculation. The **derived unit of luminance** was used to measure the amount of light returned.

The test conditions and results are as follows: The light source reflected 75,000 candelas of luminous intensity. Experiments show that the material returned with a luminance of 1,000 candelas per square meter at a distance of 100 meters and .0001 **steradians**. The weight of the material measured 95 grams per square meter.

Based on the above results, the material was above average for lightness and reflective ability.



Get ready!

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

- 1 What types of measurement are you familiar with?
- 2 What can you measure with the SI system of units?



Reading

2 Read the report from an engineer at Parker engineering. Then, mark the following statements as true (T) or false (F).

- 1 Engineers recorded the material's reflective ability.
- 2 Luminous intensity was measured with candelas.
- 3 The prototype did not meet the weight requirements.

Vocabulary

3 Match the words (1-7) with the definitions (A-G).

- | | |
|---|---|
| 1 <input type="checkbox"/> luminous intensity | 5 <input type="checkbox"/> steradian |
| 2 <input type="checkbox"/> supplementary unit | 6 <input type="checkbox"/> SI system of units |
| 3 <input type="checkbox"/> solid angle | 7 <input type="checkbox"/> derived unit |
| 4 <input type="checkbox"/> base unit | |

- A a measurement system with seven types of units
- B a two-dimensional angle in a sphere
- C the power of light the human eye can perceive
- D a unit of measurement formed by combining base units
- E a measurement unit beyond the seven basic types
- F a unit of measurement for angles
- G one of seven basic units of measurement

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

- 1 One unit of measurement for mass is very light. g _ _ m
- 2 This lamp emits 120 units of luminous intensity.
c _ n _ _ l _ s
- 3 Record the exact dimensions.
_ _ a _ _ r _ m _ _ s
- 4 How many units of measurement for area is the yard?
_ q _ _ r _ m _ _ e _ s
- 5 Measure the reflection's brightness from a distance.
_ u _ _ n _ _ c _

5 Listen and read. How much does the new material weigh?

Listening

6 Listen to a conversation between an engineer and a clothing manufacturer. Choose the right answers.

- 1 What is the main idea of the dialogue?
A describing the production process
B selling the material to a manufacturer
C reducing how much the material weighs
D negotiating the cost of the material
- 2 According to the dialogue, what is NOT an advantage of the product?
A It does not weigh very much.
B It is extremely reflective.
C Its price has been reduced.
D It can be placed on safety clothing.

7 Listen again and complete the conversation.

- E: Ms. Platt, thanks for 1 _____
_____ to meet with me.
- M: My pleasure. So, what's this great new product you mentioned on the phone?
- E: It's a super reflective material. Its 2 _____ is very high.
- M: And what exactly is it designed for?
- E: It would work great for 3 _____. Small strips placed on uniforms can reflect large amounts of light.
- M: And how much does it cost?
- E: Well, the production process is rather involved. So it costs about 70 dollars 4 _____.
- M: That's 5 _____. Other reflective materials are available for less.
- E: But ours reflects twice as much light as others. So you use less of it.
- M: Good point. It 6 _____.

Speaking

8 With a partner, act out the dialogue from Task 7. Then switch roles.

USE LANGUAGE SUCH AS:

- What's this great new product you mentioned on the phone?*
It's a super reflective material.
How much does it cost?

Student A: You are a clothing manufacturer. Ask Student B about a materials:

- uses
- cost

Student B: You've created a lightweight, reflective material. Answer Student A's questions. Make up a name for the manufacturer.

Writing

9 You are an engineer who has developed a new reflective material. Use the report and conversation from Task 8 to write a brief journal article about the material (100-120 words). Write about:

- The uses of the product
- The characteristics of the product
- Why this product is better than others

**CAREER
PATHS**

Information Technology

Virginia Evans
Jenny Dooley
Stanley Wright



Express Publishing

Table of Contents

Book

1

Unit 1 – Information Technology	4
Unit 2 – Introduction to computing systems	6
Unit 3 – Inside the computer	8
Unit 4 – Computing devices	10
Unit 5 – Networking	12
Unit 6 – The user interface	14
Unit 7 – Word processing	16
Unit 8 – Email	18
Unit 9 – Web browsing	20
Unit 10 – Images and graphic design	22
Unit 11 – Databases vs. spreadsheets	24
Unit 12 – Web design vs. development	26
Unit 13 – Desktop publishing	28
Unit 14 – Videoconferencing	30
Unit 15 – E-commerce	32
Glossary	34

Book

2

Unit 1 – Computer memory	4
Unit 2 – Programming languages	6
Unit 3 – ISPs and Internet access	8
Unit 4 – Storage devices	10
Unit 5 – Peripherals	12
Unit 6 – MP3 players	14
Unit 7 – Cell phones	16
Unit 8 – Communications	18
Unit 9 – Entertainment, gaming and social networking	20
Unit 10 – GPS systems	22
Unit 11 – Banking	24
Unit 12 – Education and research	26
Unit 13 – Robotics	28
Unit 14 – Electronic publishing	30
Unit 15 – Artificial intelligence	32
Glossary	34

Book

3

Unit 1 – Macs® and PCs	4
Unit 2 – Linux®	6
Unit 3 – Connecting to clients and employees	8
Unit 4 – Advertising and marketing	10
Unit 5 – Automation	12
Unit 6 – Telecommuting	14
Unit 7 – Hackers and viruses	16
Unit 8 – Identity theft	18
Unit 9 – Preventative measures	20
Unit 10 – Anti-virus software	22
Unit 11 – Cloud computing	24
Unit 12 – Improving health	26
Unit 13 – Creative design	28
Unit 14 – System administration	30
Unit 15 – Programming	32
Glossary	34

1 Macs® and PCs



1 color matching

The Eternal DEBATE

By Linda Drake



Apple

vs.



Microsoft



4 processing speed

As **Apple®** grows in popularity, the **Mac®** versus **PC** debate continues. Many businesses experience trouble choosing between the two. However, businesses must realize that each computer is suited for different needs.

The two differ most in their operating systems. With a PC you have a variety of OS options from **Microsoft®** and other sources. Macs® come with one of the proprietary Apple® OSes like **OS X®**. You can install **Windows®** on a Mac®, but many users prefer the Mac® OS regardless.

Macs® have proven themselves vital in publishing, particularly the **prepress** process. Mac® has superior **typography** and **color matching**. Once printed, products look exactly as good as they do on the computer screen.

Meanwhile, PCs are noted for their fast **processing speed** and **adaptability**. Users can **customize** a PC to their needs. Additionally, their **video subsystems** are more powerful. This makes PCs desirable for game designers and others who need advanced graphics.

However, both computers have their limitations. While PCs are cheaper, they are also more susceptible to viruses. Macs® usually cost more but are less susceptible to computer viruses. However, Macs® tend to have fewer third-party software options than PCs. Businesses need to consider such concerns and make the right decision when buying computers for their companies.

Get ready!

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

- 1 Why do people prefer one operating system over another?
- 2 How might one operating system benefit a company more than another?

Reading

2 Read the computer magazine article. Then, mark the statements as true (T) or false (F).

- 1 ___ Macs® are generally more expensive than PCs.
- 2 ___ PCs are better suited to publishing.
- 3 ___ PCs have fewer options from third-party software producers.

Vocabulary

3 Match the words (1-7) with the definitions (A-G).

- | | |
|-----------------|------------------------|
| 1 ___ Apple® | 5 ___ processing speed |
| 2 ___ Windows® | 6 ___ video subsystem |
| 3 ___ customize | 7 ___ Microsoft® |
| 4 ___ OS X® | |

- A company that creates the most common PC operating system
- part of a computer that creates visuals
- a measurement of how quickly a computer works
- operating system for PCs
- changing a computer for your needs
- operating system for Macs®
- company that creates Macs®

4 Fill in the blanks with the correct words: *Mac[®], prepress, color matching, PC, typography*

- 1 A _____ comes with OS X[®].
- 2 Publishing software is needed for the _____ process.
- 3 Good _____ means anything printed out looks exactly like what's on screen.
- 4 I'm getting a _____ because I like the Windows[®] OS.
- 5 The _____ on this computer includes hundreds of fonts.

5 Listen and read the computer magazine article again. What makes the PC more popular with game designers?

Listening

6 Listen to a conversation between two employees at a publishing company. Choose the correct answers.

- 1 What is the conversation mostly about?
A customizing PCs for publishing
B locating third-party software options
C finding publishing programs for Mac[®]
D the differences between Macs[®] and PCs
- 2 What can you infer about the employees?
A They currently use Macs[®].
B They are unfamiliar with PCs.
C They plan to request new Macs[®].
D They create and publish software.

7 Listen again and complete the conversation.

Employee 1: Mr. Jackson has decided to update our computers. 1 _____

Employee 2: Really? PCs? I'm glad we're updating, but I'd rather 2 _____.

Employee 1: You would? Not me. You can't customize a Mac[®].

Employee 2: Sure, you 3 _____. But Macs[®] do some things so much better.

Employee 1: What do you mean?

Employee 2: The 4 _____ and typography are more sophisticated on a Mac[®] than on a PC. We need that in publishing.

Employee 1: Okay, I'll give you that. But Macs[®] have 5 _____, don't they?

Employee 2: Maybe a little, but that's mostly with video, and we barely use it.

Speaking

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

USE LANGUAGE SUCH AS:

*We're switching to PCs.
You can customize PCs.
But Macs[®] have slower processing speeds.*

Student A: Talk to Student B about:

- switching to PCs
- benefits of PCs
- drawbacks of Macs[®]

Student B: You are an employee. Talk to Student A about the benefits of Macs[®].

Writing

9 You are an IT Worker at a company. Use the article and the conversation from Task 8 to write an email to management recommending the company purchase either Macs[®] or PCs (120-150 words). Talk about:

- Which type of computer you would choose
- Why your company needs this type of computer
- The benefits of the type of computer you would choose
- The drawbacks of the type of computer you wouldn't choose



**CAREER
PATHS**

Business English

John Taylor
Jeff Zeter



Express Publishing

Table of Contents

Book

1

Unit 1 – Greetings and goodbyes	4
Unit 2 – Introductions	6
Unit 3 – Small talk	8
Unit 4 – Ending conversations	10
Unit 5 – Ordering numbers	12
Unit 6 – Figures	14
Unit 7 – Dates	16
Unit 8 – Time and expressions	18
Unit 9 – Vacation time	20
Unit 10 – Prices	22
Unit 11 – Pay and benefits	24
Unit 12 – Your job	26
Unit 13 – Types of work	28
Unit 14 – Getting to work	30
Unit 15 – Skills and qualifications	32
Glossary	34

Book

2

Unit 1 – Product details	4
Unit 2 – Selling products	6
Unit 3 – Product problems	8
Unit 4 – Telephoning	10
Unit 5 – Emails	12
Unit 6 – Letters	14
Unit 7 – Faxes	16
Unit 8 – Types of meetings	18
Unit 9 – Meeting etiquette	20
Unit 10 – Making a presentation at a meeting	22
Unit 11 – Time management	24
Unit 12 – Negotiations	26
Unit 13 – Customer service	28
Unit 14 – Making travel arrangements	30
Unit 15 – Travel necessities	32
Glossary	34

Book

3

Unit 1 – Company culture	4
Unit 2 – Business in different cultures	6
Unit 3 – Management styles	8
Unit 4 – Team building	10
Unit 5 – Production	12
Unit 6 – Marketing	14
Unit 7 – Finance	16
Unit 8 – Sales	18
Unit 9 – Quality standards	20
Unit 10 – Achieving perfection	22
Unit 11 – Business strategy	24
Unit 12 – Competition	26
Unit 13 – Innovation	28
Unit 14 – Global economy	30
Unit 15 – Global trade	32
Glossary	34

1 Company culture

Get ready!

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

- 1 What values do you think make a company successful?
- 2 What traits or actions can discourage customers from doing business with a company?



Software plus

OUR COMPANY'S CORE VALUES.

At Software Plus, we value our customers above all else. We want to:

- provide quality products at **affordable** prices
- keep prices as low as possible so that our customers know they are getting a fair deal
- treat each customer as an individual
- strive to make every person who shops with us feel important and valued.

Software Plus also recognizes **innovation** as a key part of our business. We will take steps to:

- stay **one step ahead** of the market
- monitor current **trends** and move quickly to fill **gaps** in the market

The employees of Software Plus are the company's greatest **asset**. As such, we **endeavor** to:

- provide a pleasant, friendly working environment
- supply training **opportunities** and **perks**
- foster professional growth and development

Environmental issues are a **priority** at Software Plus. We promise to:

- support a wide range of environmentally friendly **initiatives**, such as recycling and car sharing
- never knowingly create a product that is harmful to the environment



Reading

2 Listen and read this poster about a company's values. Then, read the summary of the text. Fill in the blanks with the correct words from the word bank. How does the company value their customers? Tell the class.

Word Bank

products customers employees
market opportunities

The company 'Software Plus' has four core values. To begin with, it aims to put 1 _____ first. Secondly, it tries to stay ahead in the 2 _____ by identifying what is popular. Thirdly it treats its 3 _____ well by providing perks and training 4 _____. Finally, it never creates 5 _____ that harm the environment.

Vocabulary

3 Match the words (1-7) with the definitions (A-G).

- | | |
|------------------|-------------------|
| 1 ___ gap | 5 ___ perk |
| 2 ___ trend | 6 ___ opportunity |
| 3 ___ innovation | 7 ___ endeavor |
| 4 ___ priority | |

- A a benefit people receive from their jobs
B the most important thing to do
C a new development
D to try to do something
E a temporarily popular item or style
F a place where something is missing
G a chance to do something useful

4 Read the sentence pairs. Choose where the words best fit in the blanks.

1 foster / strive

The company aims to _____ the staff's development.
Mr. Gao wants his workers to _____ to do their best.

2 affordable / one step ahead

It's important to stay _____ of our competition.
The other company's product is more _____.

3 initiatives / core values

This company has three _____: loyalty, quality and trust.
There are many new _____ to help small businesses.

4 environmental issues / assets

The company was forced to sell many of its _____.
Being aware of _____ can reduce pollution.

Listening

5 Listen to a conversation between two managers. Mark the following statements as true (T) or False (F).

- ___ The poster will be displayed in the break room.
- ___ The man wants to include a statement about current employees.
- ___ The woman thinks people will like the environmental initiatives.

6 Listen again and complete the conversation.

- Manager 1: I need some help with this poster for next month's 1 _____.
- Manager 2: Sure, have a seat. What can I do?
- Manager 1: Well, management wants a display that shows our 2 _____. The problem is, the manual lists a lot of values, but I can only show four.
- Manager 2: I'd start with customer care. You could write about how we keep our software affordable.
- Manager 1: That's good, thanks. What do you think of including 3 _____, though?
- Manager 2: Yeah, why not? You could mention a few of our environmental initiatives. Like our recycling program.
- Manager 1: Good idea. But it's a job fair, and there's 4 _____ I should include something about them, right?
- Manager 2: What do you 5 _____?

Speaking

7 With a partner, act out the roles below, based on the dialogue from Task 6. Then switch roles.

USE LANGUAGE SUCH AS:

I need some help with this poster ...

I'd start with ...

What do you think of ...

Student A: You need to choose four core values for a poster. Talk to Student B about:

- suggestions
- your ideas
- attracting employees

Student B: Answer Student A's questions and make suggestions.

Writing

8 You are writing a website page about your company's core values. Using the poster and the conversation from Task 7, write a paragraph for the website (100-120 words). Talk about:

- What your company's core values are
- What your company endeavors to do
- How your company stays one step ahead



**CAREER
PATHS**

Accounting

John Taylor
Stephen Peltier - C.P.A., M.S.



Express Publishing

Table of Contents

Book

1

Unit 1 – Jobs in accounting	4
Unit 2 – Numbers	6
Unit 3 – Office materials	8
Unit 4 – Electronic tools	10
Unit 5 – Bookkeeping cycle	12
Unit 6 – GAAP and IASB	14
Unit 7 – Income statements	16
Unit 8 – Balance sheets	18
Unit 9 – Cash flow statements	20
Unit 10 – Describing change	22
Unit 11 – Gleaning information from financial statements	24
Unit 12 – Overdrafts	26
Unit 13 – Costs	28
Unit 14 – Taxes	30
Unit 15 – Depreciation	32
Glossary	34

Book

2

Unit 1 – The back office	4
Unit 2 – Guiding principles of accounting	6
Unit 3 – Controllers	8
Unit 4 – Cash and liquidity	10
Unit 5 – Intangible assets	12
Unit 6 – Presenting a P & L statement	14
Unit 7 – Internal controls against mistakes and theft	16
Unit 8 – Accrual basis accounting – Non-cash accounts	18
Unit 9 – Unpaid expenses	20
Unit 10 – Leverage – good or bad?	22
Unit 11 – Variable expenses	24
Unit 12 – End-of-period procedures	26
Unit 13 – Accounting software	28
Unit 14 – Reporting extraordinary gains and losses	30
Unit 15 – Is profit ethical?	32
Glossary	34

Book

3

Unit 1 – The language of accounting	4
Unit 2 – Analyzing balance sheets	6
Unit 3 – Fraud	8
Unit 4 – Solvency	10
Unit 5 – Direct and indirect costs	12
Unit 6 – Budgeting	14
Unit 7 – Auditing	16
Unit 8 – The break-even point	18
Unit 9 – Globalization	20
Unit 10 – Communicating with clients	22
Unit 11 – Viability	24
Unit 12 – Buy or lease?	26
Unit 13 – Tax havens	28
Unit 14 – Tax accounting	30
Unit 15 – The future of accounting	32
Glossary	34

PBL UNLIMITED

It's here! The new version of PBL's complete accounting software offers the same **ease of use**, **security**, and **functionality** as our previous version, plus **updates** to launch your business into the future of financial accounting.

PBL Unlimited features:

- Up to 50 user licenses
- Cash flow manager
- Automatic inventory tracking
- Audit trail report
- Remote access
- Data mining
- Unlimited customer accounts
- Two years of free updates
- And so much more ...



Get ready!

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

- 1 What are the advantages to using accounting software?
- 2 What are some different types of accounting software?

Reading

2 Read these advertisements. Then, mark the following statements as true (T) or false (F).

- 1 ___ Multiple users can operate PBL Unlimited.
- 2 ___ The Virtual Accountant features self-teaching tools.
- 3 ___ The Virtual Accountant is best for large firms.

HANFORD

Virtual
Accountant

Are you tired of paying hundreds of dollars in accountant fees? Do you wish there was a simpler and cheaper way?

With the Virtual Accountant, there is!

The Virtual Accountant is Hanford Enterprises' new **user-friendly** accounting software designed especially for individuals and small businesses. This simple program will help you get your accounting operations **up and running**. It includes simple tutorials to show you how to manage your data and avoid "garbage in, garbage out."

Call today to talk to a Hanford representative!



Vocabulary

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

- | | |
|-------------------------------|---------------------|
| 1 ___ ease of use | 4 ___ functionality |
| 2 ___ updates | 5 ___ data mining |
| 3 ___ garbage in, garbage out | |

- A the result of flawed input is flawed output
- B improvements created by a program's designers
- C analyzing information and finding patterns in it
- D the degree to which a program is simple to operate
- E the degree to which a program is practical and useful

4 Fill in the blanks with the correct words and phrases: *user licenses, remote access, up and running, tutorials, user-friendly.*

- 1 Large firms need software with a lot of _____.
- 2 The business will be _____ soon.
- 3 Don is travelling and wants a program with _____.
- 4 Individuals may want a program that is _____.
- 5 People who are new to accounting should use _____.

5 Listen and read the advertisement again. How many people are allowed to use one copy of PBL unlimited?

Listening

6 Listen to a conversation between two accountants. Choose the correct answers.

- 1 What is the dialogue mostly about?

A choosing software	C PBL's latest update
B the number of users	D using outdated software
- 2 What are the accountants likely to do?

A stop using software
B select PBL Unlimited
C shop for other programs
D update their current software

7 Listen again and complete the conversation.

Accountant 1: So, Tim, have you thought about which 1 _____ we should get?

Accountant 2: Well, I'm thinking about getting PBL Unlimited.

Accountant 1: Hmm ... I 2 _____ PBL Unlimited. I like the Virtual Accountant, though.

Accountant 2: This 3 _____ PBL Unlimited has some 4 _____.

Accountant 1: But the Virtual Accountant is really easy to use. It has tutorials on 5 _____.

Accountant 2: That's cool. But I 6 _____ for homes, not businesses.

Accountant 1: You don't think it would work for the business?

Accountant 2: Well, I would 7 _____ something with more features.

Accountant 1: What features does PBL Unlimited have?

Accountant 2: Oh, it has everything! It has inventory tracking, data mining and a lot more.

Speaking

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

USE LANGUAGE SUCH AS:

Have you thought about which software ...?
I'm thinking about getting ...
What features does ... have?

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

- software
- features
- preferences

Student B: You are an accountant. Answer Student A's questions.

Writing

9 Use the advertisement and the conversation from Task 8 to complete the email.

FROM: _____, CPA
 TO: _____, Accounting Manager

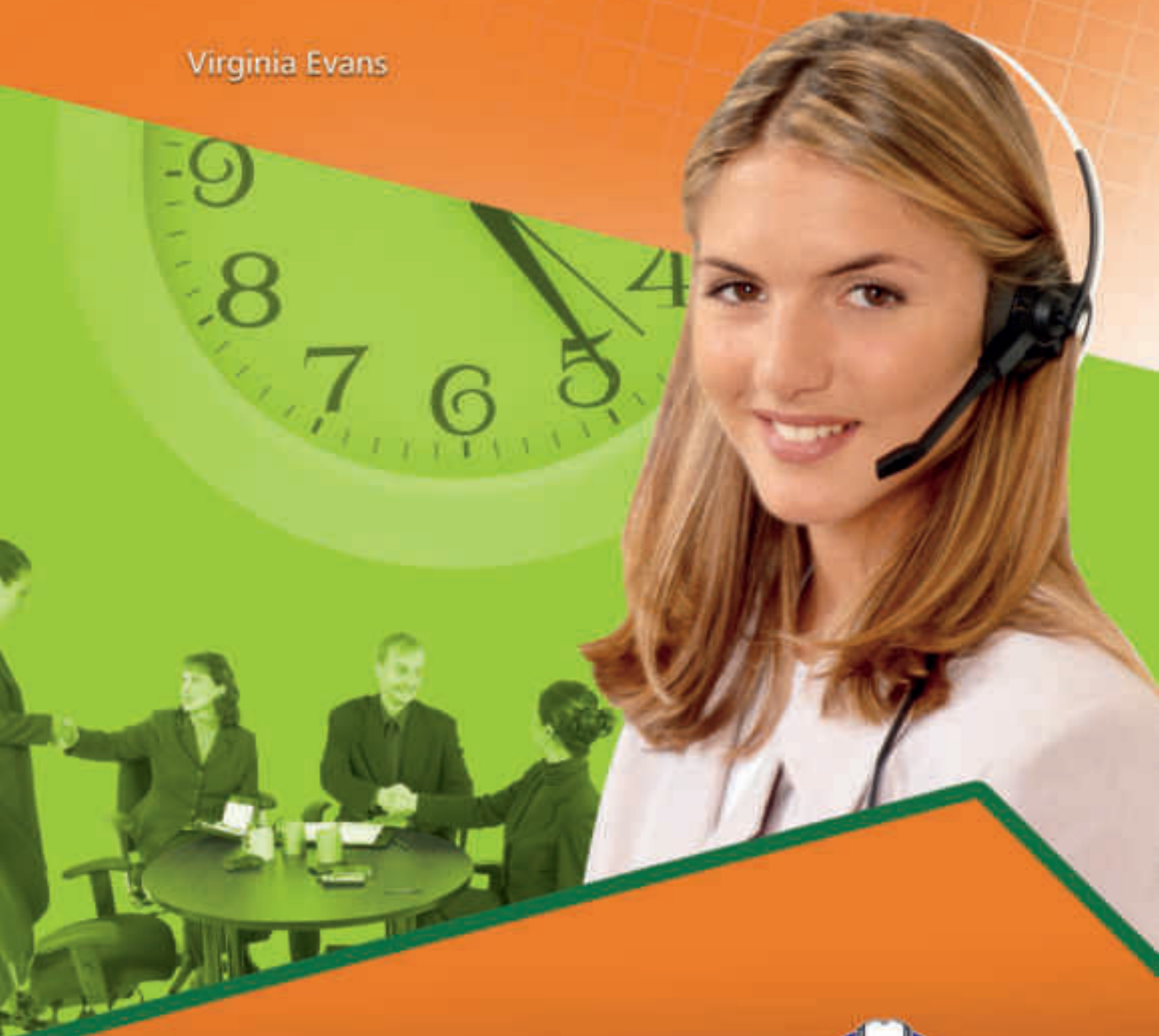
I know you want to buy new software for our department. I just wanted to let you know about a really great program that I used at a previous job. _____

Thanks for your time!

CAREER
PATHS

Secretarial

Virginia Evans



Express Publishing

Table of Contents

Book

1

Unit 1 – Office supplies	4
Unit 2 – Office furniture	6
Unit 3 – Reference books	8
Unit 4 – Office machinery	10
Unit 5 – Office documents	12
Unit 6 – Greeting visitors	14
Unit 7 – Helping visitors	16
Unit 8 – Office schedules	18
Unit 9 – Phone calls	20
Unit 10 – Qualities of a good employee	22
Unit 11 – Departments	24
Unit 12 – Answering the phone	26
Unit 13 – Making appointments	28
Unit 14 – Business letters	30
Unit 15 – Graphs and charts	32
Glossary	34

Book

2

Unit 1 – Office routines	4
Unit 2 – Quantities	6
Unit 3 – Writing invitations	8
Unit 4 – Making travel arrangements	10
Unit 5 – Booking a hotel room	12
Unit 6 – Travel preparations	14
Unit 7 – Filing equipment	16
Unit 8 – Filing systems	18
Unit 9 – Record-keeping	20
Unit 10 – Business communication	22
Unit 11 – Using computers	24
Unit 12 – Word processing	26
Unit 13 – Meetings	28
Unit 14 – Conferences	30
Unit 15 – Conference supplies	32
Glossary	34

Book

3

Unit 1 – Company activities	4
Unit 2 – Administrative assistant	6
Unit 3 – Employment	8
Unit 4 – Business transactions	10
Unit 5 – Agendas	12
Unit 6 – Taking meetings	14
Unit 7 – The mail	16
Unit 8 – Official letters	18
Unit 9 – Telecommunications	20
Unit 10 – Business abbreviations	22
Unit 11 – Money	24
Unit 12 – Banking	26
Unit 13 – Wages	28
Unit 14 – Bookkeeping	30
Unit 15 – Requests for payment	32
Glossary	34

7 Filing equipment



The Stationery Store



On special offer for one month only!

DON'T MISS OUR SALE - GREAT SAVINGS!



ring binder



clear pocket



storage box



box file

Ring Binders:

Three inch, two-ring or four-ring binders, available in blue, green, red, yellow and black. *Twelve for the price of ten!*

Box Files:

A4 or legal size, available in blue or grey. *Buy two, get one free!*

Suspension Files:

All files come with colored tabs and inserts. *Package of 100 files - now half price!*

CD Storage Boxes:

Easy to assemble. Holds 100 CDs. *Now 20% off!*

CD-R discs:

700MB digital storage. CDs will play back on DVD or CD players. Safe and permanent; it's impossible to erase your data. *Pack of fifty discs - half price!*

Clear Pockets:

A4 pockets, punched with holes to fit most types of binder. Perfect for presentations and pictures! *Pack of one hundred for the price of fifty! This month only!*

Get ready!

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

- 1 Where do people store their papers?
- 2 How do people keep things organized?

Reading

2 Read this store advertisement. Then, mark the following statements as true (T) or false (F).

- 1 ___ Box files are available in three colors.
- 2 ___ CD storage boxes can hold 20 CDs.
- 3 ___ Clear pockets are half price this month.

Free next-day delivery for orders over \$25.

Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- | | | |
|-----------------------|-------------|--------------|
| 1 ___ suspension file | 3 ___ erase | 5 ___ tab |
| 2 ___ storage box | 4 ___ legal | 6 ___ insert |

- A a piece of plastic on a suspension file
- B a file that hangs inside a drawer
- C a piece of paper inside a tab
- D a place where you can put things
- E to remove something from a surface or disk
- F a large size of paper

4 Choose the word that is closest in meaning to the underlined part.

- Put these files in a folder with metal rings.
A ring binder B suspension file C tab
- This office needs more space for keeping items that are not in use.
A inserts B storage C legal
- Put that document into the grey large, rectangular container.
A clear pocket B box file C ring binder
- Put that picture inside a plastic envelope.
A storage box B clear pocket C tab

5 Listen and read the advert again. Say five things you can buy from the store.

Listening

6 Listen to a conversation between a secretary and a salesperson at a stationery company. Check (✓) the things the administrative assistant orders.

- | | |
|------------------------|---------------------|
| 1 ___ box files | 4 ___ storage boxes |
| 2 ___ ring binders | 5 ___ CDs |
| 3 ___ suspension files | 6 ___ clear pockets |

7 Listen again and complete the conversation.

Salesperson: The Stationery Store, this is Mike speaking. How can I help you?

Secretary: Hi, I'd like to place an order for some 1 _____ supplies.

Salesperson: No problem, what would you like?

Secretary: First of all, I need some 2 _____.

Salesperson: Okay, they come in two sizes, 3 _____ and A4. Which would you like?

Secretary: The legal. I'll take a dozen of those in gray.

Salesperson: Great. Anything else?

Secretary: I need seventy red 4 _____ and three hundred 5 _____.

Salesperson: Got it. Do you have an account with us or are you paying with a credit card?

Secretary: We have an account. It's Johnstone and Company, and the account number is 3748 3948.

Salesperson: Thanks. We have the address on the computer, so we'll deliver it tomorrow morning. Is sometime between nine and eleven okay?

Secretary: 6 _____, thanks.

Speaking

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

USE LANGUAGE SUCH AS:

I'd like to place an order ...
They come in two sizes.
I'll take ...

Student A: You work at a stationery company. Talk to Student B about:

- the order
- account number
- delivery

Student B: You want to place an order for some stationery. Tell Student A what you want to buy.

Writing

9 Use the conversation from Task 8 to fill out the receipt.

 **The Stationery Store**

COMPANY: _____
ACCOUNT NUMBER: _____
DATE: _____

ORDER	PRICE
_____	_____
_____	_____
_____	_____
_____	_____

THANKS FOR YOUR PURCHASE!
COME BACK SOON

**CAREER
PATHS**

Nursing

Virginia Evans
Kori Salcido - R.N.



Express Publishing

Table of Contents

Book

1

Unit 1 – Hospital staff	4
Unit 2 – Hospital departments	6
Unit 3 – Rooms and equipment	8
Unit 4 – The body	10
Unit 5 – Blood	12
Unit 6 – The Circulatory system	14
Unit 7 – Respiratory system	16
Unit 8 – Digestive system	18
Unit 9 – Physical assessment	20
Unit 10 – Recognizing symptoms	22
Unit 11 – Pain	24
Unit 12 – Medication	26
Unit 13 – Licensed practical nurse	28
Unit 14 – Registered nurse	30
Unit 15 – Nurse practitioner	32
Glossary	38

Book

2

Unit 1 – Nutrition	4
Unit 2 – Hygiene	6
Unit 3 – Administering medication	8
Unit 4 – Admitting patients	10
Unit 5 – Taking vital signs	12
Unit 6 – Accidents, emergencies and first aid	14
Unit 7 – Wound care	16
Unit 8 – Medical specimens and testing	18
Unit 9 – Discharging patients	20
Unit 10 – Maternity nursing	22
Unit 11 – Pediatric nursing	24
Unit 12 – Surgical nursing	26
Unit 13 – Home health nursing	28
Unit 14 – Public health nursing	30
Unit 15 – Agency nursing	32
Glossary	42

Book

3

Unit 1 – Schedules and hours	4
Unit 2 – Communicating with patients and families	6
Unit 3 – Chronic vs. acute conditions	8
Unit 4 – Diabetes	10
Unit 5 – Cancer	12
Unit 6 – Heart disease	14
Unit 7 – Trauma and triage	16
Unit 8 – Communicating with staff	18
Unit 9 – IV care	20
Unit 10 – Preparing a patient for surgery	22
Unit 11 – Preventing Infection	24
Unit 12 – OB/GYN nursing	26
Unit 13 – Geriatric nursing	28
Unit 14 – Psychiatric nursing	30
Unit 15 – Hospice Nursing	32
Glossary	42

Nurse Practitioners and Primary Care

It's a familiar scene: long waits at the doctor's office in crowded waiting rooms. But there's a way to avoid this and still get your check up! How? See an NP (nurse practitioner) instead.

NPs are an excellent point of entry health providers. They hold advanced degrees and must be board certified. So you're sure to get good care.

NPs provide a wide range of services. They conduct physical exams and diagnose illnesses. They prescribe treatment such as physical therapy. Many provide regular immunizations for children. Some even offer counseling services.

Though patients must see doctors for specialized care, nurse practitioners provide general healthcare without the wait.

Get ready!

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

- 1 What kind of jobs do nurse practitioners perform?
- 2 What qualifications must nurse practitioners hold?

Reading

2 Read the article from Healthy Living magazine. Then, mark the following statements as true (T) or false (F).

- 1 Patients are usually directed to NPs by point of entry health providers.
- 2 Nurse practitioners treat patients' physical and emotional needs.
- 3 Patients of NPs must visit a doctor's office to get shots.

Vocabulary

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

- | | |
|---|--|
| 1 <input type="checkbox"/> immunization | 4 <input type="checkbox"/> board certified |
| 2 <input type="checkbox"/> advanced degree | 5 <input type="checkbox"/> point of entry |
| 3 <input type="checkbox"/> physical therapy | |

- A a college degree higher than a bachelor's degree
 B having passed a test to document expertise in an area of medicine
 C treatment for an illness or injury by physical methods rather than the use of drugs
 D the administration of a medical substance to help protect a person against a disease
 E the first level of access to a system



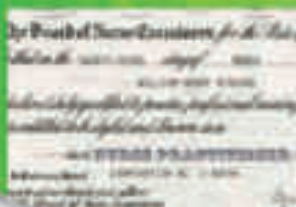
immunization



physical therapy



physical exam



board certified



nurse practitioner

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

word bank

prescribe nurse practitioner
 diagnose counseling
 physical exam

- 1 Mark is in constant pain. He hopes the doctor can quickly _____ the problem.
- 2 When Linda conducts a(n) _____, she checks all areas of a person's body.
- 3 Peter examined his patient, he decided to _____ medication to reduce the pain.
- 4 Todd offers _____ services. Many people tell him about their problems.
- 5 Molly likes learning about medicine and helping people. She wants to be a _____ when she grows up.

- 5 Listen and read the article again. How can a patient avoid a long wait at the GP's?

Listening

- 6 Listen to a conversation between an interviewer and a NP. Choose the correct answers.

- What is the dialogue mostly about?
 - challenges of being an NP
 - the steps of a physical exam
 - procedures that the NP performs
 - common illnesses that the NP sees
- According to the dialogue, what service does the nurse practitioner NOT offer?
 - prescribing medications
 - offering counseling
 - performing immunizations
 - diagnosing illnesses

- 7 Listen again and complete the conversation.

Interviewer: Thanks for agreeing to 1 _____. I know you nurse practitioners get busy.

NP: It's my pleasure.

Interviewer: So, what kind of 2 _____ do you provide?

NP: Lots. I conduct 3 _____ and perform immunizations for children. I also offer counseling.

Interviewer: What patients do you have today?

NP: My next patient has an injury from a 4 _____. I'm giving him physical 5 _____.

Interviewer: Are there any limits to the care you provide?

NP: Well, I don't perform surgery. But I do 6 _____ illnesses.

Speaking

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

USE LANGUAGE SUCH AS:

What kind of services do you provide?
My next patient has ...
Are there any limits to the care you provide?

Student A: You are an interviewer and you are writing an article about NPs. Ask Student B questions to find out about:

- services
- today's patients
- limits to care

Student B: You are a nurse practitioner. Answer Student A's questions.

Writing

- 9 Use the conversation from Task 8 to fill out the interviewer's notes.

Article about NPs

Services Provided:

Conducts _____

Performs _____

Offers _____

Limits to Care:

Does not _____

INTERVIEW NOTES



**CAREER
PATHS**

Beauty Salon

Jenny Dooley
Virginia Evans



Express Publishing

Table of Contents

Book

1

Unit 1 – Beauty Salon Workers	4
Unit 2 – Welcome Bella Salon	6
Unit 3 – Salon Small Talk	8
Unit 4 – Hair Designer’s Tools	10
Unit 5 – Hair Types and Styles	12
Unit 6 – Women’s Hairstyles	14
Unit 7 – Men’s Hair Styles	16
Unit 8 – Communicating During a Haircut	18
Unit 9 – Manicure	20
Unit 10 – Pedicure	22
Unit 11 – Makeup Essentials	24
Unit 12 – Makeup Tools	26
Unit 13 – Makeovers	28
Unit 14 – Massage	30
Unit 15 – Massage Services	32
Glossary	34

Book

2

Unit 1 – Busy day at the salon	4
Unit 2 – Giving directions	6
Unit 3 – Business hours	8
Unit 4 – Making an appointment by phone	10
Unit 5 – Shampoo	12
Unit 6 – Perms	14
Unit 7 – Straightening	16
Unit 8 – Hair coloring	18
Unit 9 – Barber service	20
Unit 10 – Damaged hair	22
Unit 11 – Getting a manicure	24
Unit 12 – Manicure maintenance	26
Unit 13 – Hair removal	28
Unit 14 – Skincare	30
Unit 15 – Spa facials	32
Glossary	34

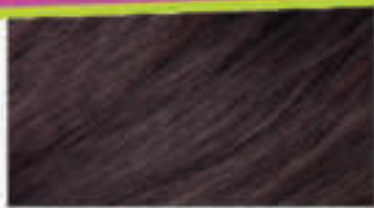
Book

3

Unit 1 – Sales	4
Unit 2 – How will you pay?	6
Unit 3 – Color treatment	8
Unit 4 – Advanced coloring techniques	10
Unit 5 – Curly hair	12
Unit 6 – Hair products	14
Unit 7 – Men’s grooming	16
Unit 8 – Special occasion hair	18
Unit 9 – Nail problems	20
Unit 10 – Artificial nails	22
Unit 11 – Manicure sanitation	24
Unit 12 – Choosing makeup	26
Unit 13 – Eye makeup techniques	28
Unit 14 – Makeup on special occasions	30
Unit 15 – Permanent makeup	32
Glossary	34



chestnut



dark brown



light brown



purple-black



auburn



copper



honey blonde



platinum

Get ready!

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

- 1 Why do some people color their hair?
- 2 What are some advantages of different hair colors?

Reading

2 Read the information from a magazine article. Then, mark the following true (T) or false (F).

- 1 ___ Chestnut hair is easy to maintain.
- 2 ___ Healthy red hair holds color well.
- 3 ___ Blonde shades have low maintenance.

Vocabulary

3 Place the words and phrases from the word bank under the correct heading.

WORD BANK

auburn platinum chestnut
light brown copper honey blonde
golden blonde dark brown

Brunette	Redhead	Blonde
_____	_____	_____
_____	_____	_____
_____	_____	_____

color swatch book

The Best Color for You!

Choose from our new color swatch book

Browns and Blacks

Choose from our new color swatch book. There are plenty of reasons to go **brunette**. Maintenance is very easy, and dark hair reflects a lot of light, so it looks very shiny. But remember, if you're thinking about a very dark color (like **blue-black**) consult a professional. Once you dye your hair black, it is very difficult to change it back.

Hot colors

chestnut, dark brown, light brown

Reds

Do you enjoy getting a lot of attention? Then, try a

head-turning shade of red. **Redheads** must have very healthy hair in order for the hair color to last for a long time. But it's worth it! Just stay away from **purple-black** tones, which appear unnatural.

Hot colors

auburn, copper

Blondes

For a youthful, energetic look, try **blonde** shades. But it may take time to find the right shade to match your skin tone. Also, blonde hair costs a lot of money and time to maintain.

Hot colors

honey blonde, platinum, golden blonde

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

- 1 Tara has decided to dye her hair a pale yellow color. _____ _l_ _n_ _
- 2 The stylist advised Sara against getting very dark black with tones of blue hair because it doesn't match her skin tone. _____ _u_ _l_ _c_ k
- 3 Helen is the only person with brown hair in her class. _____ _r_ _n_ _t_ _

- 5 Listen and read the information from a magazine article again. What must someone consider if they want to dye their hair blonde?

Listening

- 6 Listen to a conversation between a stylist and client at a hair salon. Choose the correct answers.

- What does the man help the woman with?
 - choosing a new hair color
 - maintaining a previous hair color
 - advising about hair care
 - picking the right hair cut
- What is true about the woman?
 - She has never dyed her hair before.
 - She visits the salon every two weeks.
 - She has naturally dark hair.
 - She wants to look younger.

- 7 Listen again and complete the conversation.

- Stylist:** Good morning, Mrs McAllen. You're here for a 1 _____ consultation, aren't you?
- Client:** That's right. I really want to change my look.
- Stylist:** Well, let's talk about your options. First, do you want to go lighter or 2 _____?
- Client:** I've always wanted to try 3 _____ hair.
- Stylist:** Okay, blonde is very popular. But you should know that you'd have to come in every 2 to 4 weeks for touch-ups.
- Client:** Wow, that could get 4 _____.
- Stylist:** On the other hand, blonde hair typically makes women look younger.
- Client:** Really? Maybe blonde isn't such a great idea then. What are some low-maintenance options?
- Stylist:** Well, you have 5 _____ hair. We could give you light brown instead.
- Client:** I want a bigger change from my natural color. How about red shades?
- Stylist:** I think copper red would look fantastic on you. And it's a lot easier to maintain than blonde.
- Client:** That sounds perfect! Let's see how I look as a 6 _____!



Speaking

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

USE LANGUAGE SUCH AS:

I really want to change my look.

First, do you want to go lighter or darker?

I think ... would look fantastic on you.

Student A: You are a stylist at Bella Salon. Talk to Student B about:

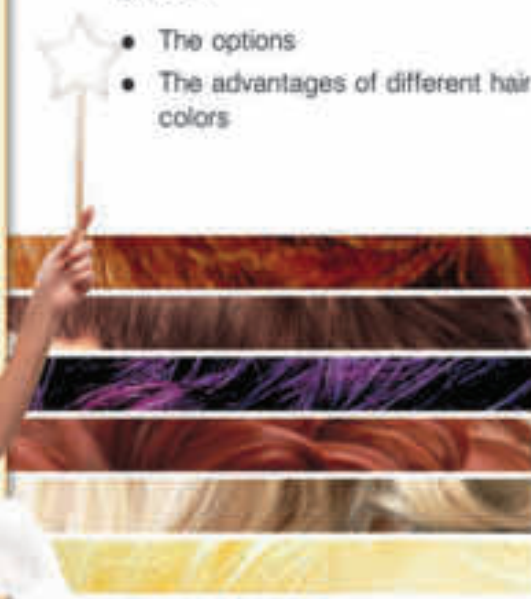
- his or her color preferences
- the color's advantages and disadvantages
- suitable colors for the client

Student B: You are a client. Based on Student A's advice, choose a hair color.

Writing

- 9 You are a colorist. Use the conversation from Task 8 to write notes about the client's change of hair color. Write about:

- The options
- The advantages of different hair colors



CAREER
PATHS

Banking

Virginia Evans
Ken Gilmore, MBA



Express Publishing

Table of Contents

Book 1	Banking Basics	Unit 1 – Money	4
		Unit 2 – Bank supplies	6
		Unit 3 – Bank furniture	8
		Unit 4 – Bank documents	10
		Unit 5 – Bank machines	12
		Unit 6 – Parts of a bank	14
		Unit 7 – Numbers	16
	Products and activities	Unit 8 – Savings accounts	18
		Unit 9 – Checking accounts	20
		Unit 10– Credit cards	22
		Unit 11 – Access channels	24
	Careers	Unit 12 – Online banking	26
		Unit 13 – Office and administrative support	28
		Unit 14 – Phone banker	30
		Unit 15 – Teller	32
Appendix	Glossary	34	
Book 2	Products and activities	Unit 1 – Transfers	4
		Unit 2 – Loans	6
		Unit 3 – Home loans	8
		Unit 4 – Certificates of deposit	10
		Unit 5 – Mutual funds	12
	Types of banking and institutions	Unit 6 – Retail banking: community banks	14
		Unit 7 – Retail banking: commercial banks	16
		Unit 8 – Retail banking: credit unions	18
		Unit 9 – Investment banking: Front Office	20
		Unit 10– Investment banking: Middle Office	22
		Unit 11 – Investment banking: Back Office	24
	Careers	Unit 12 – Loan officer	26
		Unit 13 – Credit analyst	28
		Unit 14 – Branch manager	30
		Unit 15 – Trust Officer	32
Appendix	Glossary	34	
Book 3	Types of banking and institutions	Unit 1 – Private banking	4
		Unit 2 – Savings and loans, thrifts, and building societies	6
		Unit 3 – Islamic banking	8
		Unit 4 – Central banks	10
	Banking crime	Unit 5 – Fraud 1: Check fraud	12
		Unit 6 – Fraud 2: Credit and debit card fraud	14
		Unit 7 – Fraud 3: Accounting fraud	16
		Unit 8 – Fraud 4: Internet fraud	18
		Unit 9 – Robbery	20
	Challenges in banking	Unit 10 – Competition	22
		Unit 11 – Types of risk	24
		Unit 12 – Asset quality	26
		Unit 13 – Crises and runs	28
	Regulation	Unit 14 – Regulatory principles	30
		Unit 15 – Regulatory requirements	32
Appendix	Glossary	34	

DRURY

SAVINGS BANK

one-on-one savings plans!

At Drury Savings Bank, our primary goal is customer satisfaction. That's why we encourage you to open a **savings account*** with us. It's a great way to improve your financial stability and quality of life.

Our employees develop one-on-one savings plans. That means each **depositor** receives individual attention from our staff. We're currently offering great **interest rates**. The more you **deposit**, the more **interest** you **earn**. So what are you waiting for? Schedule an appointment, and we'll help plan your **long-term** financial goals.

*No savings accounts have a minimum balance requirement. Monthly withdrawals are limited.



Vocabulary

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

- | | | |
|---------------|-----------------|----------------|
| 1 __ deposit | 3 __ depositor | 5 __ long-term |
| 2 __ interest | 4 __ withdrawal | |

- A lasting for a long time
 B when you take money from an account
 C someone who puts money into an account
 D a percentage earned on an amount of money
 E to put money into an account

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

word BANK

earn interest rate savings account
 limit minimum balance

- Tim was fined when his account fell below the _____.
- Many banks _____ savings withdrawals to six per year.
- The woman deposited the money from her paycheck into a(n) _____.
- With the high rates, the man was able to _____ some extra money.
- The man kept his money in an account with an excellent _____.

Get ready!

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

- What encourages people to open savings accounts?
- What are some restrictions on savings accounts in your country?

Reading

2 Read the bank advertisement. Then, mark the following statements as true (T) or false (F).

- ___ Depositors can develop different savings plans.
- ___ Larger accounts earn more money than smaller accounts.
- ___ Customers can open savings accounts with any amount of money.

- 5 Listen and read the advertisement again. Is it possible to keep a savings account open with no money in it?

Listening

- 6 Listen to a conversation between a teller and a customer. Choose the correct answers.

- What is the conversation mostly about?
 - making a withdrawal
 - reducing account fees
 - opening a savings account
 - checking on interest rates
- Why will the man pay a fee?
 - He is opening a new account.
 - He is ordering a cashier's check.
 - He already withdrew money this month.
 - His account doesn't have enough money.

- 7 Listen again and complete the conversation.

Teller: Is this correct, Mr. Jones? You want to take three hundred out of your 1 _____?

Customer: That's right. Why is there a problem?

Teller: A small one. You have the money. But your account is 2 _____ to one withdrawal a month.

Customer: Oh, and I 3 _____ money last week to make a cashier's check. Well, I really need the cash.

Teller: Are you sure? There will be a 4 _____.

Customer: 5 _____ is it?

Teller: It's twenty dollars.

Customer: I don't 6 _____ . I'll just pay the fee.

Speaking

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

USE LANGUAGE SUCH AS:

Is this correct ...

Your account is limited to ...

There will be a fee ...

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

- his/her account
- the withdrawal limit
- the fee he must pay to withdraw

Student B: You are making a withdrawal. Talk to Student A about the withdrawal limit fee.

Writing

- 9 Use the advertisement and the conversation from Task 8 to fill out the paperwork.

Customer Name: _____

Account Number: _____

Type of Transaction: _____

Fee: Y / N

If yes, reason for fee: _____

Fee Amount: _____

Total Transaction Amount: _____



**CAREER
PATHS**

Agriculture

Neil O'Sullivan
James D. Libbin



Express Publishing

Table of Contents

Book 1	Unit 1 – The history of agriculture	4
	Unit 2 – Plant products	6
	Unit 3 – Animal products	8
	Unit 4 – Soil	10
	Unit 5 – Water	12
	Unit 6 – Seeds	14
	Unit 7 – Plant growth	16
	Unit 8 – Harvest	18
	Unit 9 – Storage	20
	Unit 10 – Feed and nutrients	22
	Unit 11 – Housing animals	24
	Unit 12 – Breeding	26
	Unit 13 – Slaughter and processing	28
	Unit 14 – Cultivation and planting equipment	30
	Unit 15 – Harvest equipment	32
Glossary	34	
Book 2	Unit 1 – Beef industry	4
	Unit 2 – Swine industry	6
	Unit 3 – Poultry industry	8
	Unit 4 – Dairy industry	10
	Unit 5 – Sheep industry	12
	Unit 6 – Equine industry	14
	Unit 7 – Apiculture	16
	Unit 8 – Classification and Composition	18
	Unit 9 – Salts and acidity	20
	Unit 10 – The nitrogen cycle	22
	Unit 11 – Soil conservation	24
	Unit 12 – Preparing, seeding and planting	26
	Unit 13 – Climate and weather	28
	Unit 14 – Pricing	30
	Unit 15 – Government intervention	32
Glossary	34	
Book 3	Unit 1 – Animal behavior	4
	Unit 2 – Animal health	6
	Unit 3 – Animals and grain	8
	Unit 4 – Bioengineering	10
	Unit 5 – Cropping systems	12
	Unit 6 – Growing seasons	14
	Unit 7 – Weeds, pests, and disease	16
	Unit 8 – Diagnosing crop problems	18
	Unit 9 – Agribusiness management	20
	Unit 10 – International trade	22
	Unit 11 – The futures market	24
	Unit 12 – Sustainable farming	26
	Unit 13 – Technological advances	28
	Unit 14 – Organic farming	30
	Unit 15 – GMOs	32
Glossary	34	



stunted



wilted

browning

stippled

University of Jacksonville

Extension Office: Crop and Field Problems

Who we are

We are **agricultural advisors** with extensive experience in diagnosing crop and field problems. Our services are available to the general public.

What we can do for you - We can provide technical assistance in a variety of ways ranging from advice on crop selection to on-site and laboratory diagnosis.

On site diagnosis

Give us a call if your plants are **stippled**, **stunted**, **wilting**, or **browning**. We attempt to establish **symptom patterns** for small groups of plants. For larger problems, we attempt to identify the **field pattern**. Once this information has been gathered, we can usually provide a definitive diagnosis using our **symptomology keys**.

Laboratory diagnosis

When a symptomology key does not provide a definitive diagnosis, we usually turn to lab analyses. These tests can identify if a **symptom** is caused by **biotic** or **abiotic** factors.

How to contact us

If you'd like to get our advice, or set up an appointment for a field or crop diagnosis, please call 888-555-0505 or send an email to diagnosis@extension.uj.edu.

[Back to Top](#) | [UR Home](#) | [Terms of Use](#) | [Search](#) | [Site Map](#)

Reading

2 Read the webpage from an agricultural extension office. Then, choose the correct answers.

- What is the purpose of the webpage?
 - to explain a diagnostic technique
 - to offer advice on diagnosing problems
 - to give information about services
 - to list common causes of crop problems
- Who does the office provide assistance for?
 - college students
 - the general public
 - laboratory scientists
 - agriculture professors
- Which service is NOT provided?
 - advice on growing crops
 - on-site diagnosis of problems
 - laboratory analysis of samples
 - preparation of new fields

Vocabulary

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

- | | |
|--|----------------------|
| 1 — abiotic | 4 — symptomology key |
| 2 — brown | 5 — symptom |
| 3 — field pattern | |
| A to change color | |
| B non-living | |
| C a sign that indicates disease | |
| D a tool used to diagnose diseases | |
| E a sign of disease that occurs throughout an area | |

Get ready!

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

- What are some signs that crops are failing?
- What are some ways to save failing crops?



Speaking

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

USE LANGUAGE SUCH AS:

What's the problem with your corn?

I noticed the tops of some of the plants were ...

And what happened next?

Student A: You are an agricultural advisor. Ask Student B about:

- crop problems
- symptoms
- changes

Student B: You are a farmer. Answer Student A's questions.

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

WORD BANK

biotic stunted wilt
stippled symptom pattern

- 1 _____ leaves are covered with spots.
 - 2 A _____ plant will be much smaller than others.
 - 3 Many crop problems have _____ causes.
 - 4 The crops started to _____ in the heat.
 - 5 Researchers are analyzing the _____.
- 5 Listen and read the webpage from an agricultural extension office again. What happens when a symptomology key doesn't provide a definite diagnosis?

Listening

- 6 Listen to a conversation between an agricultural advisor and a farmer. Check (✓) the symptoms of the farmer's corn.

- 1 wilting
- 2 drying out
- 3 browning tops
- 4 blackened roots
- 5 stunted growth

- 7 Listen again and complete the conversation.

Advisor: Mr. Fussel, what's the problem with your corn?

Farmer: Well, 1 _____ even though I gave them plenty of water and fertilizer.

Advisor: 2 _____ first noticed the problem.

Farmer: That would have been 3 _____. First, I noticed the tops of some of the plants were browning.

Advisor: What happened next? 4 _____?

Farmer: Not that. Next, they 5 _____ slightly. That's when I 6 _____ water.

Writing

- 8 Use the conversation from Task 8 to write an email to an agricultural advisor. Include: your problem, crop symptoms, and changes you've seen.

To: Farmadvisor@farmsite.com
From: THernandez@Hfarm.com

To _____

Sincerely _____



CAREER
PATHS



Medical

Virginia Evans

Jenny Dooley

Trang M. Tran, M.D.



Express Publishing

Table of Contents

Book

1

Unit 1 – Hospital departments	4
Unit 2 – Hospital staff	6
Unit 3 – Hospital equipment	8
Unit 4 – Parts of the body	10
Unit 5 – Parts of the body 2	12
Unit 6 – Parts of the body 3	14
Unit 7 – Respiratory system	16
Unit 8 – Circulatory system	18
Unit 9 – Digestive system	20
Unit 10 – First aid	22
Unit 11 – Common abbreviations	24
Unit 12 – Measurements	26
Unit 13 – Administering medication	28
Unit 14 – Describing frequency	30
Unit 15 – Maintaining hygiene	32
Glossary	34

Book

2

Unit 1 – Blood	4
Unit 2 – Bones	6
Unit 3 – Skin	8
Unit 4 – Nervous system	10
Unit 5 – Endocrine system	12
Unit 6 – Reproductive system	14
Unit 7 – Urinary system	16
Unit 8 – Taking a history	18
Unit 9 – Talking about symptoms	20
Unit 10 – Physical examinations	22
Unit 11 – Diagnostic tests	24
Unit 12 – Diagnostic equipment	26
Unit 13 – Family medicine	28
Unit 14 – Pediatrics	30
Unit 15 – Geriatrics	32
Glossary	34

Book

3

Unit 1 – Education and training	4
Unit 2 – Communicating with staff	6
Unit 3 – Communicating with patients	8
Unit 4 – Challenges	10
Unit 5 – Describing pain	12
Unit 6 – Chronic vs. acute illnesses	14
Unit 7 – Diabetes	16
Unit 8 – Cancer	18
Unit 9 – Heart disease	20
Unit 10 – Traumatic injuries	22
Unit 11 – Infections	24
Unit 12 – Nursing	26
Unit 13 – OB/GYN	28
Unit 14 – Neurology	30
Unit 15 – Surgery	32
Glossary	34

2 Hospital staff

HEARTLAND HOSPITAL



STAFF DIRECTORY

FIRST FLOOR

Dr. Paul Sartin, **cardiologist, surgeon** / Office: 100
See for: Heart Disease, Heart Surgery

Dr. Lydia Greenwich, **anesthesiologist** / Office: 101
See for: Surgery Pain Relief and Preparation

Dr. Richard Collins, chief **pediatrician** / Office: 102
See for: Children's Health

Dr. Ann Harold, **obstetrician** / Office: 103
See for: Labor, Pregnancy

Dr. Thomas Locke, chief **radiologist** / Office: 104
See for: X-rays, CT Scans

Carol Howard, **lab technician**
See for: Test Results



general practitioner

SECOND FLOOR

Dr. Rowan McNeil, **general practitioner** / Office: 202
See for: General Medicine

Carol Simmons, NP, head **nurse** / Office: 203
See for: Nursing Schedules

Dr. Charles Thiel, **pharmacist** / Office: 204
See for: Prescriptions



pharmacist



radiologist



nurse



lab technician

Get ready!

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

- 1 Who are some different people who work in a hospital?
- 2 What are some special kinds of doctors?

Reading

2 Read the hospital directory. Then, mark the following statements as true (T) or false (F).

- 1 ___ A patient having heart surgery will visit Dr. Sartin and Dr. Greenwich.
- 2 ___ Dr. Harold is best qualified to examine a sick four-year-old.
- 3 ___ Pregnant women meet their doctor on the second floor.

Vocabulary

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

- | | |
|----------------------------|------------------|
| 1 ___ lab technician | 4 ___ nurse |
| 2 ___ anesthesiologist | 5 ___ pharmacist |
| 3 ___ general practitioner | |

- A a doctor who provides many kinds of care to adults and children
- B a doctor who renders patients unconscious or prevents them from feeling pain
- C a medical professional who works with samples in a laboratory
- D a medical professional who helps a doctor and cares for patients
- E a person who fills prescriptions and gives medicine

4 Read the sentence and choose the correct word.

- 1 The **radiologist** / **pharmacist** has prepared the X-rays.
- 2 The **lab technician** / **pediatrician** is checking on the three-year-old.
- 3 A great **obstetrician** / **cardiologist** treated me after my heart attack.
- 4 The **anesthesiologist** / **obstetrician** says the baby is doing fine.
- 5 Dr. Brown is a famous transplant **surgeon** / **nurse**.

5 Listen and read the hospital directory again. Who are some of the hospital staff and what are their duties?

Listening

6 Listen to a conversation between a doctor and a nurse. Choose the correct answers.

- 1 What is the main idea of the conversation?
A a patient's appointment
B a patient's missing chart
C a patient's blood pressure
D a patient's general practitioner
- 2 What will the woman likely do next?
A examine the patient
B call the cardiologist's office
C take the patient's blood pressure
D lead the man to the patient's room

7 Listen again and complete the conversation.

Nurse: Dr. McNeil, could you come over here 1 _____?

Doctor: Sure, Carol. What do you need?

Nurse: I just took Ms. Greyson's blood pressure. It's one fifty 2 _____ ninety-two.

Doctor: Hmm. That's 3 _____.

Nurse: Yes, I 4 _____, too.

Doctor: Who's her 5 _____?

Nurse: Her chart says it's Dr. Sartin.

Doctor: He'll want to 6 _____ this.

Nurse: I'll let his office know to set up an appointment.

Doctor: Good idea. Thanks for consulting me.

Speaking

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

USE LANGUAGE SUCH AS:

*Can you come over here?
What do you need?
Who is ...*

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

- a problem with a patient
- what you think about it
- what to do next

Student B: You are a doctor. Talk to Student A about a patient.

Writing

9 Use the conversation from Task 8 to fill out the consultation form.

Heartland Hospital
STATE DIRECTORY 
Patient
Consultation Form

Patient: _____

Doctor Consulted: _____

Issue: _____

Solution: _____

**CAREER
PATHS**

Mechanics

Jim D. Dearholt



Express Publishing

Table of Contents

Book 1	Tools	Unit 1 – Hand tools 1	4
		Unit 2 – Hand tools 2	6
		Unit 3 – Fasteners	8
		Unit 4 – Power tools	10
		Unit 5 – Bench and machine tools	12
	Mechanic Basics	Unit 6 – Basic actions	14
		Unit 7 – Materials	16
		Unit 8 – Numbers	18
		Unit 9 – Measurements	20
		Unit 10 – Around the shop	22
	Auto basics	Unit 11 – Types of cars	24
		Unit 12 – Parts of a car: Exterior	26
		Unit 13 – Parts of a car: Interior	28
		Unit 14 – Gauges and meters	30
		Unit 15 – Tires	32
Appendix	Glossary	34	
Book 2	Engines	Unit 1 – Internal combustion engine	4
		Unit 2 – Diesel vs. gasoline	6
		Unit 3 – Two-stroke engine	8
		Unit 4 – Four-stroke engine	10
	Auto Systems	Unit 5 – Electrical system	12
		Unit 6 – Ignition system	14
		Unit 7 – Fuel system	16
		Unit 8 – Lubrication system	18
		Unit 9 – Exhaust system	20
		Unit 10 – Cooling system	22
		Unit 11 – Brake system	24
		Unit 12 – Steering system	26
		Unit 13 – Suspension system	28
		Unit 14 – Transmission system	30
		Unit 15 – Differentials and joints	32
Appendix	Glossary	34	
Book 3	Electricity	Unit 1 – Basic electricity	4
		Unit 2 – Electrical tools and equipment	6
	Motorcycles	Unit 3 – Parts of a motorcycle	8
		Unit 4 – Common problems	10
	HVAC	Unit 5 – Heating	12
		Unit 6 – Ventilation	14
		Unit 7 – Air conditioning and refrigeration	16
	Heavy Machinery	Unit 8 – Farm Machines	18
		Unit 9 – Construction and demolition machines	20
	Collision Repair	Unit 10 – Welding	22
		Unit 11 – Frame repair	24
		Unit 12 – Refinishing	26
	Auto	Unit 13 – Hybrids	28
		Unit 14 – Electric cars	30
		Unit 15 – Troubleshooting problems	32
Appendix	Glossary	34	

GRINNEL
X43

Coming in at 1,000 pounds with a full tank, the Grinnel X43 is our entry-level touring motorcycle and among our best selling!



With state-of-the-art, computer-adjusted front and rear suspension systems and comfortable seating it offers an amazingly smooth riding experience for those just entering the world of motorcycles.

The X43's **handlebars** are designed to reduce strain and put the driver in full control. Convenient placement of the **throttle**, the **clutch lever**, and the **shift lever** make this bike simple and easy to operate for a first-time driver. Unlike **chain** or **belt drives**, the X43's **shaft drive** is extremely durable and requires little maintenance. It's just one example of the X43's reliability. Our aim is to ensure that you get the smoothest ride with minimal maintenance.

And how do we accomplish that goal? We start with a high-strength steel **frame**. The **fork tubes** and durable **triple trees** provide the front suspension, while the **swingarm** with computer-controlled **shock absorbers** creates the rear suspension. A six-gallon **fuel tank** ensures you can take a long ride without refueling. And not only is the X43 supported by a standard steel **side stand**, it is supported by Grinnel's three-year, unlimited mileage warranty. Check out the Grinnel X43 today, and get into the world of riding motorcycles.

Get ready!

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

- 1 What are some of the parts of a motorcycle?
- 2 What keeps a motorcycle standing when it is not being driven?

Reading

2 Read the advertisement for a motorcycle. Then, choose the correct answers.

- 1 What is the advertisement mostly about?
 - A different types of options for a motorcycle
 - B types of products from a motorcycle company
 - C a motorcycle designed for touring
 - D available parts for a motorcycle
- 2 What is true of the X43 model?
 - A It is built for racing.
 - B It has an optional side stand.
 - C It is recommended for first-time drivers.
 - D It weighs less than 900 pounds with fuel.
- 3 Which is NOT a feature of the X43?

A side stand	C steel frame
B belt drive	D shock absorbers

Vocabulary

3 Read the sentence pair. Choose where the words best fit the blanks.

- 1 **motorcycle / frame**
 - A _____ is similar to a bicycle with an engine.
 - B The wheels, seat, and other parts attach to the _____.
- 2 **side stand / handlebars**
 - A The _____ allow drivers to park a motorcycle.
 - B _____ are used to make turns.
- 3 **chain drive / shaft drive**
 - A A _____ has a long rod in the drive train.
 - B Gears are an important part of a _____.
- 4 **fuel tank / belt drive**
 - A Gasoline or diesel is stored in the _____.
 - B A _____ connects the engine and rear wheel.

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

Word Bank

clutch lever swingarm fork tube
 shift lever throttle triple tree
 shock absorber

Front suspension	Rear suspension	Controls

- 5 Listen and read the advertisement for a motorcycle again. What type of rider is the X43 aimed at?

Listening

- 6 Listen to a conversation between two mechanics. Mark the following statements as true (T) or false (F).

- ___ The motorcycle was in an accident.
- ___ The mechanic wants to replace the fork.
- ___ The frame is the most damaged part.

- 7 Listen again and complete the conversation.

Mechanic 2: That depends. The 1 _____ are beyond repair.

Mechanic 1: No doubt about that.

Mechanic 2: I think I could find a reasonably priced replacement.

Mechanic 1: OK. How about the 2 _____?

Mechanic 2: I went over it with a 3 _____ and didn't find a single crack.

Mechanic 1: That's incredible!

Mechanic 2: There was some damage, but it's 4 _____.

Mechanic 1: So do you think it's still 5 _____?

Mechanic 2: Sure, but 6 _____ a lot of work. We'll also need to replace both wheels, the brakes, and the swingarm.

Mechanic 1: 7 _____?

Mechanic 2: That's all I could find.



Speaking

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

USE LANGUAGE SUCH AS:

How about the ...?
 So do you think it ...?
 We'll also need to ...

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

- the damage to a motorcycle
- what needs to be repaired
- if the motorcycle can be ridden

Student B: You are a mechanic. Talk to Student A about the damage to a motorcycle.

Writing

- 9 Use the advertisement and conversation from Task 8 to fill out an assessment of a damaged motorcycle. Include: damaged parts, repairs required, and parts that are safe.

Damage Assessment

Customer name: _____

Damaged parts: _____

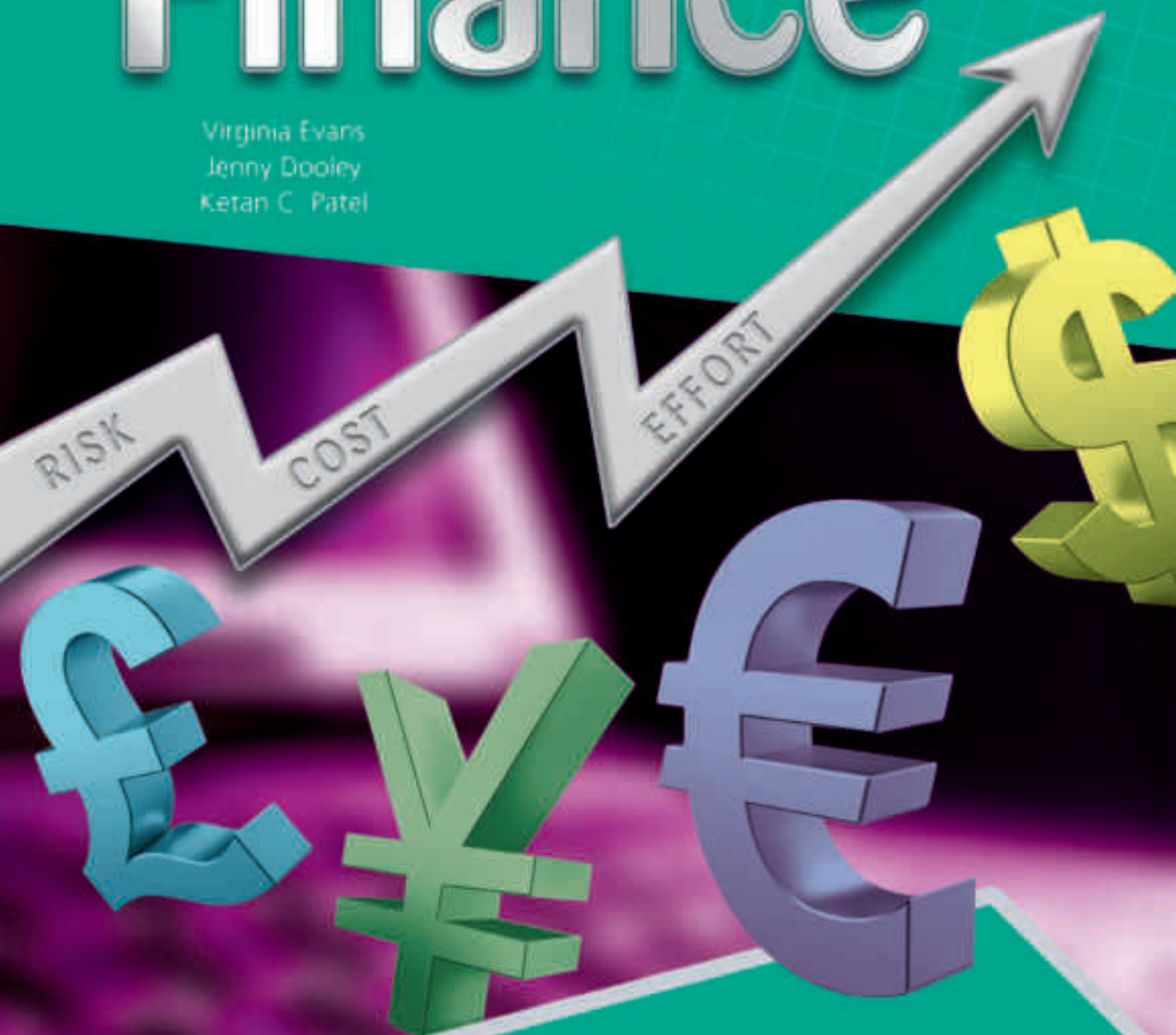
New parts required: _____

Safe parts: _____

**CAREER
PATHS**

Finance

Virginia Evans
Jenny Dooley
Ketan C. Patel



Express Publishing

Table of Contents

Book 1	Finance Basics	Unit 1 – Office supplies	4
		Unit 2 – Office furniture	6
		Unit 3 – Office machines	8
		Unit 4 – Financial documents	10
		Unit 5 – Cash	12
		Unit 6 – Numbers	14
		Unit 7 – Changes in value	16
		Unit 8 – Balance sheets	18
	Banking	Unit 9 – Using money	20
		Unit 10 – Bank accounts	22
		Unit 11 – Bank services and costs	24
		Unit 12 – Loans	26
	Business Finance	Unit 13 – Types of businesses	28
		Unit 14 – Types of cost	30
		Unit 15 – Budgets	32
Appendix	Glossary	34	
Book 2	Finance Basics	Unit 1 – Types of investments	4
		Unit 2 – Investment styles	6
		Unit 3 – Personal investments and retirement	8
		Unit 4 – The stock market	10
		Unit 5 – Changes in the stock market	12
	Investment Banking	Unit 6 – The front office	14
		Unit 7 – The middle office	16
		Unit 8 – The back office	18
		Unit 9 – Regulation	20
	Job in Finance	Unit 10 – Bank manager	22
		Unit 11 – Accountant	24
		Unit 12 – Tax consultant	26
		Unit 13 – Financial advisor	28
		Unit 14 – Stock broker	30
		Unit 15 – Trader	32
Appendix	Glossary	34	
Book 3	Business finance	Unit 1 – Supply, demand, and prices	4
		Unit 2 – Starting a business	6
		Unit 3 – Balance sheets	8
		Unit 4 – Profit and loss accounts	10
		Unit 5 – Sales forecasts	12
		Unit 6 – Controlling operations	14
		Unit 7 – Business relationships	16
		Unit 8 – Challenges	18
	Insurance	Unit 9 – Insurance basics	20
		Unit 10 – Insurance claims	22
	Public finance	Unit 11 – Central banks	24
		Unit 12 – International organizations	26
		Unit 13 – Economic indicators	28
		Unit 14 – Economic stability	30
		Unit 15 – Economic theory	32
Appendix	Glossary	34	

2 Investment styles

The Tulsa
Chronicle

Investing Tips

from Larry Dean

The **key element** that will determine your investing style is **risk tolerance**.

With all the market's ups and downs, investing can be stressful. That's why it's important to choose an investment style that works for you. The key element that will determine your investing style is **risk tolerance**.

Some people have a naturally high level of **risk aversion**. If this is you, go with investments that are virtually **risk-free**, like bonds and CDs. Perhaps you are considering **personal investments** to sustain you after **retirement**. You also should maintain a **conservative** investing approach. Stay in your **comfort zone**. Avoid the stress of market fluctuations.

Some of you, on the other hand, are more willing to take chances. You will risk great losses for a chance at great returns. You should go with a more **aggressive** investment approach in stocks. And for those of you in the middle, **moderate** investments are the way to meet your **goals**. Invest in mutual funds to limit risk but increase returns.



Get ready!

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

- 1 How willing are you to take risks with your money? Why?
- 2 How does risk affect a person's investing style?

Reading

2 Read the investment advice column. Then, choose the correct answers.

- 1 What is the purpose of the article?
A to evaluate levels of risk aversion
B to explain conservative investment strategies
C to compare high and low risk investments
D to give advice based on investment styles
- 2 What investments should people with moderate to high risk aversion NOT purchase?
A bonds C mutual funds
B CDs D stocks
- 3 According to the column, what are the benefits of bonds?
A They have almost no risk.
B They benefit from market fluctuations.
C They give higher returns than mutual funds.
D They provide a chance to make large profits.

Vocabulary

3 Write a word that is similar in meaning to the underlined part.

- 1 Most people are comfortable with a medium level of risk. d a
- 2 Candice is a cautious investor. o e v i
- 3 Jon worked hard to meet his planned level of achievement. o
- 4 His high reluctance to face the chance of loss keeps him from making most investments. s a r i

4 Read the sentence pair. Choose where the words best fit the blanks.

1 personal investment / retirement

A Dad went into _____ at age 60.

B Buying the shop was a _____.

2 aggressive / risk-free

A Joe made _____ investments, hoping for a huge return.

B These government bonds are _____.

3 comfort zone / risk tolerance

A Some stock purchases require a high _____.

B CDs are safe and should be in any investors' _____.

5 Listen and read the page from the investment advice column again. If you are not afraid of risk but at the same time like to play safe, what should you invest in?

Listening

6 Listen to a conversation between a financial advisor and a customer. Mark the following statements as true (T) or false (F).

1 ___ The customer has high risk aversion.

2 ___ The advisor suggests investing in a moderate investment.

3 ___ A mutual fund is out of the customer's comfort zone.

7 Listen again and complete the conversation.

Advisor: Well, the first thing to consider is how much 1 _____ you are willing to take.

Customer: I'm not sure. I certainly don't want to 2 _____.

Advisor: Okay. Are you willing to risk losing half of your money 3 _____ double it?

Customer: Yeah, but I couldn't handle losing much more than that.

Advisor: All right. You have a fairly 4 _____ of risk aversion.

Customer: So, what should I invest in?

Advisor: There are a number of options. A mutual fund is a fairly 5 _____ investment.

Customer: I've heard of those. They aren't 6 _____?

Advisor: They involve some risk, but nothing that would put you out of your comfort zone.

Speaking

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

USE LANGUAGE SUCH AS:

The first thing to consider is ...

You have a ...

There are a ...

Student A: You are a financial advisor. Talk to Student B about:

- his/her level of risk aversion
- an appropriate investing style
- possible investments

Student B: You are a new investor. Talk to Student A about investing and risk.

Writing

9 Use the conversation from Task 8 to fill out the risk aversion worksheet for the client.

Jackson Investments

New Client Risk Aversion

Client Name: _____

How much of an investment is the client willing to risk? _____

Client's risk aversion level: _____

Suggested investments: _____

**CAREER
PATHS**

Construction I

Buildings

Virginia Evans
Jenny Dooley
Jason Revels



Express Publishing

Table of Contents

Book

1

Unit 1 – Hand tools 1	4
Unit 2 – Hand tools 2	6
Unit 3 – Power tools	8
Unit 4 – Fasteners	10
Unit 5 – Safety equipment	12
Unit 6 – Basic actions 1	14
Unit 7 – Basic actions 2	16
Unit 8 – Basic math	18
Unit 9 – Decimals, fractions, and percents	20
Unit 10 – Measurements	22
Unit 11 – Materials	24
Unit 12 – Properties and dimensions	26
Unit 13 – Site communication	28
Unit 14 – Parts of a residence	30
Unit 15 – Parts of a commercial building	32
Glossary	34

Book

2

Unit 1 – Careers	4
Unit 2 – Worksite safety	6
Unit 3 – Site investigation	8
Unit 4 – Site layout	10
Unit 5 – Cranes	12
Unit 6 – Rigging	14
Unit 7 – Excavation 1	16
Unit 8 – Excavation 2	18
Unit 9 – Foundations 1	20
Unit 10 – Foundations 2	22
Unit 11 – Formwork 1	24
Unit 12 – Formwork 2	26
Unit 13 – Floor plans	28
Unit 14 – Floors 1	30
Unit 15 – Floors 2	32
Glossary	34

Book

3

Unit 1 – Prints 1	4
Unit 2 – Prints 2	6
Unit 3 – Concrete work 1	8
Unit 4 – Concrete work 2	10
Unit 5 – Concrete work 3	12
Unit 6 – Timber frames	14
Unit 7 – Steel frames	16
Unit 8 – Concrete frames	18
Unit 9 – Doors and windows	20
Unit 10 – Insulation	22
Unit 11 – Stairs	24
Unit 12 – Masonry	26
Unit 13 – Roofs 1	28
Unit 14 – Roofs 2	30
Unit 15 – Finishing	32
Glossary	34

12 Masonry



SUE GABLE

Expert Mason

Whether you want a decorative brick wall or a complete brick building, I am the **mason** for you. I have over 20 years of **masonry** experience. My recent work includes:

- leading the installation of the exterior **bearing wall** at the Two Oaks Shopping Center
- designing and installing numerous **curtain walls** in the Fair Meadows housing project
- installing a complex **multiwythe cavity wall** at the Jefferson Government Building

With my experience, I can recommend the right design for your needs. For example, do you need room for drainage but still want a brick wall? A **single wythe veneer** wall with airspace backing is right for you.

I've used every type of **masonry unit**, including brick, concrete, and limestone. I can make the perfect **mortar** mix for any material to guarantee a strong, long-lived wall. I am also familiar with using **grout** to embed steel reinforcement in a wall.

I would be happy to visit your building site for a free consultation. Please call me at (797) 555-2356 or email sue@gablemasonry.com.



curtain wall



mortar



grout

Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- | | |
|-------------------|-------------------|
| 1 __ cavity wall | 4 __ veneer |
| 2 __ single wythe | 5 __ curtain wall |
| 3 __ bearing wall | 6 __ multiwythe |

- A a wall with a thickness of one block
 B a wall that bears a weight down to a foundation structure
 C a wall with a thickness of two or more blocks
 D a wall that has one masonry layer backed by an airspace
 E a wall that is non-structural and only serves to keep out the weather
 F a wall that has two skins made from brick or concrete separated by a hollow space

Get ready!

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

- 1 What material does a mason work with?
- 2 What connects bricks in a brick wall?

Reading

2 Read the ad for a mason. Then, mark the following statements as true (T) or false (F).

- 1 __ The mason recently completed a single wythe veneer wall.
- 2 __ The mason mixes her own mortar.
- 3 __ Grout is used to embed brick into a wall.

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

Word Bank

masonry unit mortar
masonry mason grout

- 1 Use a special _____ to embed the rebar in this wall.
- 2 The construction company is hiring a new _____.
- 3 Use standard _____ to join the bricks together.
- 4 This concrete _____ weighs eight kilograms.
- 5 _____ involves the use of many materials other than bricks and cement.

- 5 Listen and read the ad for a mason again. What types of walls has the mason recently created?

Listening

- 6 Listen to a conversation between a mason and a potential customer. Choose the correct answers.

- 1 What is the conversation mainly about?
A the benefits of masonry
B when construction can begin
C how masonry can lower construction costs
D why masonry is being used more often
- 2 Why does the woman recommend using masonry?
A It is less expensive.
B It looks more attractive.
C It lasts longer than other materials.
D It can be constructed faster than other materials.

- 7 Listen again and complete the conversation.

Customer: Hi, Sue. My name is Dave Chandler. I'm considering a new office for my business. I'm thinking of going with masonry.

Mason: That's a great idea. What can I tell you?

Customer: Well, I don't know too much about it. Is it really 1 _____ than a timber or concrete frame?

Mason: I think so. Masonry has a lot of benefits.

Customer: How so?

Mason: For one, masonry structures 2 _____ than other kinds of structures.

Customer: Oh, yeah? How much longer?

Mason: A well-built brick structure has a life of more than fifty years. That's 3 _____ thirty years for steel or reinforced concrete.

Customer: That's impressive. But 4 _____, I won't need this building in fifty years.

Mason: 5 _____. But it will increase the value of your property. That could be important if you decide to sell it.

Customer: I guess that 6 _____.

Speaking

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

USE LANGUAGE SUCH AS:

I'm considering ...

For one, masonry structures ...

To be honest, ...

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

- masonry and other frame types
- the strength of masonry
- the value of masonry

Student B: You are considering masonry for a new building. Talk to Student A about masonry.

Writing

- 9 Use the ad and the conversation from Task 8 to write an informational brochure about masonry walls. Write about:

- types of masonry walls
- materials used
- benefits of masonry



**CAREER
PATHS**

Plumbing

Virginia Evans
Jenny Dooley
Samuel Wright



Express Publishing

Table of Contents

Book

1

Unit 1 – Hand tools 1	4
Unit 2 – Hand tools 2	6
Unit 3 – Power tools	8
Unit 4 – Safety equipment	10
Unit 5 – Basic actions 1	12
Unit 6 – Basic actions 2	14
Unit 7 – Materials	16
Unit 8 – Numbers	18
Unit 9 – Measurements	20
Unit 10 – Properties and dimensions	22
Unit 11 – Pipes, tubes, and tubing	24
Unit 12 – Fittings	26
Unit 13 – Valves	28
Unit 14 – Fixtures	30
Unit 15 – Faucets	32
Glossary	34

Book

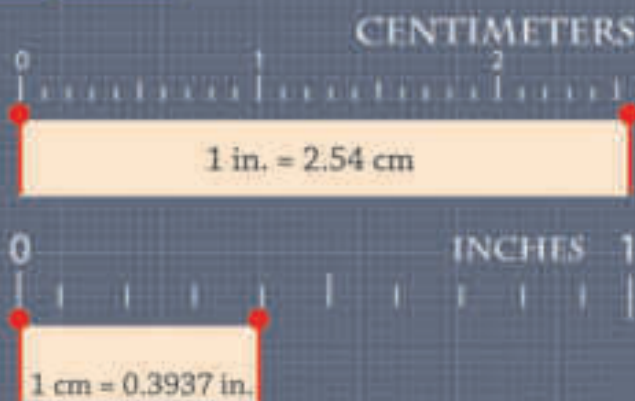
2

Unit 1 – Drains	4
Unit 2 – Sealants and compounds	6
Unit 3 – Drainage, waste, and venting systems	8
Unit 4 – Garbage disposals	10
Unit 5 – Dishwashers	12
Unit 6 – Gas water heaters	14
Unit 7 – Electric water heaters	16
Unit 8 – Water heaters: Other	18
Unit 9 – Appliance boxes	20
Unit 10 – Site communication	22
Unit 11 – Blueprints: Reading	24
Unit 12 – Blueprints: Drafting	26
Unit 13 – Organizing materials	28
Unit 14 – Handling materials	30
Unit 15 – Layouts	32
Glossary	34

Book

3

Unit 1 – Fire-Suppression systems	4
Unit 2 – Septic systems	6
Unit 3 – Water service installation	8
Unit 4 – Water distribution installation	10
Unit 5 – Drainage, waste, and vent installation	12
Unit 6 – Toilet installation	14
Unit 7 – Sink installation	16
Unit 8 – Water heater installation	18
Unit 9 – Toilets	20
Unit 10 – Clogs	22
Unit 11 – Faucets and showers	24
Unit 12 – Pumps	26
Unit 13 – Septic systems	28
Unit 14 – Pipe repair	30
Unit 15 – Water heaters	32
Glossary	34



Aplumb Supply

Measurements and Sizing

Aplumb is proud to serve clients around the world. We know that not all customers use the same measurements. For our North American clients, we provide **imperial** measurements. All pipe sizes are listed in **inches**. Weight measurements appear in **pounds**.

For clients outside North America, we also provide **metric** measurements. Pipe sizes are listed in **millimeters**. Weight measurements appear in **kilograms**.

Each region has its own page. Just click the link for the measurements you need. To convert measurements between systems, use our **conversion** calculators. Click 'Conversions'. You can convert inches to **centimeters** in an instant.

Get ready!

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

- 1 What are the two major measurement systems? Where are they used?
- 2 What are some common measures in the two systems?

Reading

2 Read the website for a pipe supplier. Then, mark the following statements as true (T) or false (F).

- 1 PSI is used in the metric system.
- 2 Kilograms are provided with the imperial product listings.
- 3 Aplumb lists two types of pressure measurement for each product.

Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- | | |
|---------------------------------------|---------------------------------------|
| 1 <input type="checkbox"/> pound | 4 <input type="checkbox"/> centimeter |
| 2 <input type="checkbox"/> inch | 5 <input type="checkbox"/> kilogram |
| 3 <input type="checkbox"/> conversion | 6 <input type="checkbox"/> millimeter |

- A a metric measure of distance equal to 1/100 of a meter
- B the act of changing a measurement from one system to another
- C an imperial measure of distance
- D a metric measure of distance equal to 1/1000 of a meter
- E a metric measure of weight
- F an imperial measure of weight

4 Read the sentence pair. Choose where the words best fit the blanks.

- 1 **imperial / metric**
 - A The _____ system uses pounds, not kilograms.
 - B An inch is not a(n) _____ measurement.
- 2 **psi / kPa**
 - A Metric pressure is measured in _____.
 - B Imperial pressure is measured in _____.

- 5 Listen and read the pipe supplier's website again. What do the different systems use to measure length?

Listening

- 6 Listen to a conversation between two plumbers. Choose the correct answers.

- What is the conversation mainly about?
 - the length of a pipe
 - the weight of a pipe
 - the location of a pipe
 - the pressure a pipe can contain
- What is true of the man?
 - He used the wrong type of pipe.
 - He made a similar mistake before.
 - He used to work in North America.
 - He had never used metric measurements.

- 7 Listen again and complete the conversation.

Supervisor: Bill, can I talk to you 1 _____
_____?

Plumber: Sure, boss. What is it?

Supervisor: This pipe is 2 _____
_____.

Plumber: It is? But I measured it twice. It was
twenty-five 3 _____ each time.

Supervisor: That explains it. You measured in
inches. We need the measurement in
4 _____.

Plumber: Oh, my mistake. I'm so used to the
5 _____.

Supervisor: That 6 _____
_____ with plumbers who worked in North
America.

Plumber: It won't happen again. I'll cut a new
pipe to twenty-five centimeters.

Speaking

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

USE LANGUAGE SUCH AS:

Can I talk to you?

This pipe is ...

You measured in ...

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

- a problem with a pipe
- the measurement system used
- why the problem occurred

Student B: You are a plumber. Talk to Student A about a problem with a pipe.

Writing

- 9 Use the conversation from Task 8 to fill out the memo.

Jackson Plumbing

Employee MEMO

Recently, an employee cut several pipes using the wrong system of measurement. Review the list below to be sure you're familiar with the correct units for each system.

	Imperial	Metric
Weight:	_____	_____
Pressure:	_____	_____
Length:	_____	_____



**CAREER
PATHS**

Architecture

Virginia Evans

Jenny Dooley

Dave Cook, AIA



Express Publishing

Table of Contents

Book

1

Unit 1 – Types of structures	4
Unit 2 – Parts of a building 1	6
Unit 3 – Parts of a building 2	8
Unit 4 – Shapes 1	10
Unit 5 – Shapes 2	12
Unit 6 – Describing shapes and structures	14
Unit 7 – Describing landscapes	16
Unit 8 – Basic math	18
Unit 9 – Measurements 1	20
Unit 10 – Measurements 2	22
Unit 11 – Materials 1	24
Unit 12 – Materials 2	26
Unit 13 – Describing materials	28
Unit 14 – Education 1	30
Unit 15 – Education 2	32
Glossary	34

Book

2

Unit 1 – Qualities of an architect	4
Unit 2 – People in architecture	6
Unit 3 – Scale	8
Unit 4 – Sketches	10
Unit 5 – Perspective	12
Unit 6 – Orientation	14
Unit 7 – Concept	16
Unit 8 – Site survey and analysis	18
Unit 9 – Design factors	20
Unit 10 – Design elements	22
Unit 11 – Detail developments	24
Unit 12 – Elements of construction	26
Unit 13 – Construction process	28
Unit 14 – Prefabrication	30
Unit 15 – Finished building	32
Glossary	34

Book

3

Unit 1 – Design tools and materials	4
Unit 2 – Models	6
Unit 3 – Drawings 1	8
Unit 4 – Drawings 2	10
Unit 5 – Blueline prints 1	12
Unit 6 – Blueline prints 2	14
Unit 7 – Presentations: Storyboarding	16
Unit 8 – Presentations: Portfolios	18
Unit 9 – Historical architecture	20
Unit 10 – Modernism	22
Unit 11 – Postmodernism	24
Unit 12 – Contemporary architecture 1	26
Unit 13 – Contemporary architecture 2	28
Unit 14 – Sustainability 1	30
Unit 15 – Sustainability 2	32
Glossary	34

DeGrasse Museum Presents

Postmodern Images: Reintroducing Beauty into Architecture

The DeGrasse Museum invites you to explore **Postmodernism** at a new exhibit. See 25 physical models and more than 100 photographs of notable Postmodern buildings.

This fascinating architectural style is a direct **countermovement** to early twentieth-century Modernism. While Modernism featured stark, **bland** designs, Postmodernism embraces color and **ornaments**. Its followers believe that architecture should be **dual purpose**, having both function and visual appeal. This **reactionary** attitude revived ideas from styles before Modernism.

Unexpected images and bold shapes **characterize** Postmodern architecture. **Monumentalism** is also apparent in the featured model of the Fadner Building. The building's **primary** design is based on Modernism, and from the ground to the fifteenth floor, it features simple lines and boxes. However, the top is a dramatic example of **double coding**. Neoclassical columns support a grand, asymmetrical structure that overhangs the street.

Don't miss two lectures by architectural historian Greta Moss. On Saturday, she will discuss the reasons for popular architecture's departure from Modernism. She will also address arguments from late twentieth-century Modernists. During her Sunday lecture, Moss will talk about the art and philosophy of Postmodernism. Learn about the importance of **symbolic** elements in Postmodern construction. This session will focus on the use of **icons** in several famous Postmodern buildings. Visit www.degrassemuseum.com for details and tickets.



Get ready!

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

- 1 What is the difference between Modern and Postmodern architectural features?
- 2 What is the artistic philosophy behind Postmodernism?

Reading

2 Read the brochure. Then, mark the following statements as true (T) or false (F).

- 1 ___ According to the brochure, foundations of Postmodernism came before Modernism.
- 2 ___ The exhibit's featured model is a blend of different architectural styles.
- 3 ___ One of the lectures will focus on similarities between Modern and Postmodern symbolism.

Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- | | |
|---------------|---------------------|
| 1 ___ icon | 4 ___ characterize |
| 2 ___ bland | 5 ___ dual purpose |
| 3 ___ primary | 6 ___ Postmodernism |

- A an image that is associated with a particular idea
 B an architectural movement featuring functional and decorative elements
 C considered plain or uninteresting
 D most basic or important
 E to be a fundamental feature or quality of something
 F serving multiple functions

- 4 Fill in the blanks with the correct word or phrase from the word bank.

Word BANK

monumentalism symbolic
double coding ornament
countermovement reactionary

- In a(n) _____, one set of ideas directly opposes another set of ideas.
- The carving of a sword is _____ of the people's resistance to the government.
- The fireplace is not real; it's just a(n) _____.
- The blend of classical features with contemporary features is an example of _____.
- "Advocates for Function" is a(n) _____ group of Modernists.
- _____ usually features very large buildings with bold façades.

- 5 Listen and read the brochure again. What is the Postmodern view of functionalism?

Listening

- 6 Listen to a conversation between a museum guide and a visitor. Choose the correct answers.

- What is the conversation mainly about?
 - how to interpret Postmodern icons
 - notable Postmodern architects in the region
 - the differences between Postmodernism and previous styles
 - when Postmodernism became popular
- According to the woman, what is a feature of the Fadner Building?
 - It is not functional.
 - It displays monumentalism.
 - It is very bland.
 - It features symbolism.

- 7 Listen again and complete the conversation.

Guide: Before we start the tour, does anyone have any questions?

Visitor: Are we going to 1 _____ of the Grasswood Center?

Guide: No. The Grasswood Center is actually not 2 _____.

Visitor: Really? It's so simple. I was 3 _____ be part of the exhibit.

Guide: I think you're confusing Postmodernism 4 _____.

Visitor: But the primary purpose of Postmodern buildings is to be functional. Isn't that why they're 5 _____?

Guide: Actually, it's the 6 _____. Strict functionalism is a feature of Modernism.

Speaking

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

USE LANGUAGE SUCH AS:

I was sure it would ...

Actually, it's the other ...

Let's look at ...

Student A: You are a museum guide. Talk to Student B about:

- a Postmodern exhibit
- the features of Postmodernism
- architectural styles of local buildings

Student B: You are a museum visitor. Talk to Student A about architectural styles of local buildings.

Writing

- 9 Use the reading passage and conversation to complete a feedback form about your museum tour. Include: the exhibit you visited, the information that the tour guide covered, and the most interesting fact you learned on the tour.

**CAREER
PATHS**

Petroleum I

Virginia Evans
Jenny Dooley
Seyed Alireza Haghigat



Express Publishing

Table of Contents

Book 1	Unit 1 – Jobs in the oil industry	4
	Unit 2 – Jobs in the oil industry 2	6
	Unit 3 – In the company	8
	Unit 4 – In the oil field	10
	Unit 5 – Work locations	12
	Unit 6 – Weather conditions	14
	Unit 7 – Working conditions	16
	Unit 8 – Actions	18
	Unit 9 – Basic tools	20
	Unit 10 – Specialized tools	22
	Unit 11 – Numbers	24
	Unit 12 – Geometry	26
	Unit 13 – Measurements	28
	Unit 14 – Measuring tools	30
	Unit 15 – Safety equipment	32
Glossary	34	
Book 2	Unit 1 – Parts of a drilling rig	4
	Unit 2 – Types of offshore rigs	6
	Unit 3 – Parts of an offshore rig	8
	Unit 4 – Rig power systems	10
	Unit 5 – Rig rotary systems	12
	Unit 6 – Rig circulation system	14
	Unit 7 – The modern drilling process	16
	Unit 8 – Drilling problems	18
	Unit 9 – New drilling technology	20
	Unit 10 – Well completion	22
	Unit 11 – Well stimulation	24
	Unit 12 – Crude oil products	26
	Unit 13 – Cleaning crude oil	28
	Unit 14 – Transporting oil	30
	Unit 15 – At the gas station	32
Glossary	34	
Book 3	Unit 1 – Blowouts	4
	Unit 2 – Workovers	6
	Unit 3 – Rig dismantling	8
	Unit 4 – Automation (robotics in the oil field)	10
	Unit 5 – Improved oil recovery	12
	Unit 6 – Finding oil	14
	Unit 7 – Geographical features	16
	Unit 8 – Petroleum mapping	18
	Unit 9 – Mud logging	20
	Unit 10 – Petroleum traps	22
	Unit 11 – Contracts	24
	Unit 12 – Finance	26
	Unit 13 – Marketing	28
	Unit 14 – Oil spills	30
	Unit 15 – Environmental impact	32
Glossary	34	



RIGWORKERWEEKLY

Slingsing Slang

One challenge new rig workers face is language. Hands don't think twice about using words like **possum belly**, **pill** or **flare**. They might think it's funny when the new guy confuses a **catwalk** with a **catline** or **wildcat**.

Most new workers get the idea of **fish** and **fishing**. However, other terms are not as clear. **Doghouse** and **knowledge box** are two such terms. In addition, most new hires do not know that **joint** is a length of pipe. Take the time to explain rig slang to new employees. It makes things easier when everyone is on the same page.

Get ready!

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

- 1 What is the slang word for an experienced worker on an oil rig?
- 2 What is slang for a platform on a rig?

Reading

2 Read the magazine article from *Rig Worker Weekly*. Then mark the following statements as true (T) or false (F).

- 1 ___ New rig workers can be confused by slang.
- 2 ___ It is hard to guess the meaning of some terms.
- 3 ___ New workers need to figure out the slang on their own.

Vocabulary

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

word BANK

catline doghouse fishing
flare knowledge box pill

- 1 The rig crew stayed in the _____ during the storm.
- 2 The toolpusher took some paperwork out of the _____.
- 3 The roughneck used a _____ to stop a leak.
- 4 Denise used a _____ to move the smaller equipment.
- 5 The worker tried _____ for the broken drill bit.
- 6 Bruce used a _____ to burn off the gas.

4 Read the sentences and choose the correct terms.

- 1 The **hand** / **fish** worked hard to finish the job.
- 2 The rig had a large **catwalk** / **possum belly** that was used for storing fluid.
- 3 The crew working on the **wildcat** / **joint** well hoped to find oil.
- 4 The workers ran out of pipe, so they had to order more **joints** / **hands**.
- 5 The men tried to retrieve the **possum belly** / **fish** but it was out of reach.
- 6 The roughneck crossed the **catwalk** / **wildcat** to talk to the toolpusher.

5 Listen and read the magazine article from *Rig Worker Weekly* again. How should an experienced rig worker help a new hire?

Listening

6 Listen to a conversation between two rig workers. Choose the correct answers.

- 1 What can be inferred about the new worker?
A He is confused by terms used on the rig.
B He is not dressed for bad weather.
C He is familiar with some slang terms.
D He is going to go inside the doghouse.
- 2 What will the workers likely do next?
A fasten together the joints C go to the doghouse
B take a tour of the rig floor D move the drilling pipe

7 Listen again and complete the conversation.

Experienced Worker: Hey, can you help me move some joints?
New Worker: Uh ... 1 _____ joints?
Experienced Worker: You must be new.
New Worker: Yes, I've never 2 _____ a rig before.
Experienced Worker: Okay. Well, joints are pieces of 3 _____
New Worker: Thanks. I'd be 4 _____ help. So ... is the weather usually this bad?
Experienced Worker: Today's not so great, but we can always go in the 5 _____ if it starts to rain.
New Worker: What's that?
Experienced Worker: It's a shelter on the 6 _____ . Now let's get to work.

Speaking

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

USE LANGUAGE SUCH AS:

Can you help me ...?
What are ...?
Do you know what ...?

Student A: You are an experienced rig worker. Talk to Student B about:

- the kind of help you need
- oil rig language
- how to deal with bad weather

Student B: You are a new worker. Talk to Student A about working on the rig.

Writing

9 Use the conversation from Task 8 to fill out the rig worker's notes below.



Rig Worker's Notes

Slang
to remember

Knowledge box: _____

Pill: _____

Wildcat: _____

**CAREER
PATHS**

Petroleum II

Virginia Evans
Jenny Dooley
Seyed Alireza Haghigat



Express Publishing

Table of Contents

Book 1	Unit 1 – Oil sands	4
	Unit 2 – Oil shale	6
	Unit 3 – Petroleum reserves	8
	Unit 4 – Treating petroleum in the field	10
	Unit 5 – Picking up oil from storage tanks	12
	Unit 6 – Measuring petroleum	14
	Unit 7 – The licensing process	16
	Unit 8 – Licensed areas	18
	Unit 9 – Acquiring leases	20
	Unit 10 – Exploration damages	22
	Unit 11 – Lease agreements for private property	24
	Unit 12 – Petroleum engineers	26
	Unit 13 – Construction and maintenance employees	28
	Unit 14 – Well types	30
	Unit 15 – Wildcatting	32
Glossary	34	
Book 2	Unit 1 – The chemistry of petroleum	4
	Unit 2 – Properties of petroleum	6
	Unit 3 – Impurities in petroleum	8
	Unit 4 – Petroleum seals	10
	Unit 5 – Indicators of petroleum: Seepage	12
	Unit 6 – Indicators of petroleum: Seismic data	14
	Unit 7 – Indicators of petroleum: Marine seismic data	16
	Unit 8 – Core samples	18
	Unit 9 – Fluid samples	20
	Unit 10 – Automated driller’s cabins	22
	Unit 11 – Drillships	24
	Unit 12 – Heatstroke	26
	Unit 13 – Fatigue	28
	Unit 14 – First aid	30
	Unit 15 – Hydrogen sulfide exposure	32
Glossary	34	
Book 3	Unit 1 – Petroleum reservoir estimates	4
	Unit 2 – Reservoir modeling	6
	Unit 3 – Natural reservoir drive mechanisms	8
	Unit 4 – Artificial lift: Beam pumping	10
	Unit 5 – Artificial lift: Submersible pumping	12
	Unit 6 – Artificial lift: Gas lift	14
	Unit 7 – Well problems	16
	Unit 8 – Refined product pipelines	18
	Unit 9 – Pipeline pigging	20
	Unit 10 – Pipeline pumping stations	22
	Unit 11 – Offshore pipelines	24
	Unit 12 – Disposal of drilling waste 1	26
	Unit 13 – Disposal of drilling waste 2	28
	Unit 14 – Doing business in the petroleum industry	30
	Unit 15 – Petroleum company strategy models	32
Glossary	34	



A petroleum **seal** is an important part of a reservoir. If seals are not present, petroleum traps are not created. Instead the petroleum migrates to the surface. Seals are made from rocks and minerals such as **limestone**, **halite**, and **mudrock**. These make good seals because they have small pores. The petroleum cannot flow through them easily. **Faults** can also be seals if they occur in the right kind of rock.

Capillary seals do not let petroleum pass through unless pressure in the reservoir causes leakage. There are two types of capillary seals. The types are based on how petroleum leakage occurs. **Membrane seals** leak when the pressure becomes too great. The pressure pushes petroleum through the rock pores. After the pressure level drops, the seal closes up again. **Hydraulic seals** leak when the pressure in the reservoir **accumulates**. This causes **fractures** in the seal. Once enough pressure is released, the fractures mend and the rock reseals.

Vocabulary

3 Place the words from the word bank under the correct heading.

WORD BANK

halite hydraulic membrane
capillary mudrock limestone

Seal types	Rock/Mineral types

4 Match the words (1-4) with the definitions (A-D).

- 1 ___ fracture 3 ___ fault
2 ___ seal 4 ___ accumulate

- A a break that occurs in a rock
B a divide in a rock formation caused by the earth's movement
C a rock that keeps petroleum moving upward to the surface
D to grow or increase over a period of time

Get ready!

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

- 1 What are some types of rock where seals form?
- 2 What does excessive pressure cause to happen to seal rock?

Reading

2 Read the webpage. Then, mark the following statements as true (T) or false (F).

- 1 ___ Seals need to be present for petroleum traps to form.
- 2 ___ Hydraulic seals leak when the seal fractures.
- 3 ___ Faults are a type of capillary seal.

- 5 Listen and read the webpage again. What causes a membrane seal to leak?

Listening

- 6 Listen to a conversation between a geologist and an oil field worker. Choose the correct answers.

- 1 What is the purpose of the conversation?
A to explain how faults work as seals
B to describe how faults are created
C to compare the structure of petroleum traps
D to discuss the types of rocks that form seals
- 2 What will the software show the woman?
A where the fault is located
B how much petroleum is in the trap
C which kind of rock is creating the seal
D how the petroleum is moving

- 7 Listen again and complete the conversation.

- Oil Field Worker:** Hey, Sasha. What are you doing out in the field?
- Geologist:** I'm conducting an analysis of the 1 _____.
- Oil Field Worker:** I just don't understand how a fault can be a seal. I mean, it's a 2 _____ in the ground.
- Geologist:** Well, faults are often in rocks that are already seals, 3 _____.
- Oil Field Worker:** So how does that help?
- Geologist:** If the rock is 4 _____, even with the fault, it remains a seal.
- Oil Field Worker:** Okay, that makes sense.
- Geologist:** But faults change the structure of the 5 _____.
- Oil Field Worker:** Is that why you're analyzing it?
- Geologist:** Yes, the computer software shows how the hydrocarbons are 6 _____ around the fault. It also shows the potential for the fault seal to leak.

Speaking

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

USE LANGUAGE SUCH AS:

I'm doing an analysis of ...

What kind of ...?

The computer software shows ...

Student A: You are an oil field worker. Talk to Student B about:

- what work is going on
- the seal type
- why he or she is analyzing the seal

Student B: You are a geologist. Talk to Student A about seals.

Writing

- 9 Use the webpage and the conversation from Task 8 to fill out the geologist's notes.



Field Notes

Location: _____

Type of seal: _____

Type of rock: _____

Reason for analysis: _____

Equipment used: _____

**CAREER
PATHS**

Civil Aviation

Virginia Evans
Jenny Dooley
Jacob Esparza



Express Publishing

Table of Contents

Book

1

Unit 1 – Parts of an airplane 1	4
Unit 2 – Parts of an airplane 2	6
Unit 3 – The cockpit	8
Unit 4 – Flight instruments	10
Unit 5 – Radio equipment	12
Unit 6 – Radio basics 1	14
Unit 7 – Radio basics 2: Conventions	16
Unit 8 – Radio basics 3	18
Unit 9 – Distance and speed	20
Unit 10 – Describing flight 1	22
Unit 11 – Describing flight 2	24
Unit 12 – Types of airliners	26
Unit 13 – Types of airspace	28
Unit 14 – Parts of an airport	30
Unit 15 – People in an airport	32
Glossary	34

Book

2

Unit 1 – Air traffic control	4
Unit 2 – Flight plans	6
Unit 3 – Weather conditions	8
Unit 4 – Pre-flight check	10
Unit 5 – Weather reports	12
Unit 6 – Taxiing	14
Unit 7 – Takeoff	16
Unit 8 – Climbing	18
Unit 9 – Control systems	20
Unit 10 – Cruising	22
Unit 11 – Instrument scan	24
Unit 12 – Encountering traffic	26
Unit 13 – Descent	28
Unit 14 – Approach	30
Unit 15 – Landing	32
Glossary	34

Book

3

Unit 1 – Aerodynamics	4
Unit 2 – Weight and balance	6
Unit 3 – Broadcasts	8
Unit 4 – Holding	10
Unit 5 – Security	12
Unit 6 – Winter operations	14
Unit 7 – Radio failure	16
Unit 8 – Stalls	18
Unit 9 – Steep turns	20
Unit 10 – Unusual attitudes	22
Unit 11 – In-Flight hazards 1	24
Unit 12 – In-Flight hazards 2	26
Unit 13 – Medical emergencies	28
Unit 14 – Rejected takeoffs	30
Unit 15 – Rejected landings	32
Glossary	34

CHAPTER III

TYPES OF AIRSPEED



There are many types of **airspeed**. Remember that **indicated airspeed** is what your instrument reads. **Calibrated airspeed** is corrected for errors and is more accurate. **True airspeed** and **equivalent airspeed** are also different. True airspeed refers to the air around the aircraft. Equivalent airspeed refers to the air at sea level. **Groundspeed** is speed relative to the ground. Always know which type of airspeed you are using.

Be aware of different units of measurement. A **knot** measures speed. A **nautical mile** measures distance. Some places use **mph** (miles per hour) and others use **kph** (kilometers per hour). Always indicate your units of measurement.



Get ready!

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

- 1 What are some measures of speed?
- 2 What unit is air distance measured in?

Reading

2 Read the chapter on airspeed. Then, choose the correct answers.

- 1 What is the main purpose of this chapter?
 - A to explain how pilots measure airspeed
 - B to describe different types of airspeed
 - C to help a pilot calculate airspeed
 - D to compare different airspeed instruments
- 2 Which of the following is often inaccurate because it is not corrected for errors?
 - A calibrated airspeed
 - B groundspeed
 - C true airspeed
 - D indicated airspeed
- 3 Which of these is NOT explained in the chapter?
 - A different types of airspeed
 - B different instruments for reading airspeed
 - C the difference between indicated airspeed and calibrated airspeed
 - D different units used to measure airspeed

Vocabulary

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

word bank

airspeed groundspeed knot
nautical mile true airspeed
equivalent airspeed

- 1 The pilot measured his aircraft's speed based on one nautical mile per hour, or one _____.
- 2 The pilot had to decide which type of _____ to measure.
- 3 1,852 meters is the same as one _____.
- 4 The co-pilot measured _____ to see how fast the plane was moving in relation to the ground.
- 5 Pilot Rogers used _____ to see how fast his craft would be flying at sea level.
- 6 Pilot Stevens measured _____ based on the air immediately around his aircraft.

4 Read the sentence pair. Choose where the words best fit the blanks.

1 Indicated / calibrated

A _____ airspeed is usually accurate because it is corrected for errors.

B _____ airspeed is not always accurate because it is not corrected for errors.

2 mph / kph

A A measurement that is based on miles is _____.

B A measurement that uses kilometers is _____.

5 Listen and read the chapter on airspeed again. What does equivalent airspeed refer to?

Listening

6 Listen to a conversation between a student and an instructor. Mark the statements true (T) or false (F).

1 ___ The woman is confused about indicated and calibrated airspeeds.

2 ___ Indicated airspeed is more accurate than calibrated airspeed.

3 ___ Changes in air pressure create calibrated airspeed errors.

7 Listen again and complete the conversation.

Student: Mr. Henry, I have a few questions about 1 _____.

Instructor: Of course, Linda. What do you 2 _____?

Student: Indicated airspeed and calibrated airspeed 3 _____ a little.

Instructor: Well, do you know which one is more 4 _____?

Student: 5 _____ airspeed, because it's corrected for errors.

Instructor: 6 _____. So what are you confused about?



Speaking

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

USE LANGUAGE SUCH AS:

I have a few questions about ...

I'm confused about ...

Do you know ...

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

- indicated airspeed
- calibrated airspeed
- why you feel confused

Student B: You are an instructor. Talk to Student A about errors that might occur in indicated airspeed.

Writing

9 Use the conversation from Task 8 to complete the exam questions.

Part III

Indicated VS calibrated airspeed

Indicated airspeed is: _____

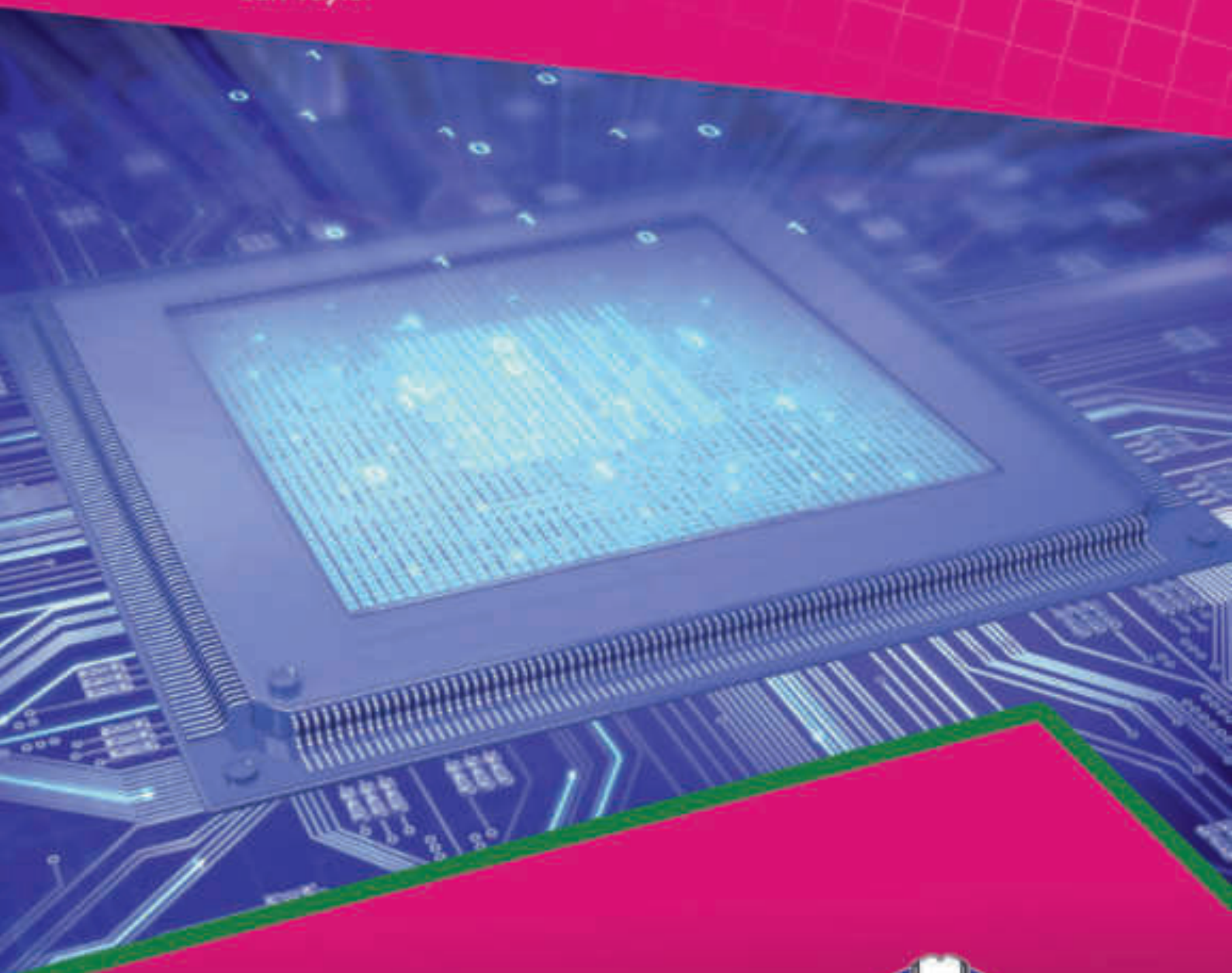
Calibrated airspeed is: _____

Which one is more accurate? _____

**CAREER
PATHS**

Electronics

Virginia Evans
Jenny Dooley
Carl Taylor



Express Publishing

Table of Contents

Book

1

Unit 1 – Consumer electronics	4
Unit 2 – Electricity basics	6
Unit 3 – Electricity basics 2	8
Unit 4 – Tools	10
Unit 5 – Tools 2	12
Unit 6 – Soldering tools	14
Unit 7 – Testers and meters	16
Unit 8 – Workspace	18
Unit 9 – Actions	20
Unit 10 – Actions 2	22
Unit 11 – Work settings	24
Unit 12 – Electrical safety	26
Unit 13 – Math	28
Unit 14 – Measurements	30
Unit 15 – Prefixes	32
Glossary	34

Book

2

Unit 1 – Causes of product failure	4
Unit 2 – Initial evaluation	6
Unit 3 – External evaluation	8
Unit 4 – Circuits	10
Unit 5 – Signals	12
Unit 6 – Capacitors	14
Unit 7 – Crystals and resonators	16
Unit 8 – Diodes	18
Unit 9 – Fuses	20
Unit 10 – Chips (Integrated circuits)	22
Unit 11 – Resistors	24
Unit 12 – Potentiometers	26
Unit 13 – Relays and switches	28
Unit 14 – Transistors	30
Unit 15 – Voltage regulators	32
Glossary	34

Book

3

Unit 1 – Diagrams	4
Unit 2 – Call numbers	6
Unit 3 – Disassembling devices	8
Unit 4 – Replacing components	10
Unit 5 – Choosing components	12
Unit 6 – Power supply	14
Unit 7 – Input/Output	16
Unit 8 – Signal processing	18
Unit 9 – Heat sinks	20
Unit 10 – Separating the snaps	22
Unit 11 – Removing ribbon cables	24
Unit 12 – Layers	26
Unit 13 – Interior reassembly	28
Unit 14 – Exterior reassembly	30
Unit 15 – Disposal of electronics	32
Glossary	34

Removing components

In the past it was simple to remove components. Circuits had one layer. You just had to remove the solder and pull the lead through the hole in the board. Nowadays, boards are **multi-layered**, and component removal requires lots of skill and patience.

molten

clip

chop off

multi-layered

First, **double-check** that you have disconnected the power source. Then, **clear** the solder from the hole using a soldering iron and solder wick. Heat the solder. The **molten** solder will **flow** into the wick. Then you can pull the **lead** through. For large pieces, **suck** the solder away using a solder sucker. This may leave a **coating** of solder. Remove this using wick.

Some parts of the circuit are made of copper, which absorbs heat. **Thermal absorption** makes it hard to melt solder. The thick, **multi-**

layered boards also produce a **heat-sinking** effect. If you can't melt the solder, don't use a higher wattage iron. This can **deform** the boards and damage the circuit lands. It can also **delaminate** multi-layered circuit board lands and some components' pads. If you can't remove all the solder, **clip** the leads close to the components. Then you can solder the new component to the old component's leads. If you can't reach the leads, **chop off** the component close to its base.

Get ready!

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

- 1 What are some ways a circuit board can be damaged by heat?
- 2 What are two ways to disconnect leads or wires?

Reading

2 Read the article on removing components. Then, mark the following statements as true (T) or false (F).

- 1 ___ Solder wick is used to remove small pieces of solder.
- 2 ___ A higher wattage iron is good to use on multi-layered boards.
- 3 ___ Remove the solder before cutting the component leads.

Vocabulary

3 Match the words (1-8) with the definitions (A-H).

- | | |
|------------------|--------------------|
| 1 ___ flow | 5 ___ suck |
| 2 ___ deform | 6 ___ double-check |
| 3 ___ delaminate | 7 ___ clear |
| 4 ___ chop off | 8 ___ clip |

- A check something twice
- B remove obstacles from a passage
- C remove the coating
- D cut through something small and thin
- E remove using a vacuum
- F move in liquid form
- G change shape in a bad way
- H cut and remove something

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

- 1 These days most circuit boards are made of several boards on top of each other.
m _ _ _ _ _ a _ _ f _ _
- 2 The fact that some parts take away the heat often makes it hard to melt solder.
_ h _ _ _ l _ b _ _ _ _ i _ _
- 3 The thickness of the boards creates a fast cooling effect. h _ _ _ _ n _ _ _ g
- 4 You can remove the lead once the solder is hot and in liquid form. _ _ l _ _ n
- 5 You don't need to add a thick layer of paint. A thin layer is enough. _ o _ _ _ n _

5 Listen and read the article again. How do you remove components from a multi-layered board?

Listening

6 Listen to a conversation between two technicians. Mark the following statements as true (T) or false (F).

- 1 _ The woman is using a solder sucker.
- 2 _ The man and woman decide to use a higher-wattage iron.
- 3 _ The man suggests clipping the wires.

7 Listen again and complete the conversation.

- Tech 1: Can you help me? I can't remove this 1 _____.
- Tech 2: Sure. Removing pieces from 2 _____ is really difficult.
- Tech 1: I know. I can't 3 _____.
- Tech 2: What are you using?
- Tech 1: A soldering iron and wick. But the solder isn't melting, so it won't 4 _____ the wick.
- Tech 2: Maybe the iron isn't hot enough.
- Tech 1: The iron is hot, but the thermal absorption from the copper parts is producing a 5 _____.
- Tech 2: You could try using a higher wattage iron.
- Tech 1: No, I don't think we should do that. We could 6 _____.

Speaking

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

USE LANGUAGE SUCH AS:

I can't remove this ...
You could try ...
No, I don't think ...

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

- clearing the hole
- the equipment you are using
- other methods of removing the component

Student B: You are a technician. Talk to Student A about how to remove a component.

Writing

9 Use the article on removing components and the conversation from Task 8 to write a memo about the proper way to remove components. Include what type of equipment to use, what equipment shouldn't be used, and when to clip wires.

what equipment
shouldn't be used

proper way
to remove
components

when to
clip wires

what type of
equipment to use

**CAREER
PATHS**

Electrician[®]

Virginia Evans
Jenny Dooley
Tres O'Dell



Express Publishing

Table of Contents

Book

1

Unit 1 – General tools	4
Unit 2 – More tools	6
Unit 3 – Power tools – drills and saws	8
Unit 4 – Specialized tools	10
Unit 5 – Materials	12
Unit 6 – Safety	14
Unit 7 – Actions	16
Unit 8 – More actions	18
Unit 9 – Numbers	20
Unit 10 – Measurements	22
Unit 11 – Elements of electricity	24
Unit 12 – Electrical safety	26
Unit 13 – Types of wires	28
Unit 14 – Wire codes	30
Unit 15 – Wire connectors	32
Glossary	34

Book

2

Unit 1 – Electrical connectors	4
Unit 2 – Conduit systems	6
Unit 3 – Buried and aerial service entrances	8
Unit 4 – Panels	10
Unit 5 – Subpanels	12
Unit 6 – Fuses and circuit breakers	14
Unit 7 – Balancing the load	16
Unit 8 – Receptacle boxes	18
Unit 9 – Receptacles	20
Unit 10 – Switch boxes	22
Unit 11 – Types of switches	24
Unit 12 – Grounding systems	26
Unit 13 – Installing a grounding system	28
Unit 14 – Electrical fires	30
Unit 15 – Electrical safety at home	32
Glossary	34

Book

3

Unit 1 – How GFCIs work	4
Unit 2 – Types of GFCIs	6
Unit 3 – Installing GFCIs	8
Unit 4 – Testing GFCIs	10
Unit 5 – AFCIs	12
Unit 6 – Lights	14
Unit 7 – Ceiling fans	16
Unit 8 – Outdoor light fixtures	18
Unit 9 – Kitchen appliances	20
Unit 10 – Electric heaters	22
Unit 11 – Utility room appliances	24
Unit 12 – Submersible pumps	26
Unit 13 – Induced voltage	28
Unit 14 – Direct strikes	30
Unit 15 – Surge protection	32
Glossary	34

7 Ceiling fans

Homebreeze Installation Guide

Model: Ceiling Fan UJ790

ceiling fan
clearance
cross support
circulate
remote control

Important: Failure to **follow** these instructions during installation may present a safety hazard.

- 1 Before you begin, make sure you have enough space to install your **ceiling fan**. Without proper **clearance**, the fan may break or cause damage to surrounding walls and fixtures when operated.
- 2 Locate an appropriate **cross support**. We recommend mounting the fan **independently** from the included ceiling box so it stays **stable**. A fan towards the middle of the room will **circulate** the air most effectively.
- 3 Hang the fan with the included metal ceiling box (see page 4 for detailed instructions). Homebreeze Model UJ790 is a **swing-up** fan, so you will be able to wire the fan easily after you hang it.
- 4 Wire the fan, or have an electrician wire it for you (see page 6 for detailed instructions).
- 5 Swing the fan into place and secure the final screws in the ceiling box.
- 6 Test the fan to make sure that it does not **wobble**. The UJ790 is a **variable-speed** fan, so use the highest speed setting to perform this test. You will need two AA batteries to operate the **remote control**.

Get ready!

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

- 1 How does a ceiling fan work?
- 2 What should be considered when installing a ceiling fan?

Reading

2 Read the instruction manual on a ceiling fan. Then, complete the table using information from the manual.

Step	Description
Before Installation	_____
Installation	_____
After Installation	_____

Vocabulary

3 Write a word that is similar in meaning to the underlined part.

- 1 This light fixture should be installed without relying on other parts to the ceiling beam.
_ n d _ _ _ n d _ _ t l _
- 2 If the fan moves back and forth unsteadily, it is not installed correctly. w _ _ b l _ s
- 3 We need a fan that is capable of operating fast or slow to use in the wintertime.
_ _ r i _ b l _ _ _ p _ _ d
- 4 Before installation, the electrician located the solid beam in the ceiling.
c _ _ s s _ _ u _ _ o r _
- 5 Tighten the screws to keep each fixture securely in one place. _ t _ b _ e

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

Word Bank

circulate remote control swing-up
follow ceiling fan clearance

- Do you have enough _____ to install a fan here?
- You must always _____ the instructions.
- The bedroom lights are operated by _____.
- The purpose of a fan is to _____ air.
- This _____ fan is easy to wire after hanging.
- The _____ makes the kitchen cooler.

- 5 Listen and read the instruction manual on a ceiling fan again. What is the final step after installation?

Listening

- 6 Listen to a conversation between two electricians. Mark the following statements as true (T) or false (F).

- ___ The wrong type of light fixture was installed.
- ___ The woman's mistake caused a serious electrical malfunction.
- ___ The woman forgot to test the fans after installation.

- 7 Listen again and complete the conversation.

Electrician 1: There seems to be something wrong with the way the 1 _____ are attached.

Electrician 2: Really? I tested the lights and they seem okay.

Electrician 1: Well, the wiring is fine, but 2 _____ when I turn on the fan at high speed.

Electrician 2: Oh, I see what you mean. The whole thing 3 _____.

Electrician 1: A fan wobbling like that won't 4 _____ properly. Or it could cause more serious problems, like electrical malfunction or damage to the fan.

Electrician 2: I know, I know. That was my fault. I should have 5 _____ right away to make sure they were stable.

Electrician 1: That's okay, Karen. Now that you've seen what happens, I'm sure you'll remember next time.

Electrician 2: I will. And I'll 6 _____ right away to tighten those light fixtures and make sure they're secure.

Speaking

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

USE LANGUAGE SUCH AS:

I tested the ...
The ... is fine, but look what happens ...
I should have ...

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

- an error while installing fan
- possible consequences
- what action is needed

Student B: You are an electrician. Talk to Student A about a fan installation error.

Writing

- 9 Use the conversation from Task 8 to write the electrician's work report. Write about:

- item installed
- nature of installation error
- why hazardous
- steps taken to correct problem



CAREER
PATHS

Merchant Navy

Captain Stuart T. Sheppard
Virginia Evans - Jenny Dooley



Express Publishing

Table of Contents

Book 1	Unit 1 – Parts of a ship: Exterior	4
	Unit 2 – Parts of a ship: Interior	6
	Unit 3 – Ship systems	8
	Unit 4 – Ship stability	10
	Unit 5 – Nautical directions	12
	Unit 6 – Communications: Audio	14
	Unit 7 – Communications: Visual	16
	Unit 8 – Communications: Signal flags	18
	Unit 9 – Nautical measurements	20
	Unit 10 – The crew	22
	Unit 11 – Chiefs and officers	24
	Unit 12 – Canvas work	26
	Unit 13 – Painting	28
	Unit 14 – Ground tackle	30
	Unit 15 – Steering gear	32
Glossary	34	
Book 2	Unit 1 – Tankers 1: Types	4
	Unit 2 – Tankers 2: Loading and discharging	6
	Unit 3 – Container ships	8
	Unit 4 – Wire	10
	Unit 5 – Marlinespike seamanship 1	12
	Unit 6 – Marlinespike seamanship 2	14
	Unit 7 – Blocks and tackles	16
	Unit 8 – Loading equipment	18
	Unit 9 – Cargo handling and storage	20
	Unit 10 – Mooring	22
	Unit 11 – Anchoring	24
	Unit 12 – Towing	26
	Unit 13 – Weather	28
	Unit 14 – First aid	30
	Unit 15 – The day of an officer	32
Glossary	34	
Book 3	Unit 1 – Ship business	4
	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
	Unit 14 – Navigation instruments and equipment	30
	Unit 15 – Tides, currents, and winds	32
Glossary	34	



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 measurement, equals 100 fathoms.
- To measure **speed** use **knots**, not miles or kilometers per hour.
- Some terms are mistaken for land-based measurements. For example, a **gross ton** doesn't refer to the **weight** of a ship's mass. It measures a vessel's internal volume.

1 nautical mile = 1.15 miles

1 nautical mile = 1.85 km



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
 - C the origin of nautical words for measurement
 - D the importance of using nautical terms for distance
- 2 Which of the following is NOT a nautical measurement?

A knot	C fathom
B gross ton	D miles per hour
- 3 What can you infer about the term "gross ton"?
 - A It is no longer in use.
 - B It changes with higher speeds.
 - C It is often used incorrectly as a measure of weight.
 - D It is the most difficult measurement to calculate.

Vocabulary

3 Match the words (1-6) with the definitions (A-F).

- | | |
|------------|-------------------|
| 1 _ fathom | 4 _ gross ton |
| 2 _ knot | 5 _ nautical mile |
| 3 _ cable | 6 _ foot |

- A a measurement equal to 100 fathoms
- B a measurement of depth
- C a distance measurement
- D a measurement of volume
- E a measure of speed
- F a measurement equal to 12 inches

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).

- ___ The ship is behind schedule.
- ___ The ship is traveling at twelve knots.
- ___ 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 need to reach Newton by 1500 hours. What's our distance?

Navigator: We're about ninety nautical miles out
3 _____

Officer: And 4 _____?

Navigator: We're traveling at fifteen knots.

Officer: By my calculations, it'll 5 _____
_____ six hours to get there.

Navigator: I reckon the same thing. We'll be.
6 _____

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.



Navigator's Log

Officer: _____

Date: _____

Time: _____

Current Speed: _____

Distance to Destination: _____

Estimated Time to Arrival: _____

fathoms

1 fathom = 6 feet = 1.8 meters

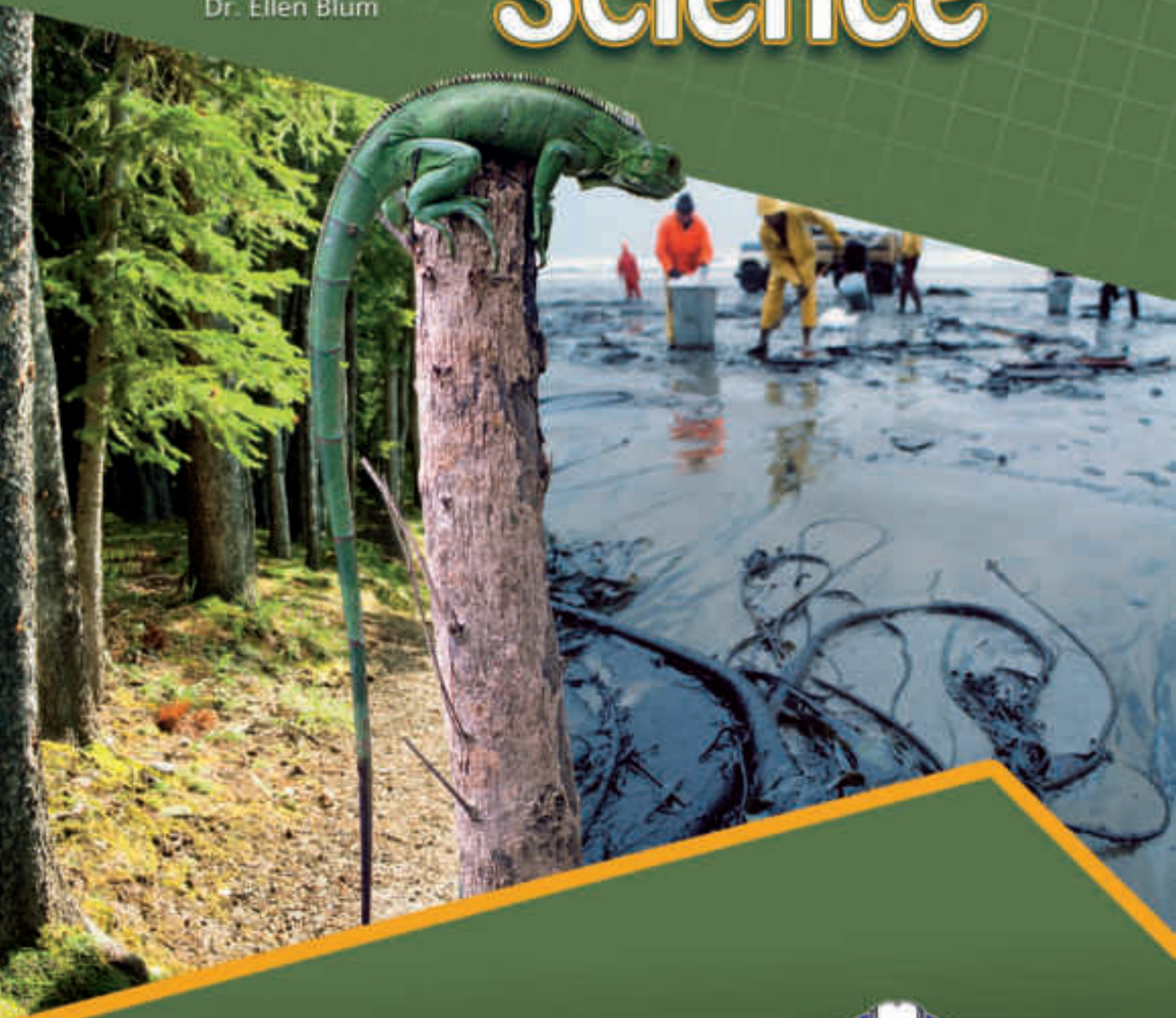
feet

1 foot = 12 inches

**CAREER
PATHS**

Environmental Science

Virginia Evans
Jenny Dooley
Dr. Ellen Blum



Express Publishing

Table of Contents

Book

1

Unit 1 – The earth: Structure and spheres	4
Unit 2 – Landforms	6
Unit 3 – Ecosystems: Components	8
Unit 4 – Trophic levels	10
Unit 5 – Terrestrial biomes	12
Unit 6 – Aquatic systems 1	14
Unit 7 – Aquatic systems 2	16
Unit 8 – The Scientific method	18
Unit 9 – Measurements	20
Unit 10 – Climate: Factors	22
Unit 11 – Climate: Zones	24
Unit 12 – Weather	26
Unit 13 – Matter	28
Unit 14 – Energy	30
Unit 15 – Basic units of life	32
Glossary	34

Book

2

Unit 1 – The water cycle	4
Unit 2 – Energy flow	6
Unit 3 – Nitrogen cycle	8
Unit 4 – Rock cycle	10
Unit 5 – Carbon cycle	12
Unit 6 – Plate tectonics	14
Unit 7 – Resources 1	16
Unit 8 – Resources 2	18
Unit 9 – Evolution	20
Unit 10 – Biodiversity	22
Unit 11 – Extinctions	24
Unit 12 – Classification system	26
Unit 13 – Energy: Nonrenewable	28
Unit 14 – Energy: Renewable	30
Unit 15 – Recycling	32
Glossary	34

Book

3

Unit 1 – Deforestation	4
Unit 2 – Threats to species	6
Unit 3 – Natural hazards	8
Unit 4 – Urbanization	10
Unit 5 – Soil pollution and degradation	12
Unit 6 – Air pollution 1	14
Unit 7 – Air pollution 2	16
Unit 8 – Ozone depletion	18
Unit 9 – Water pollution	20
Unit 10 – Climate change	22
Unit 11 – Genetic engineering	24
Unit 12 – Waste disposal	26
Unit 13 – Overpopulation	28
Unit 14 – Sustainability 1	30
Unit 15 – Sustainability 2	32
Glossary	34

Protecting our Oceans

Saltwater systems are a vital part of the Earth's biosphere. Don't let human waste destroy our oceans! Trash often piles up in **coastal zones**. It washes in and out with the tide in **intertidal zones**. Creatures that live in **estuaries** and **coastal wetlands** are especially affected. **Coral reefs** are also in danger. These active areas support about 25% of all ocean life. Trash from humans usually starts at the coasts. However, it is a threat to every **aquatic life zone**, from the surface to the **ocean bottom**. It floats out to **open sea** with the tide. There, the plastics and chemicals harm many varieties of aquatic life.

coral

ocean

human waste

estuary

coastal zone



Get ready!

- 1 Before you read the passage, talk about these questions.
- 1 In what area does a river meet the sea?
 - 2 What area in an ocean is home to a wide variety of life?

Reading

- 2 Read the brochure. Then, mark the following statements as true (T) or false (F).
- 1 ___ Trash typically stays in intertidal zones.
 - 2 ___ Coral reefs contain about half of all ocean life.
 - 3 ___ Only the ocean bottom is unaffected by trash.

Vocabulary

- 3 Match the words (1-6) with the definitions (A-F).
- | | |
|-----------------|-------------------------|
| 1 ___ ocean | 4 ___ coral reef |
| 2 ___ open sea | 5 ___ intertidal zone |
| 3 ___ saltwater | 6 ___ aquatic life zone |
- A a large body of water
 B an underwater area with particular characteristics
 C an area of deep water away from the coast
 D bodies of water containing salt
 E an area made up of mineral structures
 F an area that is sometimes underwater and sometimes exposed

- 4 Read the sentences and choose the correct words.
- 1 The debris sank from the surface down to the **intertidal zone / ocean bottom**.
 - 2 Most sea life lives in the warm waters of the **open sea / coastal zone**.
 - 3 The **estuary / ocean** contains some saltwater and some freshwater.
 - 4 Many trees grow in the **coastal wetlands / coral reef**.

- 5 Listen and read the brochure again. What kind of waste pollutes oceans?

Listening

- 6 Listen to a conversation between two scientists. Choose the correct answers.

- 1 What is the main idea of the conversation?
- A which organisms live in a coral reef
 - B differences between aquatic life zones
 - C the condition of different ocean areas
 - D methods for cleaning coastal zones.
- 2 What is the woman's good news?
- A The industrial waste was cleaned up.
 - B The coral reef recovered.
 - C The chemical spill was not harmful.
 - D The crab population increased.

- 7 Listen again and complete the conversation.

- Scientist 1: How did your 1 _____ go?
- Scientist 2: Well, there's good news and bad news.
- Scientist 1: Uh oh. What was 2 _____ it?
- Scientist 2: We found a large patch of industrial waste. It's right above the northeastern 3 _____.
- Scientist 1: That's not good. Coral reefs develop slowly. It could take years to 4 _____.
- Scientist 2: I know. But on the 5 _____, the Seaborn Estuary is much cleaner.
- Scientist 1: Isn't that where they had that nasty chemical spill? A lot of crabs were killed, right?
- Scientist 2: That's right. Now the 6 _____ is almost back to normal.

Speaking

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

USE LANGUAGE SUCH AS:

How did ... go?

We found ...

On the other hand ...

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

- his or her findings on a research trip
- a problem in an aquatic life zone
- an improvement in an aquatic life zone

Student B: You are a scientist. Talk to Student A about your findings on a research trip.

Writing

- 9 Use the brochure and the conversation from Task 8 to fill out the research report.

Summary of

Aquatic Research Expedition

I found a problem in _____

The problem was _____

I found an improvement in _____

The improvement was _____

coral
reef



CAREER
PATHS

Sports

Virginia Evans
Jenny Dooley
Alan Graham



Express Publishing

Table of Contents

Book

1

Unit 1 – The soccer field	4
Unit 2 – Soccer: Equipment	6
Unit 3 – Soccer: Players	8
Unit 4 – Soccer: Rules 1	10
Unit 5 – Soccer: Rules 2	12
Unit 6 – Soccer: Leagues and tournaments	14
Unit 7 – The basketball court	16
Unit 8 – Basketball: Equipment	18
Unit 9 – Basketball: Players	20
Unit 10 – Basketball: Rules	22
Unit 11 – Basketball: Leagues and tournaments	24
Unit 12 – The rugby field	26
Unit 13 – Rugby: Players	28
Unit 14 – Rugby: Rules	30
Unit 15 – Sports injuries	32
Glossary	34

Book

2

Unit 1 – The golf course	4
Unit 2 – Golf: Equipment	6
Unit 3 – Golf: Rules of play	8
Unit 4 – Golf: Tours and tournaments	10
Unit 5 – Hockey: Equipment	12
Unit 6 – Hockey: Rink and rules of play	14
Unit 7 – Field hockey: Equipment and field	16
Unit 8 – Field hockey: Rules of play	18
Unit 9 – Table tennis	20
Unit 10 – The cricket field	22
Unit 11 – Cricket: Equipment	24
Unit 12 – Cricket: Players	26
Unit 13 – Cricket: Rules of play 1	28
Unit 14 – Cricket: Rules of play 2	30
Unit 15 – Cricket: Leagues and tournaments	32
Glossary	34

Book

3

Unit 1 – Tennis: Rules	4
Unit 2 – Tennis: Tournaments	6
Unit 3 – The football field	8
Unit 4 – Football: Equipment	10
Unit 5 – Football: Players	12
Unit 6 – Football: Rules	14
Unit 7 – Volleyball	16
Unit 8 – Summer Olympics	18
Unit 9 – Winter Olympics	20
Unit 10 – The baseball field	22
Unit 11 – Baseball: Equipment	24
Unit 12 – Baseball: Players	26
Unit 13 – Baseball: Rules 1	28
Unit 14 – Baseball: Rules 2	30
Unit 15 – Baseball: Leagues and tournaments	32
Glossary	34

1 Tennis: Rules



Beginner's Guide to Tennis

Tennis is a popular game played around the world. However, it may be confusing to newcomers. Here are the basics of the game to help get you started.

Tennis is played on a **tennis court**. It can be played on three kind of surfaces: clay, grass, and hard court. The court is divided by a **net** into two sections. Each section is further divided by the **service line**. Between this line and the net is the **service box**.

Tennis players require only a **tennis racket** and **tennis balls** to play. Players hit the ball back and forth across the court over the net. They score points when their opponents hit the ball out of bounds or against the net or when the ball bounces twice in the opponent's court.

Play begins with a **serve**. The serving player stands behind the **baseline**. The player must hit the ball diagonally to land it inside his opponent's service area. If the server makes two **faults** or a **net service**, their opponent scores a point.

Players begin at **love**, or zero points. The first point is counted as **fifteen**, the second **thirty**, and the third **forty**. At **deuce**, or tie, the server must score the last two points to win. A game ends when the server scores his final **game point** or their opponent the **break point**. A **set** is usually won by the first player to win six games.

Get ready!

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

- 1 What are some areas of a tennis court?
- 2 What equipment is used when playing tennis?

Reading

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

- 1 Players serve from behind the service line.
- 2 A serving player gets one chance to get the ball over the net.
- 3 "Love" indicates that a player has not scored any points.

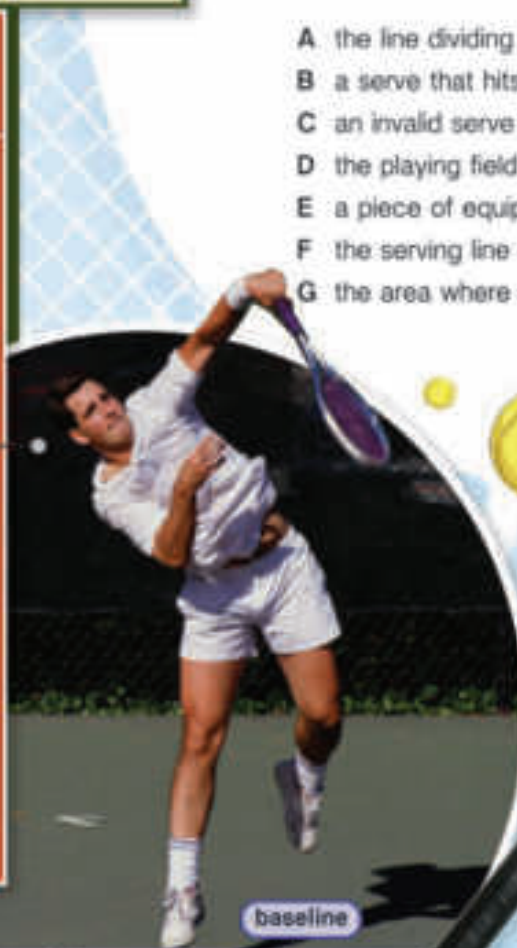
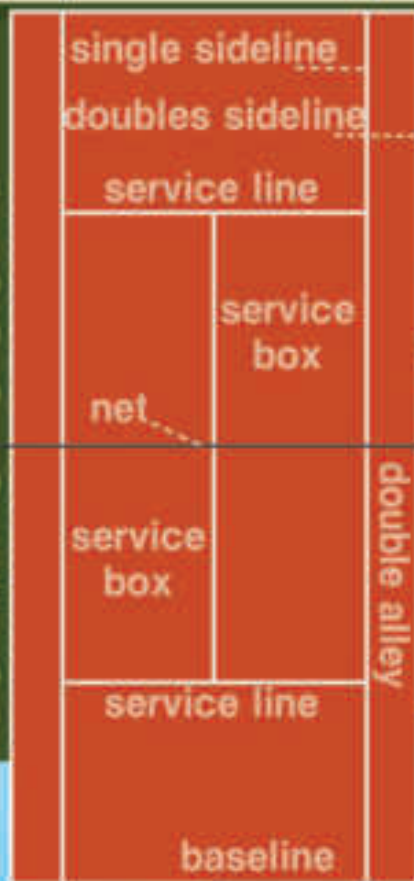
Vocabulary

3 Match the words (1-7) with the definitions (A-G).

- | | |
|---|--|
| 1 <input type="checkbox"/> tennis court | 5 <input type="checkbox"/> fault |
| 2 <input type="checkbox"/> baseline | 6 <input type="checkbox"/> tennis racket |
| 3 <input type="checkbox"/> service box | 7 <input type="checkbox"/> service line |
| 4 <input type="checkbox"/> net service | |

- A the line dividing a player's side of the court
- B a serve that hits the net
- C an invalid serve in tennis
- D the playing field in tennis
- E a piece of equipment used to hit a tennis ball
- F the serving line on a tennis court
- G the area where a player must land a serve

tennis.court



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

Word BANK

set love game point deuce
forty break point fifteen

- 1 When the player scored at _____ he won the game.
 - 2 With a score of _____, the player had not yet made a point.
 - 3 A daring play won the game for the server's opponent at _____.
 - 4 With scores of _____, both players had made one point.
 - 5 At _____, the server must score two points to win.
 - 6 Both players were very tired after playing a _____ of tennis.
 - 7 After scoring three points, the player's score was _____.
- 5 Listen and read the tennis guide again. Why is deuce a special score in tennis?

Listening

- 6 Listen to a conversation between two spectators. Mark the following statements as true (T) or false (F).
- 1 ___ The man doesn't understand how tennis scoring works.
 - 2 ___ The player has only scored once.
 - 3 ___ The woman compares the deuce score to a tie-breaker situation.
- 7 Listen again and complete the conversation.

Spectator 1: In tennis, points are worth 1 _____.

Spectator 2: So, one point is scored as 2 _____?

Spectator 1: That's right. Players start at zero, which is called 3 _____. The first point is still only one point, but it's scored as fifteen.

Spectator 2: What comes after that?

Spectator 1: The 4 _____ is scored thirty, and the third point is scored forty.

Spectator 2: That's the 5 _____?

Spectator 1: One more point is needed to win, unless the 6 _____ forty-forty. They call that deuce.

Speaking

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

USE LANGUAGE SUCH AS:

I'm confused about ...
It's split ...
What don't you ...

Student A: You are a tennis fan. Talk to Student B about:

- the tennis court
- how it's divided
- where to serve from

Student B: You are new to the game of tennis. Talk to Student A about how a tennis court is arranged.

Writing

- 9 Use the tennis guide and the conversation from Task 8 to write an article on the structure of a tennis court and serving. Include: the net, the service box, and the baseline.



COMMAND

& CONTROL

CAREER
PATHS



John Taylor - Jeff Zeter



Express Publishing

Table of Contents

1

Chapter 1 – Weaponry	Unit 1 – Pistol	4
	Unit 2 – Rifle	5
	Unit 3 – Mortar	6
	Unit 4 – Gun	7
	Unit 5 – Tank	8
Chapter 2 – The Soldier’s Life	Unit 6 – Radio Basics	10
	Unit 7 – On Post	12
	Unit 8 – Food	13
	Unit 9 – First Aid	14
	Unit 10 – Uniforms and Tactical Gear	16
Chapter 3 – Organization	Unit 11 – Rank Structure	18
	Unit 12 – Military Organization	20
	Unit 13 – Arms and Services	22
Chapter 4 – Land Navigation	Unit 14 – Map Reading 1	24
	Unit 15 – Map Reading 2	26
Appendix	Glossary	28

2

Chapter 1 – Weaponry	Unit 1 – Mines	4
	Unit 2 – Anti-tank Weapons	6
	Unit 3 – Machine Guns	8
	Unit 4 – Future Weapons	9
Chapter 2 – Vehicles & Platform	Unit 5 – Armored Fighting Vehicles	10
	Unit 6 – Multi-purpose Vehicles	12
	Unit 7 – Strykers	14
	Unit 8 – Air Defense Systems	15
	Unit 9 – Helicopters (Utility)	16
	Unit 10 – Helicopters (Attack)	17
Chapter 3 – Operations	Unit 11 – Peacekeeping Missions	18
	Unit 12 – Convoys	20
	Unit 13 – Patrols	22
	Unit 14 – Search and Rescue	24
	Unit 15 – Checkpoints	26
Appendix	Glossary	28

3

Chapter 1 – Units	Unit 1 – Infantry	4
	Unit 2 – Armor	6
	Unit 3 – Artillery	7
	Unit 4 – Engineers	8
	Unit 5 – Military Intelligence	10
	Unit 6 – Public Affairs	11
	Unit 7 – Airborne Forces	12
	Unit 8 – Special Forces	13
Chapter 2 – Operations	Unit 9 – Crowd Control	14
	Unit 10 – Limited Visibility Techniques	16
	Unit 11 – Urban Operations	18
	Unit 12 – Reconnaissance	20
	Unit 13 – Movement to Contact	22
	Unit 14 – Attack	24
	Unit 15 – Observation Post	26
Appendix	Glossary	28

6 The Soldier's Life: Radio Basics

Radios are vital military tools. They allow soldiers to **stay in contact** during combat and other operations.

Most radios are made to **hop frequencies**. This prevents the enemy from listening to the full conversation.

The **SINCGARS (man-pack)** and **AN/PRC-148 (handheld)** are common military radios.

The man-pack can be worn as a **backpack**. This portable type of radio handles both voice and data **transmissions**.

The handheld is the most widely used radio. It permits easy **two-way** contact.

Most modern radios use **rechargeable lithium-ion batteries**.



Using a SINCGARS man-pack radio in the field

Comprehension

1 Read, listen and fill in the blanks to complete the sentences.

- 1 Radios hop frequencies in order to
- 2 There are two basic types of radios: the and the
- 3 The SINCGARS radio can handle not only but also voice transmissions.
- 4 The handheld is most useful for
- 5 Today's portable handheld radios are powered by

2 a) Read again and choose the correct answers.

- 1 What can be inferred about the SINCGARS radio?
A It cannot hop frequencies automatically.
B It is mostly used for data transmissions.
C It has a better battery than the AN/PRC-148.
D Soldiers wear it like a backpack.

- 2 According to the text, what is true of the AN/PRC-148 handheld radio?
A It can receive but not send data messages.
B It is too large to fit into a soldier's pocket.
C It uses a rechargeable battery.
D It has a longer range than man-pack radios.


b) In pairs, talk about how many types of radios there are and how they can be used.

Vocabulary

3 Choose the correct definition for each word.

- 1 *man-pack*
A a radio worn on the back
B a message sent through a radio
C a type of radio transmission
- 2 *two-way*
A moving in two directions
B consisting of two parts
C using voice and data
- 3 *stay in contact*
A to replace batteries
B to have communication
C to turn off a radio

4 Study the table below.

RADIO VOICE PROCEDURE 	
WORDS	MEANING
Affirmative	Yes.
Roger	I understand / I received your transmission.
Negative	No.
Wilco	I will comply; I will do what you have asked.
Standby	Wait.
Over	I'm finished speaking and waiting for a reply.
Out	I'm finished speaking and don't expect a reply.
Go ahead	Please send your next transmission.
Say again	Repeat the last transmission.
You're breaking up	I cannot hear you / your voice.

5 Complete the conversation with appropriate words or phrases from the word bank.

negative wilco say again
over out



- D77: Echo one-three. I didn't hear your last transmission. Please (1) _____
- E13: I repeat, please advise. Is air reconnaissance available for this area? (2) _____
- D77: (3) _____. We do not have air recon at this time. Please wait for further instructions.
- E13: (4) _____. I will await your next transmission. (5) _____

6 Complete the word or short phrase that is similar in meaning to the underlined part.

- I understood your last transmission. I am moving toward the objective now.
_ _ g _ _
- Yes. All units have reported back to base.
_ f _ _ _ t _ _
- You're going to have to repeat the last transmission, soldier. I couldn't understand you.
_ o ' _ _ _ e _ _ _ _ p

- This is Delta Actual. Please proceed with your transmission.
_ o a _ _ _ _
- I'm verifying that information for you now. Please wait until my next transmission.
S _ _ _ _ _ y

Listening

-  Listen to a radio conversation between a soldier in the field and his commander. Write down any key vocabulary (in bold in the reading passage) that you hear.
-  Listen again to the conversation. Then answer the questions.

- Why does the man contact the woman on the radio?
.....
.....

- What does the woman order the unit to do?
.....
.....

- Why does the man ask the woman to "say again?"
.....
.....

Speaking

- In pairs, act out short radio exchanges using the procedure words in Ex. 4.



AIR FORCE

CAREER
PATHS



Gregory L. Gross Col USAF (Ret) - Jeff Zeter



Express Publishing

Table of Contents

1

Chapter 1 – Aircraft Basics	Unit 1 – Parts of an Airplane	4-5
	Unit 2 – Parts of a Helicopter	6-7
	Unit 3 – Spatial Relationships	8-9
	Unit 4 – Radio Communication	10-11
Chapter 2 – On Base	Unit 5 – Rank Structure	12-13
	Unit 6 – Base Structures	14
	Unit 7 – NATO Organization	15-16
	Unit 8 – Military Organization	17-18
	Unit 9 – Training	19
	Unit 10 – Uniforms	20
Chapter 3 – Jobs	Unit 11 – Pilot	21-22
	Unit 12 – Air Traffic Control	23
	Unit 13 – Maintenance	24
	Unit 14 – Pararescue	25-26
	Unit 15 – Weather	27-28
Appendix	Glossary	29

2

Chapter 1 – Aircraft	Unit 1 – The Fighter Jet	4-5
	Unit 2 – UAVs	6-7
	Unit 3 – The Bomber	8-9
	Unit 4 – Cargo Airplanes	10-11
	Unit 5 – Gunships	12-13
	Unit 6 – Tankers	14-15
	Unit 7 – Reconnaissance Aircraft	16-17
	Unit 8 – Helicopters	18-19
	Unit 9 – Cruise Missiles	20-21
Chapter 2 – Operations	Unit 10 – Suppression of Enemy Air Defense	22-23
	Unit 11 – Humanitarian Operations	24-25
	Unit 12 – Counterterrorism Operations	26-27
	Unit 13 – Counter-drug Operations	29-29
	Unit 14 – Small Scale Contingencies	30-31
	Unit 15 – Close Air Support	32-33
Appendix	Glossary	34-37

3

Chapter 1 – Famous Units	Unit 1 – Fighter Unit	4-5
	Unit 2 – Bomber Unit	6-7
	Unit 3 – Search and Rescue	8-9
Chapter 2 – Targeting the Enemy	Unit 4 – Targets	10-11
	Unit 5 – Air-to-Air Missiles	12-13
	Unit 6 – Air-to-Surface Missiles	14-15
	Unit 7 – Surface-to-Air Missiles	16-17
	Unit 8 – Cannons	18-19
	Unit 9 – Anti-Ship and Anti-Submarine	20-21
Chapter 3 – Attack	Unit 10 – Centers of Gravity	22-23
	Unit 11 – Surprise Attack	24-25
	Unit 12 – Strategic Attack	26-27
	Unit 13 – Psychological Effects	29-29
	Unit 14 – Joint Air Attack Team	30-31
	Unit 15 – Phases of Attack	32-33
Appendix	Glossary	34-37

5 On Base: Rank Structure



The Chief Master Sergeant of the Air Force (left) talks to a Senior Airman.

A recruit may hope to become a **general** someday, but he or she will start at the lowest **rank**. All enlisted airmen begin duty in the **airmen** tier. Eventually, they can work their way up to the **Noncommissioned Officer Tier**. Such a move requires more leadership and responsibility. Exceptional airmen can reach the highest level for enlisted airmen, the **Senior Noncommissioned Officer Tier**.

On the other hand, **officers** are commissioned, based on their education, experience and qualifications. They begin as **company grade officers**, who are either **lieutenants** or **captains**. Like airmen, officers also have potential to increase their rank. Officers who show the most promise become **field grade officers**, such as majors and colonels. A very select few become **flag officers**, or generals.

Comprehension

1 Read, listen, and mark the statements as true (T) or false (F). Correct the false statements.

- 1 ___ Airmen start in the Noncommissioned Officer Tier.
.....
- 2 ___ A captain is a senior noncommissioned officer.
.....
.....
- 3 ___ Company grade officers are lower in rank than field grade officers.
.....

Vocabulary

2 List the types of rank, from highest to lowest.

Noncommissioned Officers
Senior Noncommissioned Officers
Company Grade Officer Flag Officers
Field Grade Officers Enlisted Airmen

- 1
- 2
- 3
- 4
- 5
- 6

INSIGNIA: Enlisted Ranks

Airmen

(No insignia)

Airman Basic



Airman



Airman First Class

Noncommissioned Officers



Senior Airman



Staff Sergeant



Technical Sergeant

Senior Noncommissioned Officers



Master Sergeant



Senior Master Sergeant



Chief Master Sergeant



Command Chief Master Sergeant



Chief Master Sergeant of the Air Force

INSIGNIA: Officer Ranks

Company grade Officers



Second Lieutenant



First Lieutenant



Captain

Field grade Officers



Major



Lieutenant Colonel



Colonel

General Officers



Brigadier General



Major General



Lieutenant General



General

3 Label each insignia.



1



2



3



4



5

Listening

4 Listen to a conversation between an officer and an airman, and answer the questions.

- 1 What is the airman's new rank?
.....
- 2 Where will the airman transfer to?
.....
- 3 Why must the airman transfer?
.....

Speaking

5 You are speaking to new recruits. Explain the difference between NCOs and commissioned officers.

POLICE

CAREER
PATHS



John Taylor - Jenny Dooley



Express Publishing

Table of Contents

1

Chapter 1 – Descriptions	Unit 1 – Suspects	4
	Unit 2 – Citizens	6
	Unit 3 – Vehicles	8
	Unit 4 – Personal items 1	10
	Unit 5 – Personal items 2	12
Chapter 2 – Operations	Unit 6 – Walking directions	14
	Unit 7 – Driving directions	16
	Unit 8 – Emergency calls	18
	Unit 9 – Traffic stops	20
	Unit 10 – Car accidents	22
Chapter 3 – Crimes	Unit 11 – Pickpocket	24
	Unit 12 – Hotel room theft	26
	Unit 13 – Robbery	28
	Unit 14 – Taxi fraud	30
	Unit 15 – Auto theft	32
Appendix	Glossary	34

2

Chapter 1 – Equipment	Unit 1 – Basic equipment	4
	Unit 2 – Vehicles	6
	Unit 3 – Weapons	8
	Unit 4 – Non-Lethal weapons	10
Chapter 2 – Operations	Unit 5 – Radio communications	12
	Unit 6 – Providing first aid	14
	Unit 7 – Directing traffic	16
	Unit 8 – Interviewing witnesses and victims	18
	Unit 9 – Handling lost and stolen property	20
	Unit 10 – Patrolling	22
Chapter 3 – Crimes	Unit 11 – Disturbing the peace	24
	Unit 12 – Weapons possession	26
	Unit 13 – Assault	28
	Unit 14 – Battery	30
	Unit 15 – Prostitution	32
Appendix	Glossary	34

3

Chapter 1 – The Statio	Unit 1 – Organization	4
	Unit 2 – Departments	6
	Unit 3 – Detention centers	8
Chapter 2 – Operations	Unit 4 – Crime prevention	10
	Unit 5 – Searching suspects and property	12
	Unit 6 – Establishing crime scenes	14
	Unit 7 – Crowd control	16
	Unit 8 – Pursuit	18
	Unit 9 – Making an arrest	20
	Unit 10 – Processing suspects	22
	Unit 11 – Anti-Terrorism	24
Chapter 3 – Crimes	Unit 12 – Drug possession	26
	Unit 13 – Drug distribution	28
	Unit 14 – Identity theft	30
	Unit 15 – Homicide	32
Appendix	Glossary	34

1 Equipment: Basic equipment



badge



duty belt

multi-tool

handcuffs

bulletproof vest

Get ready!

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

- 1 What are some tools police use?
- 2 What equipment does a police officer typically carry in your country?

Reading

2 Read the page from a police equipment company's website. Then, choose the correct answers.

- 1 What is the purpose of the webpage?
 - A to list products available
 - B to show a completed order
 - C to state required equipment
 - D to describe a business
- 2 Which item is NOT sold with all its needed parts?
 - A zip tie
 - B multi-tool
 - C handcuffs
 - D flashlight
- 3 What is true of the bulletproof vest?
 - A It is the most expensive item.
 - B It includes plates in all models.
 - C It is available in multiple sizes.
 - D It can only be ordered by phone.

Strong Arm Police Equipment Suppliers

Current Inventory

Item Code	Description	Cost
P141	Badge: standard five point star. Engraving extra.	\$8
P198	Boots: black, leather, reinforced toe and sole. Avail. sizes M 7-13 W 4-12.	\$110
P509	Bulletproof vest: adjustable size, fits over uniform. Optional reinforced front/back plates extra. Call for details.	\$400
P040	Duty belt: adjustable, holds up to ten items.	\$70
P588	Flashlight: lightweight, 20 cm length, uses C batteries (not included).	\$15
P422	Gloves: black leather. Avail sizes S, M, L, XL.	\$20
P188	Handcuffs: stainless steel.	\$30
P454- P499	Holster: all leather. Locking belt clip. Specify gun make and model when ordering.	\$45- \$200
P098	Multi-tool: 9 useful tools in one! Case included.	\$65
P905	Radio: five channels. Rechargeable.	\$100
P112	Restraint (pair): nylon web. 12 cm.	\$8
P113	Zip tie (pack of 12): white.	\$6

Click [here](#) to place an order.

Strong Arm is committed to complete customer satisfaction. Call 1-888-499-5999 or [email us](#) for assistance at any time.

Vocabulary

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

- 1 __ zip tie
- 2 __ duty belt
- 3 __ multi-tool
- 4 __ radio
- 5 __ boot

- A a device with many uses
- B a strap that holds an officer's tools
- C a device used for communication
- D equipment that protects the foot
- E an item that binds suspects' hands



zip tie

4 Choose the correct word for each blank.

- 1 badge / handcuffs
 A The criminal couldn't move because of the _____.
 B Robert wears his _____ on his uniform.
- 2 gloves / bulletproof vests
 A These _____ protect officers' hands.
 B Modern _____ can stop most bullets.
- 3 flashlight / restraints
 A The _____ prevented him from moving.
 B Use your _____ if it is too dark outside.

5 Listen and read the website again. Where does a police officer keep his or her pistol?

Listening

6 Listen to a conversation between two officers. Mark the statements as true (T) or false (F).

- 1 ___ Handcuffs cost much more than zip ties.
 2 ___ The woman thinks zip ties break easily.
 3 ___ Using a zip tie requires both hands.

7 Listen again and complete the conversation.

- Officer 1: You don't think they're our best option? They're so lightweight you can carry a dozen at a time.
- Officer 2: True, that's their main advantage.
- Officer 1: That and they're cheap. We can buy fifty or sixty for the price of one pair of handcuffs.
- Officer 2: Sure, that's something else they have 1 _____.
- Officer 1: And they're 2 _____. I could go on and on. So, what are their downsides then?
- Officer 2: The biggest downside is that they're difficult to put on correctly when you only have 3 _____.
- Officer 1: I see your point.
- Officer 2: I can slap 4 _____ on a suspect with one hand and have my other one free. I feel a lot safer and more in control that way.
- Officer 1: True, that's 5 _____.
- Officer 2: And 6 _____, that outweighs all their negatives.

Speaking

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

USE LANGUAGE SUCH AS:

- That's its main advantage.*
That's something they have going for them.
One downside is ...

Student A: You are a police officer. Talk to Student B about a piece of equipment. Talk about:

- its most useful feature
- other advantages
- comparison with other equipment

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

Writing

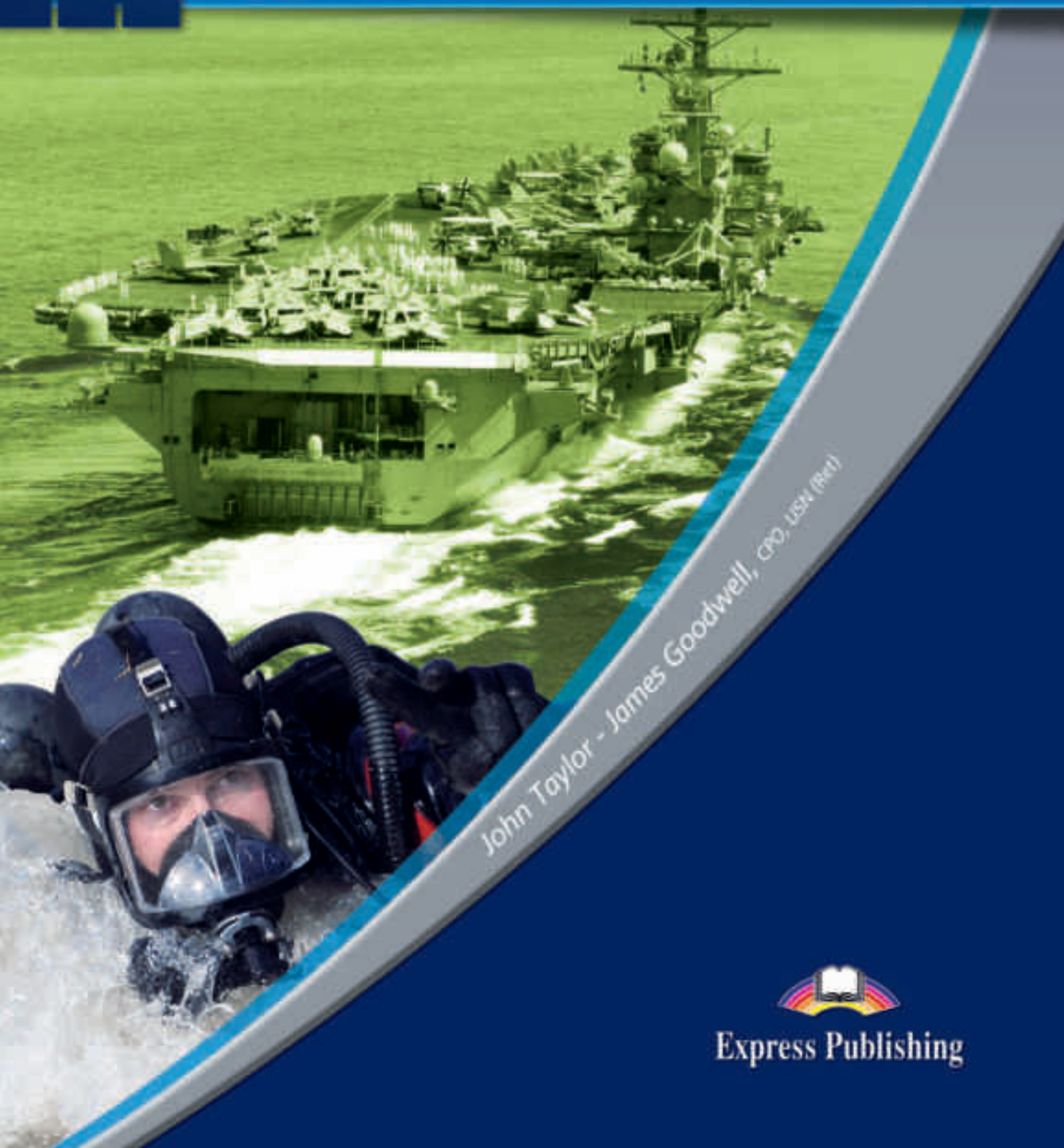
9 Use the website and the conversation from Task 8 to fill out the customer feedback form.

Strong Arm Police Equipment Suppliers Customer Feedback Form

- Item ordered: _____
- Item Strengths: _____
- Item Weaknesses: _____
- Would you recommend this item to a friend? Y N
- Why or why not? _____

NAVY

CAREER
PATHS



John Taylor - James Goodwell, CPO, USN (Ret)



Express Publishing

Table of Contents

1	Unit 1 – Ship Structure: Exterior	4
	Unit 2 – Ship Structure: Interior	6
	Unit 3 – Nautical Directions	8
	Unit 4 – Ship Systems	10
	Unit 5 – Audio Communication	12
	Unit 6 – Visual Communication	14
	Unit 7 – Weather	16
	Unit 8 – First Aid	18
	Unit 9 – Rank and Rate	20
	Unit 10 – Ship Organization: Command Structure	22
	Unit 11 – Ship Organization: Departments and Divisions	24
	Unit 12 – Uniforms	26
	Unit 13 – Shipboard Duties	28
	Unit 14 – Bills	30
	Unit 15 – Conditions of Readiness	32
Glossary	34	
2	Unit 1 – Ships: Ship Characteristics	4
	Unit 2 – Ships: Aircraft Carriers	6
	Unit 3 – Ships: Cruisers	8
	Unit 4 – Ships: Destroyers and Frigates	10
	Unit 5 – Ships: Submarines	12
	Unit 6 – Ships: Amphibious Warfare Ships	14
	Unit 7 – Ships: Patrol Combatants	16
	Unit 8 – Weapons: Missiles and Rockets	18
	Unit 9 – Weapons: Mines and Torpedoes	20
	Unit 10 – Weapons: Guns	22
	Unit 11 – Seamanship: Marlinespike Seamanship	24
	Unit 12 – Seamanship: Mooring	26
	Unit 13 – Seamanship: Anchoring	28
	Unit 14 – Seamanship: Towing	30
	Unit 15 – Seamanship: Deck Seamanship	32
Glossary	34	
3	Unit 1 – Fleet Support Ships and Service Craft	4
	Unit 2 – Mine Warfare Ships	6
	Unit 3 – Boats	8
	Unit 4 – Boat Crews and Equipment	10
	Unit 5 – Aircraft: Parts of an Aircraft	12
	Unit 6 – Aircraft: Attack Aircraft	14
	Unit 7 – Aircraft: Support Aircraft	16
	Unit 8 – Aircraft: Aircraft Squadrons	18
	Unit 9 – Navigation: Elements of Navigation	20
	Unit 10 – Navigation: Navigation Methods	22
	Unit 11 – Navigation: Navigation Instruments and Equipment	24
	Unit 12 – Navigation: Tides, Currents, and Winds	26
	Unit 13 – Security	28
	Unit 14 – Safety and Emergency Response	30
	Unit 15 – Damage Control	32
Glossary	34	

7 Aircraft: Support Aircraft



A NATO E-3A Airborne Warning and Control System (AWACS) aircraft flies over the aircraft carrier USS George Washington



An MH-60S Sea Hawk helicopter during a vertical replenishment



A C-2A Greyhound launches from the aircraft carrier USS Ronald Reagan

Naval aircraft do not just engage enemy planes and attack air- or ground-based targets. They also perform a variety of support functions that are equally important to naval missions.

Some aircraft undertake **patrol** missions over long distances, looking for enemy ships or submarines. **Unmanned aerial vehicles (UAVs)** can perform these functions without putting pilots at risk. Others provide **Command and Control**. Flying high above the battle group, these aircraft use powerful radar systems to provide **airborne early warning** of approaching enemies. They also maintain communication among the fleet. Yet some aircraft prevent the enemy from communicating. Such aircraft **jam** enemy signals in **electronic warfare** operations.

Aircraft also provide several **transport** functions. Land- and carrier-based **helicopters** provide **vertical replenishment (VERTREP)** operations. The C-2 transport can carry 10,000 pounds of cargo, yet still land on a carrier. The best-known transport plane, the C-130, moves everything from personnel and cargo to tanks and helicopters. Specially modified units also provide **aeromedical evacuation**.

Search and rescue (SAR) missions are another function of support aircraft, though they are only undertaken by rotary wing aircraft. When someone is lost at sea, when a plane crashes, or when a ship sinks, these aircraft launch to save those left behind.

Comprehension

1 Read, listen, and mark the statements as true (T) or false (F).

- ___ Patrol missions can be completed without pilots on board.
- ___ The C-2 can be outfitted to serve as an airborne medical station.
- ___ Airplanes and helicopters are both involved in SAR operations.

Vocabulary

2 Match the definitions to the correct words.

- | | |
|-----------------|------------------|
| 1 ___ transport | 4 ___ helicopter |
| 2 ___ patrol | 5 ___ VERTREP |
| 3 ___ jam | |
- an aircraft that is lifted and kept in the air by rotating wings
 - to block an electronic signal from being transmitted
 - the transfer of cargo to ships using helicopters
 - to conduct an operation in an area for observation and maintaining order
 - to carry something from one place to another

3 Complete the sentences with the terms below.

Word BANK

*aeromedical evacuation electronic warfare
command and control search and rescue
airborne early warning UAV*

- The _____ system failed to notify the fleet of the approaching attack.
- The Navy used a(n) _____ to scout the combat zone.
- Both ships and aircraft were used in the _____ operation to find the missing sailors.
- A(n) _____ operation was ordered to take the injured personnel to a hospital.
- Officers on the _____ aircraft were able to view the entire battlefield.
- The Navy uses sophisticated jamming systems to conduct _____.

4 Read the passage again. Why are helicopters used for SAR and VERTREP missions?

Listening

5 Listen to a conversation between an officer and a pilot, and answer the questions.

- What type of operation did the pilot just complete?
 - patrol
 - search and rescue
 - VERTREP
 - command and control
- What will the man most likely do next?
 - Refuel a helicopter.
 - Resupply a destroyer.
 - Attend a mission briefing.
 - Go to the maintenance department.

Speaking

6 Listen again, and then act out the dialogue from Task 5 with a partner. Then switch roles.

USE LANGUAGE SUCH AS:

*What is the status ... ?
We're putting you up again.
Just make sure ...*

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

- results of a SAR mission
- an upcoming mission
- how to prepare

Student B: You are a pilot. Talk to Student A about support missions.

Writing

7 Use the conversation in Task 5 to describe the support functions of naval aircraft. Include: transport, patrol, and rescue operations.

**CAREER
PATHS**



Flight Attendant

Virginia Evans
Jenny Dooley
Lori Coocen



Express Publishing

Table of Contents

Book 1	Unit 1 – The Flight Crew	4
	Unit 2 – Airline Employees	6
	Unit 3 – People in the Airport	8
	Unit 4 – Parts of the Airport	10
	Unit 5 – Airport Security	12
	Unit 6 – Parts of an Aircraft	14
	Unit 7 – Parts of the Cabin 1	16
	Unit 8 – Parts of the Cabin 2	18
	Unit 9 – Physical Demands	20
	Unit 10 – Appearance	22
	Unit 11 – Uniforms	24
	Unit 12 – Types of Flights	26
	Unit 13 – Types of Aircraft	28
	Unit 14 – Radio Communications	30
	Unit 15 – Delays and Cancellations	32
Glossary	34	
Book 2	Unit 1 – The Stages of Flight	4
	Unit 2 – Preflight Briefing	6
	Unit 3 – Preflight Duties 1	8
	Unit 4 – Preflight Duties 2	10
	Unit 5 – Preflight Announcements	12
	Unit 6 – The Safety Demonstration	14
	Unit 7 – En Route Duties 1	16
	Unit 8 – En Route Duties 2	18
	Unit 9 – Approach 1	20
	Unit 10 – Approach 2	22
	Unit 11 – Arrival	24
	Unit 12 – Post-flight Duties	26
	Unit 13 – Between Flights	28
	Unit 14 – Passengers 1	30
	Unit 15 – Passengers 2	32
Glossary	34	
Book 3	Unit 1 – Interviews	4
	Unit 2 – Training	6
	Unit 3 – Relocations and Bases	8
	Unit 4 – Reserve Duty	10
	Unit 5 – Schedules	12
	Unit 6 – Bidding	14
	Unit 7 – Customer Service Tips	16
	Unit 8 – Crew Resource Management (CRM)	18
	Unit 9 – The Sterile Cockpit	20
	Unit 10 – Flight Emergencies 1	22
	Unit 11 – Flight Emergencies 2	24
	Unit 12 – Medical Emergencies	26
	Unit 13 – First Aid	28
	Unit 14 – Aircraft Security 1	30
	Unit 15 – Aircraft Security 2	32
Glossary	34	

Get ready!

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

- 1 Why are announcements before landing important for flight attendants to make?
- 2 What are some important things that passengers may be asked to do as they approach the airport for landing?



Chambliss Airways

Approach
Announcement Script

Good morning ladies and gentlemen. We hope you have enjoyed your flight on Chambliss Airways. We will be landing at JFK International Airport shortly. Before we do, we need to take care of a few items. Please return to your seats and **collect** your belongings. Flight attendants are coming around to collect any **trash**. **Pass** any items you wish to **discard** to them. Did you **recline** your seat? Please, return your **seatback** to its original **upright** position. Also, **lower** any **armrests**. **Tray tables** should be **locked** into place. Also, we ask that you **turn off** and stow any electronics. Carry-ons go in the overhead bins or under the seat. Finally, please **buckle** your seatbelt and prepare to land. We hope you enjoyed your flight from Athens to New York. We look forward to flying with you again soon.



Reading

2 Read the announcement script. Then, mark the following statements as true (T) or false (F).

- 1 ___ Passengers are asked to recline their seats before landing.
- 2 ___ The armrests need to be lowered before landing.
- 3 ___ Carry-on items can be placed in overhead bins.

Vocabulary

3 Match the words or phrases (1-9) with the definitions (A-I).

- | | |
|----------------|------------------|
| 1 ___ seatback | 6 ___ tray table |
| 2 ___ collect | 7 ___ buckle |
| 3 ___ pass | 8 ___ discard |
| 4 ___ recline | 9 ___ lower |
| 5 ___ turn off | |

- A to gather objects together
 B to hand an object to someone else
 C to cause something to incline backwards
 D the part of the chair your back rests on
 E a small piece of plastic used to eat or work on that is used on an airplane
 F to power down electronic items
 G to throw something away
 H to attach two sides of something together in order to hold something
 I to move something closer to the ground





4 Read the sentences and choose the correct words or phrases.

- 1 The flight attendant collected our **seatback/ trash** before we landed.
- 2 The **tray tables/armrests** make the airplane seats more comfortable.
- 3 It is important for your seat to be **upright/ buckled** before we take off.
- 4 I **locked/discarded** my tray table in the correct position.

5 Listen and read the announcement again. Where can carry-ons and electronics be placed before landing?

Listening

6 Listen to a conversation between a flight attendant and a passenger. Mark the following statements as true (T) or false (F).

- 1 The man asks the woman to recline her seat.
- 2 The man says that the woman can leave her phone on.
- 3 The woman says she will put her carry-on item under her seat.

7 Listen again and complete the conversation.

Flight Attendant: We are getting ready to land. Do you have any **1** _____ ?

Passenger: No, I **2** _____ already.

Flight Attendant: Then please **3** _____ into position.

Passenger: Okay, sure. Sorry about that.

Flight Attendant: You will also have to return your seat back to an **4** _____ .

Passenger: Do I need to **5** _____ my phone?

Flight Attendant: Please. Electronics sometimes interfere with our radios. Can I put **6** _____ - _____ in the overhead bin?

Passenger: No, thank you. I will just put it under the seat.

Speaking

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

USE LANGUAGE SUCH AS:

We are getting ready to ...

You will also ...

Can I put ...?

Student A: You are a flight attendant. Talk to Student B about:

- discarding trash
- changing their seat position for landing
- stowing his or her carry-on item

Student B: You are a passenger. Talk to Student A about what you need to do to prepare for landing.

Writing

9 Use the conversation from Task 8 to fill in a checklist of flight attendant duties before landing.



Chambliss Airways

Checklist Before Landing

- 1 Trash: _____
- 2 Tray tables: _____
- 3 Seat position: _____
- 4 Electronics: _____
- 5 Carry-on items: _____

**CAREER
PATHS**

Virginia Evans
Jenny Dooley
Kenneth Rodgers



ENVIRONMENTAL ENGINEERING



Express Publishing

Table of Contents

Book

1

Unit 1 – The Environmental Engineer	4
Unit 2 – The Earth	6
Unit 3 – Ecosystems	8
Unit 4 – Biomes and Aquatic Systems	10
Unit 5 – Weather	12
Unit 6 – Climate	14
Unit 7 – Basic Units of Life	16
Unit 8 – Measurements 1	18
Unit 9 – Basic Numbers and Math	20
Unit 10 – Measurements 2	22
Unit 11 – Tables and Graphs	24
Unit 12 – Describing Change	26
Unit 13 – Presentations	28
Unit 14 – Properties of Matter	30
Unit 15 – Energy	32
Glossary	34

Book

2

Unit 1 – Traits of an Environmental Engineer	4
Unit 2 – Education	6
Unit 3 – The Scientific Method	8
Unit 4 – Problem Solving	10
Unit 5 – Working with Large Numbers	12
Unit 6 – Analyzing Quantities	14
Unit 7 – Accounting	16
Unit 8 – Water Cycle	18
Unit 9 – Carbon Cycle	20
Unit 10 – Energy Cycle	22
Unit 11 – Biodiversity and Extinctions	24
Unit 12 – Environmental Chemistry	26
Unit 13 – Resources	28
Unit 14 – Resource Recovery	30
Unit 15 – Atmospheric Change	32
Glossary	34

Book

3

Unit 1 – Risk Assessment	4
Unit 2 – Population, Environment, and Resources 1	6
Unit 3 – Population, Environment, and Resources 2	8
Unit 4 – Urbanization	10
Unit 5 – Water Use and Pollution 1	12
Unit 6 – Water Use and Pollution 2	14
Unit 7 – Water Quality Control	16
Unit 8 – Air Pollution 1	18
Unit 9 – Air Pollution 2	20
Unit 10 – Waste Management 1	22
Unit 11 – Waste Management 2	24
Unit 12 – Evaluating Impact	26
Unit 13 – Disaster Response	28
Unit 14 – Land Reclamation and Restoration	30
Unit 15 – Water Reclamation and Restoration	32
Glossary	34

10 Waste Management 1



open dump

WASTE MANAGEMENT

The Good and the Bad

Waste management is critical for human and environmental health. Without proper waste management, people would just throw garbage in **open dumps**. Fortunately, many places have better ways to handle waste. However, even the best facilities face challenges.

Liquid **hazardous** waste is often stored in **surface impoundments**. However, these can leak and contaminate groundwater. Fumes may also add to air pollution. A better solution is **deep-well disposal**. This method is permanent and environmentally sound if managed properly.

Solid waste landfills are sites that handle municipal and **industrial solid waste**. A **composite liner** is placed under the landfill. The intention is to prevent water pollution. However, environmental agencies suggest that this is only a temporary barrier. On top of the liners is a series of **cells** which have **daily cover** over them. **Lifts** lead to multiple layers of cells.

Solid waste landfills are extremely common. But they are not without problems. Many of them have reached or are close to **disposal capacity**. As the population grows, this will become a bigger problem. In addition, landfills release flammable **toxic** gases as waste **decomposes**. **Methane recovery** can be accomplished with a series of pipes that suck the gas out. Meanwhile, underground **carbon storage** can prevent CO₂ from entering the atmosphere.

Get ready!

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

- 1 Why is waste management important?
- 2 How do solid waste landfills handle waste?

Reading

2 Read the magazine article. Then, choose the correct answers.

- 1 What is the purpose of the article?
 - A to compare types of waste management facilities
 - B to describe waste management problems and solutions
 - C to explain how solid waste landfills are created
 - D to highlight the harmful effects of open dumps
- 2 What can be inferred about solid waste landfills?
 - A They can be difficult to operate.
 - B They often have hazardous liquids.
 - C They may eventually pollute water.
 - D They have too many cell layers.
- 3 Which of the following is NOT a problem with waste facilities?
 - A They are quickly filling up.
 - B They emit hazardous gases.
 - C They are not compacted well.
 - D They can catch fire.

Vocabulary

3 Match the words or phrases (1-8) with the definitions (A-H).

- | | |
|----------------------|---------------------------|
| 1 ___ toxic | 5 ___ composite liner |
| 2 ___ cell | 6 ___ methane recovery |
| 3 ___ lift | 7 ___ disposal capacity |
| 4 ___ carbon storage | 8 ___ surface impoundment |
-
- A the collection of a gas so that it can be used for another purpose
 - B an area of compacted waste
 - C a hole that holds liquid waste
 - D a synthetic material placed over compacted soil
 - E poisonous
 - F the largest amount of waste a facility can hold
 - G a layer put over cells when they are full
 - H the capture and storage of CO₂ so that it doesn't pollute the atmosphere



4 Choose the sentence that uses the underlined part correctly.

- 1 Injecting liquid into underground rock is one way to get rid of waste permanently.
_ _ _ p - _ e _ _ _ s p _ _ a _
- 2 The manufacturing process creates a lot of garbage from industrial facilities.
_ _ d u _ _ _ a _ s _ _ _ d _ a _ _
- 3 Many poor countries have lots of large, unregulated areas where people throw trash.
_ _ e _ _ u _ _ s
- 4 Methane is an extremely dangerous greenhouse gas.
_ _ _ a r _ _ _ s
- 5 Some items in landfills may never break down.
_ _ c _ _ _ o _ _
- 6 The layer of soil put over cells prevents the wind from blowing waste around.
d _ _ _ _ o _ _ r
- 7 Most of the city's waste goes to a(n) place where waste is dumped and buried.
_ o _ _ _ _ s _ _ l _ _ _ _ l _

5 Listen and read the magazine article again. What are some ways to manage hazardous liquid waste?

Listening

6 Listen to a conversation between an environmental engineer and a city planner. Mark the following statements as true (T) or false (F).

- 1 ___ The city's solid waste landfill already has a methane recovery system.
- 2 ___ The landfill's daily covers keep garbage in place and control odors.
- 3 ___ The engineer will make plans for a carbon storage system.

7 Listen again and complete the conversation.

Engineer: Okay. I think that a system for 1 _____ would be very beneficial.

City Planner: I was under the 2 _____ that we had a system to do that.

Engineer: No, not 3 _____.

City Planner: I can't believe that. What safety features do we have in place?

Engineer: There's an impermeable 4 _____ to protect the groundwater supply.

City Planner: Okay, but that's pretty standard with solid waste landfills. What else do we have?

Engineer: There's a system of applying 5 _____.

City Planner: I'm not 6 _____ with that.

Speaking

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

USE LANGUAGE SUCH AS:

I was under the impression that ...

Yes, that's right./No, not at this time.

Let's get going on ...

Student A: You are an environmental engineer. Talk to Student B about:

- what waste disposal methods your city currently uses
- what safety features the facilities have

Student B: You are a city planner. Talk to Student A about your city's waste management methods.

Writing

9 Use the magazine article and the conversation from Task 8 to complete an informational flyer about your city's waste management programs. Include: the methods the city uses, their benefits, and their safety features.