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Finance	Natural Resources II – Mining	Worldwide Sports Events

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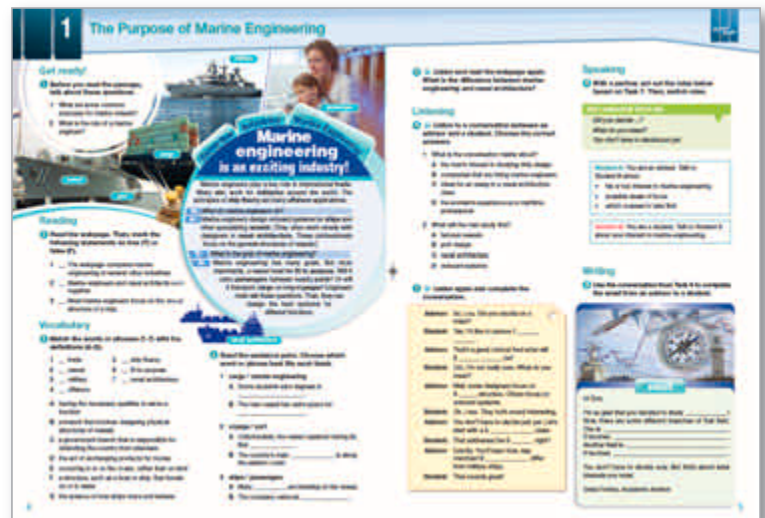


Career Paths

These books are designed for professionals, and students in vocational schools and colleges to help them develop the language skills they need to succeed in a professional work environment.

Key Features

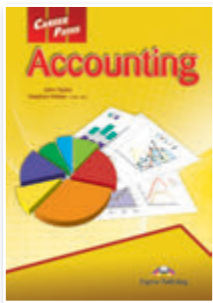
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Agricultural Engineering



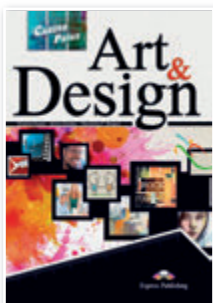
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Air Force



Architecture



Art & Design



Au Pair



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Beauty Salon



Banking



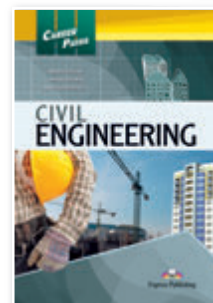
Business English



Call Centers



Civil Aviation



Civil Engineering



Command & Control



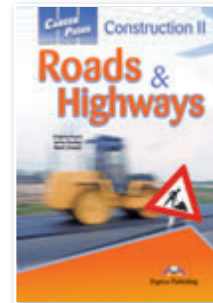
Computer Engineering



Computing



Construction I



Construction II



Cooking



Dental Hygienist



Dentistry



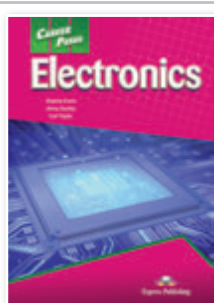
Elder Care



Electrical Engineering



Electrician



Electronics



Engineering



Environmental Engineering



Environmental Science



2 Photography 1

friendlycamera.com

Home Support Search Contact

Photography is harder than it looks.
Good photographers need practice. Here are some tips for dealing with common problems.
Problem: I'm trying to shoot a moving subject. The photographs are blurry and I can't see the details.
Solution: Your exposure is probably taking too long. Try a camera with a shorter shutter speed.
Problem: My subject isn't moving, but my photographs are blurry.
Solution: You might need to focus your lens. Make small adjustments until the image looks right. If that doesn't work, try using a tripod. It will help you keep the camera steady.
Problem: My night-time pictures are too dark.
Solution: To take a good night-time picture, you need light. Use a camera with a flash.
Problem: My local camera store closed down. Where can I turn my negatives into photographs?
Solution: Learn to develop your own film. This is more satisfying than taking it to a store, anyway.

Vocabulary
Write a word that is similar in meaning to the underlined part.
1 The photographer needs to take a picture of the new city hall for the newspaper article. take ... 1
2 The material that stores images was damaged, so the photographs were turned upside down. ... 2
3 If the piece of curved glass is dirty, the pictures will not look right. dirty ... 3
4 The new device for taking pictures is much more advanced than the old one. advanced ... 4
5 The artist studied the act of creating pictures with a camera. studied ... 5
6 The magazine hired a new person who takes pictures. hired ... 6
7 The proper process of allowing light into a camera helps a photographer achieve the desired effect. proper ... 7

Get ready!
Before you read the passage, talk about these questions.
1 What are pictures stored on?
2 What is necessary when taking a photograph in dark conditions?

Reading
Read the webpage. Then, mark the following statements as true (T) or false (F).
1 The webpage offers multiple solutions for blurry pictures.
2 The webpage advises that short shutter speeds cause dark pictures.
3 The webpage recommends getting film developed at a store.

4 Read the sentence pairs. Choose which word or phrase best fits each blank.
1 focused / developed
A The photographer _____ the camera before he took the photograph.
B The photographer _____ the film into photographs.
2 shutter speed / negative
A The _____ shows the image with the colors reversed.
B Adjust the _____ so the picture won't be too blurry.
3 flash / tripod
A To keep the camera steady, use a _____.
B To add more light to the subject, use a _____.

5 Listen and read the webpage again. How can a photographer take a clear picture of a moving subject?

Listening
Listen to a conversation between a photographer and an assistant. Choose the correct answers.
1 What is the purpose of the conversation?
A to identify an error while developing negatives
B to choose an easier photography subject
C to determine why a batch of photographs came out badly
D to explain the need for a flash on the next project
2 What does the woman plan to do next on the next project?
A shoot another type of subject
B use the camera's flash
C develop the negatives differently
D use a faster shutter speed

6 Listen again and complete the conversation.
Photographer: Let me take a look. Yeah, they're 1
Assistant: What do you think happened? Did I 2 _____ incorrectly?
Photographer: No, I don't think it was your fault. I bet I just used a 3 _____
Assistant: That could make the pictures blurry?
Photographer: Oh, definitely. Especially since my 4 _____
Assistant: I see. Would it help to 5 _____ next time?
Photographer: Not in 6 _____. There was plenty of sunlight out there.

Speaking
With a partner, act out the roles below based on Task 7. Then, switch roles.
USE LANGUAGE SUCH AS:
They didn't come out ...
I bet I just ...
Would it help to ...?
Student A: You are a photographer. Talk to Student B about:
• a problem with a batch of photographs
• the cause of the problem
• what you will do differently next time
Student B: You are an assistant. Talk to Student A about a problem with a batch of photographs.

Writing
Use the conversation from Task 6 and the webpage to complete the project reshoot request.

Request to Reshoot Form
Nonmembers Image
What was the problem with the original photographs?
How will you avoid this problem again?

1 The Agricultural Engineer

Get ready!

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

- 1 What does an agricultural engineer do?
- 2 What skills does a good agricultural engineer have?

Reading

1 Read the newspaper article. Then, choose the correct answers.

1. What is the main idea of the article?

- A job openings for agricultural engineers
- Advice on becoming an agricultural engineer
- Responsibilities of agricultural engineers
- Recruitment for educational programs in agricultural engineering

2. Which of the following is NOT a duty of an agricultural engineer?

- harvesting crops
- assessing irrigation
- designing machinery
- evaluating waste systems

3. According to the article, what is the main focus of agricultural engineers?

- repairing farm machinery
- increasing farms' profitability
- inventing new farm products
- helping farmers better use their resources

Speaking

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

USE LANGUAGE SUCH AS:

What can you tell us about your work?
What are you working on now?
When will it be finished?

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

- his or her occupation
- his or her current project
- when it will be completed

Student B: You are an engineer. Talk to Student A about your occupation.

Listening

3 Listen to a conversation between a reporter and an agricultural engineer. Mark the following statements as true (T) or false (F).

- 1 The man is working on an irrigation system.
- 2 The project will help increase absorption.
- 3 The man will be done by the end of the month.

4 Listen again and complete the conversation.

Reporter: Wonderful. So, what are you 1 _____ now?

Engineer: I'm currently designing a new 2 _____ system.

Reporter: What can 3 _____ about that?

Engineer: It's designed to reduce 4 _____, it's also increase absorption.

Reporter: When will it 5 _____?

Engineer: Hopefully we'll be done 6 _____ of this year.

Vocabulary

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

- 1 assess
- 2 farm
- 3 improve
- 4 produce
- 5 design
- 6 plant

- A to make something better
- B to plan out something
- C to examine something closely and make a decision
- D to create or make something
- E to place something in the ground so it will grow
- F to care for plants and animals as an occupation

Writing

6 Use the conversation from Task 4 to fill out the reporter's notes.

SUNSHINE VALLEY PAPER: Interview Notes

Date: 10/05

Name of Subject: _____

Occupation: _____

Current project and goal: _____

Expected completion date: _____

AGRICULTURAL ENGINEERS: Unsung Heroes

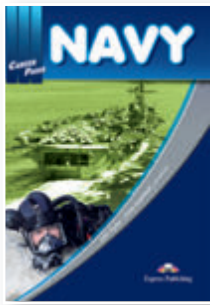
By Geoffrey Goodwin

CAREER HIGHLIGHT

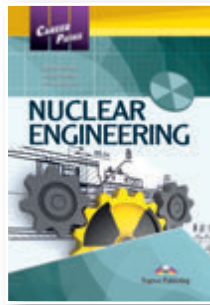
Agriculture is important to us all. Many people work in this field. They're not all farmers, either. Agricultural engineers are important, but not well-known. They help people farm better by producing more food. Any time a farmer plants or harvests, an engineer is involved. Agricultural engineers do many different things, but their most important goal is helping farmers use resources effectively. To this end, some design equipment or buildings. They may work with machinery. Others assess and improve irrigation systems. Land and water management are big concerns. Still others evaluate existing waste management systems. This includes animal waste and fertilizer runoff.

sample pages from CAREER PATHS Agricultural Engineering

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 Mechanical Engineering	 Mechanics	 Medical	 Medical Equipment Repair	 Merchant Navy
 Museum Management & Curatorship	 Natural Gas I	 Natural Gas II	 Natural Resources I	 Natural Resources II



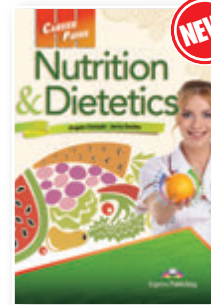
Navy



Nuclear Engineering



Nursing



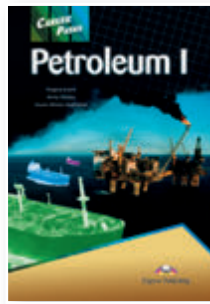
Nutrition & Dietetics



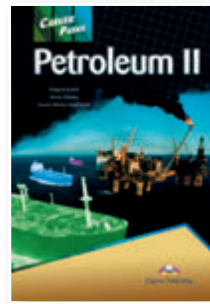
Paramedics



Pet Care



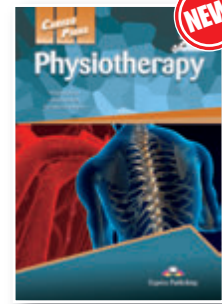
Petroleum I



Petroleum II



Physician Assistant



Physiotherapy



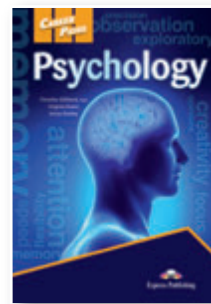
Plant Production



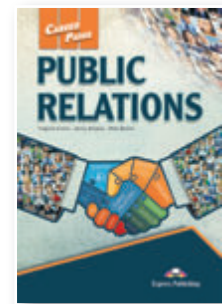
Plumbing



Police



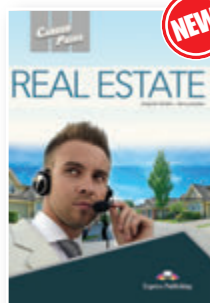
Psychology



Public Relations



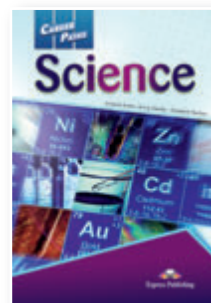
Rail Transportation



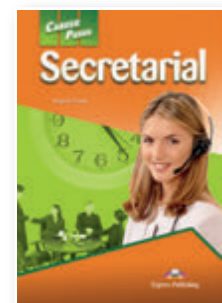
Real Estate



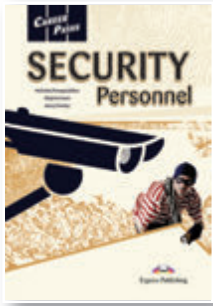
Sales and Marketing



Science



Secretarial



Security Personnel



Software Engineering



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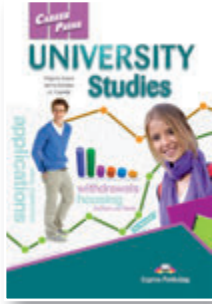
Taxi Drivers



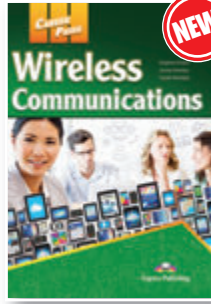
Tourism



Travel Agent



University Studies



Wireless Communications



World Cup



Worldwide Sports Events

1 Legal Matters

RODNEY'S REAL ESTATE BLOG POST April 21

Get ready!
 1 Before you read the passage, talk about these questions.
 1 In your country, what are some legal responsibilities of a real estate agent?
 2 Why might a client file a lawsuit against a real estate agent?

Today, I'd like to answer questions from my loyal readers!

John asks: I recently bought a house with a local broker. According to her, I chose a quiet, safe neighborhood. But I just learned something terrible. A murder happened in this house five years ago! Did my broker commit fraud?
I say: Your broker's actions may or may not be illegal. In some places, brokers must tell you about serious incidents like murders. Check local laws about **stigmatized properties**. However, calling the place "safe" was probably just **puffing**, and most likely wasn't fraudulent. That said, you should determine whether the area has an ongoing, well-known crime problem. In that case, your broker could be guilty of fraud. Now, true fraud is difficult to prove. You'd have to show that your broker **knowingly** failed to provide disclosure. On the other hand, she's expected to have **expertise** about such factors. So, at least, you might prove **negligent misrepresentation**.

Rachel asks: There's a massive sewage leak on my new property. And the seller never mentioned it! What should I do?
I say: That sounds like a **material defect**—and a health **hazard**. Furthermore, it doesn't sound like a **latent** problem. Someone should have noticed it during inspection. I recommend contacting a real estate attorney.

Vocabulary
 1 Match the words or phrases (1-8) with the definitions (A-H).

1 — disclosure	5 — material
2 — hazard	6 — puffing
3 — defect	7 — misrepresentation
4 — latent	8 — stigmatized property

A having an important or noticeable effect on something else
 B a problem that prevents something from functioning correctly
 C something that may cause harm
 D the act of lying about something
 E hidden for a period of time until it becomes visible
 F the act of giving someone information for an official purpose
 G the act of emphasizing the positive aspects of something
 H a place where something bad has occurred

Reading
 2 Read the blog post. Then, mark the following statements as true (T) or false (F).
 1 The purpose of the blog post is to advise buyers about their rights.
 2 The latent flooding problem is not one of the property owners' concerns.
 3 The agent who sold the stigmatized property failed to provide disclosure.

4 Write a word that is similar in meaning to the underlined part.
 1 The judge convicted the real estate agent of dishonest actions.
 2 With the broker's help and expertise, the company found a great spot for its new store.
 3 If a broker's actions are seriously improbable and risking harm, he or she may lose her license.
 4 With full knowledge, the salesperson sold the house even though it had a severe dry rot problem.

5 Listen and read the blog post again. What does the blogger recommend to the property owner with the sewage leak?

Listening
 6 Listen to a conversation between a client and an attorney. Choose the correct answers.
 1 According to the woman, what was the problem with the sale?
 A The agent knowingly concealed a latent defect.
 B The buyer failed to request disclosure.
 C The attorney did not convince the judge of fraud.
 D The homeowners misled the real estate agent.
 2 According to the woman, what is true about the case?
 A The man has a poor chance of winning.
 B The agent in the case is guilty.
 C It is impossible to predict the outcome.
 D It is a very complicated case.

7 Listen again and complete the conversation.

Client: What do you think? Did she commit 1 _____?
 Attorney: The case is looking pretty strong. I found evidence that the agent knew about the 2 _____ problem.
 Client: Oh, yeah? So, she knew about the 3 _____ and she sold the house anyway?
 Attorney: Well, sort of. The previous homeowners did 4 _____ her. They said they'd fixed the problem.
 Client: Oh, I see. So, she didn't lie, exactly. But she still should've got 5 _____ information, right?
 Attorney: Absolutely. She was responsible for verifying the repairs. Since she didn't, her actions were 6 _____.

Speaking
 8 With a partner, act out the roles below based on Task 7. Then, switch roles.
USE LANGUAGE SUCH AS:
 What do you think about ...?
 He/She should have ... / My guess is ...

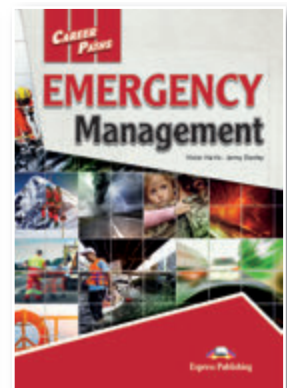
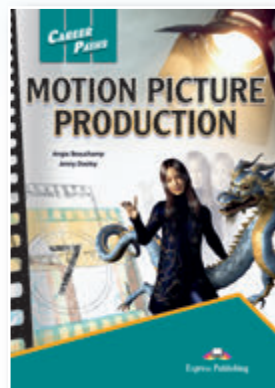
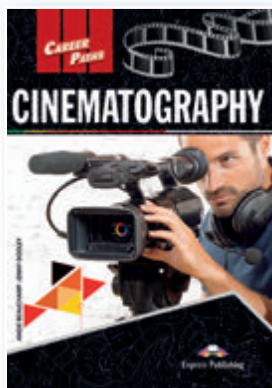
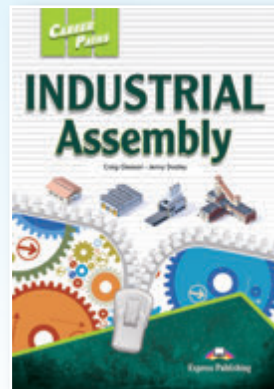
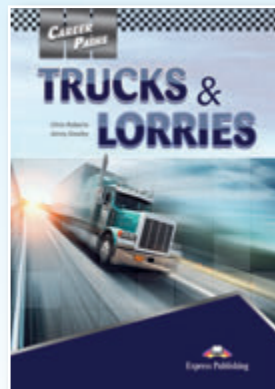
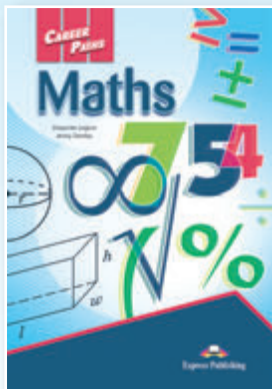
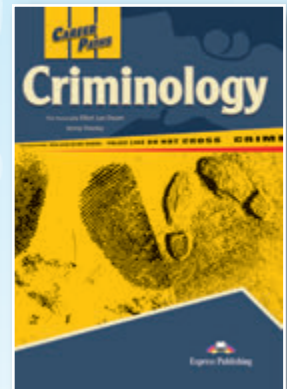
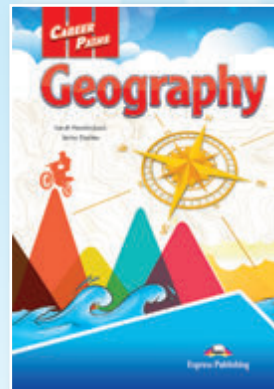
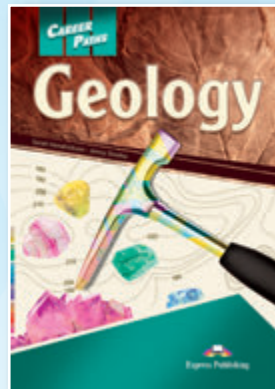
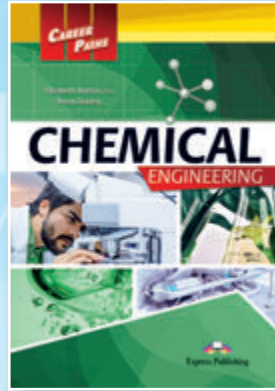
Student A: You are a client. Talk to Student B about:
 • a legal case that you are involved in
 • your role in the case
 • the likely outcome of your legal case

Student B: You are an attorney. Talk to Student A about his or her legal case.

Writing
 9 Use the blog post and the conversation from Task 8 to write an advice column for someone who believes that his or her real estate agent behaved irresponsibly. Include: a description of the situation, the columnist's legal opinion, and the columnist's recommendations.

5

In progress



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**CAREER
PATHS**

Business English

John Taylor
Jeff Zeter



Express Publishing

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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**

Tourism

Virginia Evans
Jenny Dooley
Veronica Garza



Express Publishing

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cabin

cruise director

cruise ship

Welcome to Poseidon Cruises!

BIG BOAT
BIG FUN

porter

upper deck

tender

Get ready!

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

- Why do people take cruises?
- 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.

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

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.

Vocabulary

- 3 Read the sentence pairs. Choose where the words best fit in the blanks.
- relaxation / adventure
Mick does not want a lot of activity. He wants _____ during his holiday.
Rita climbs a mountain because she enjoys the _____.
 - embarkation / shore excursion
Penny visits a new city. She is on a(n) _____.
Oscar shows his ticket at _____.
 - 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 _____. _____ 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

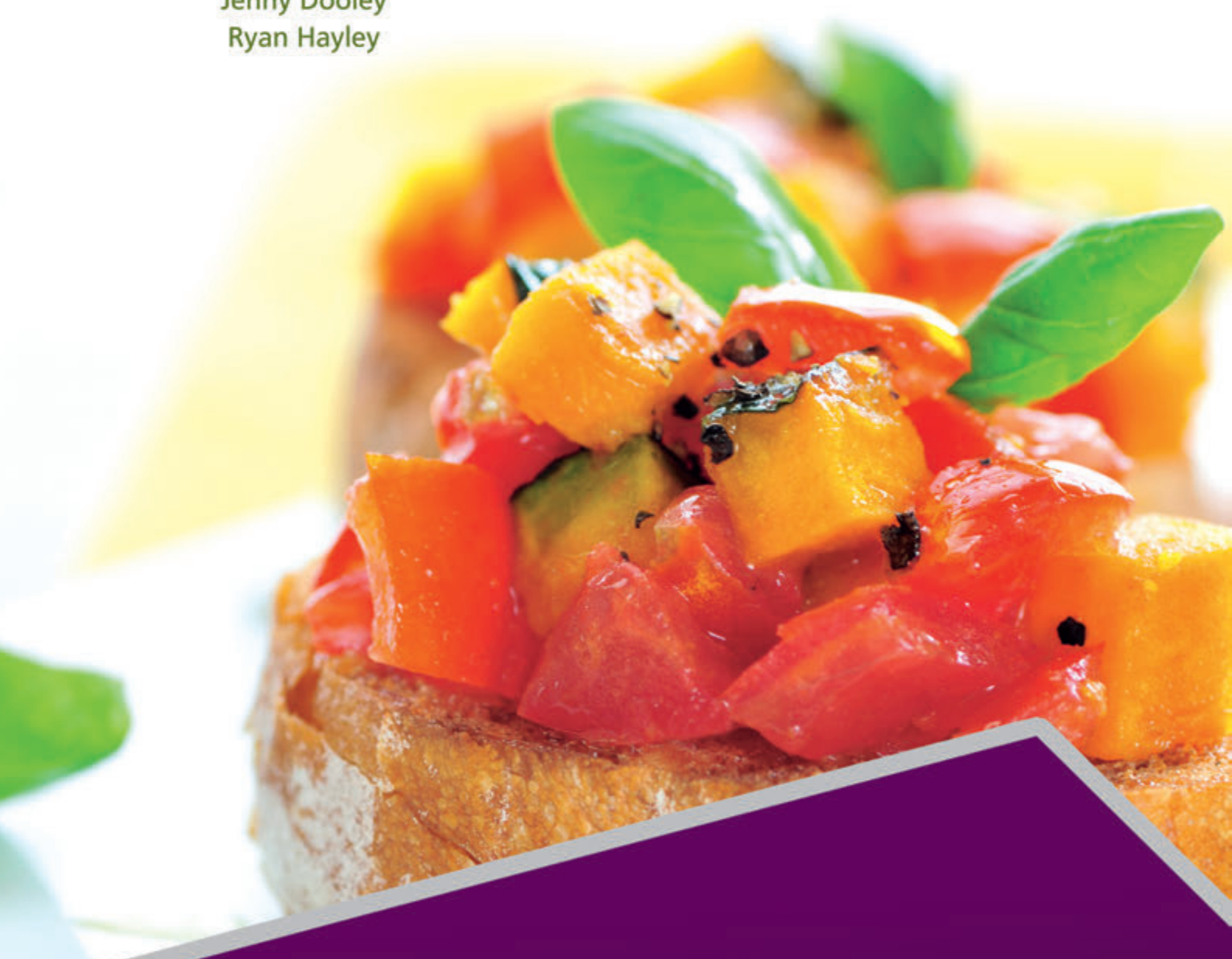
8 Use the conversation in Task 7 to fill out the schedule for the cruise ship.

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

**CAREER
PATHS**

Cooking

Virginia Evans
Jenny Dooley
Ryan Hayley



Express Publishing

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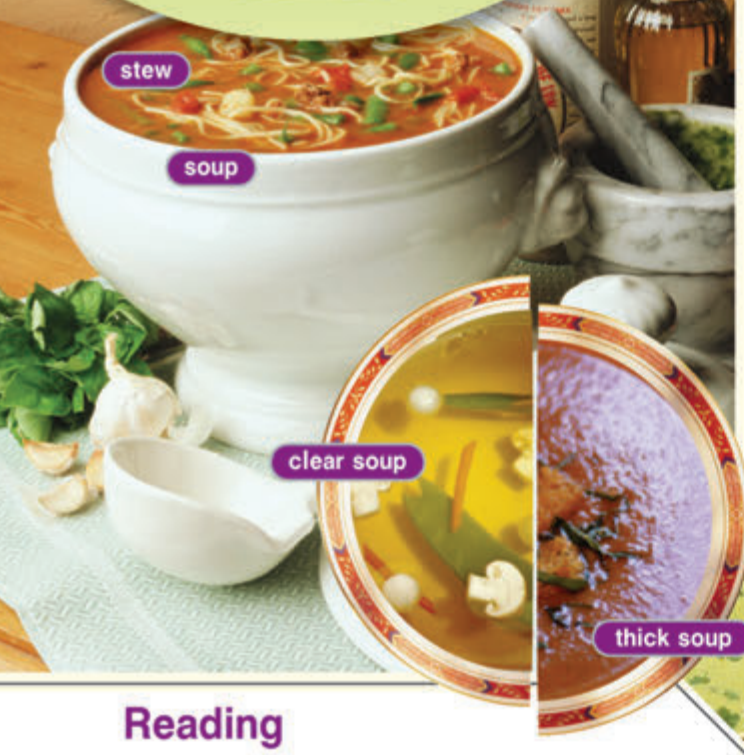
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Get ready!

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

- 1 What kinds of soups are made with vegetables?
- 2 What kinds of soups are made with meat and seafood?



Reading

2 Read the newspaper article about a soup restaurant. Then, choose the correct answers.

- 1 What is the main idea of the article?
 - A best soups for different occasions
 - B ingredients in a particular kind of soup
 - C ways to maintain freshness of soups
 - D recommendations about various soups
- 2 Which soup did the reviewer dislike?
 - A tomato puree
 - B clam chowder
 - C lobster bisque
 - D beef consommé
- 3 Which is NOT offered by the restaurant?
 - A home-made broth
 - B fresh, local ingredients
 - C thick, rich clear soups
 - D chicken-potato stew

The "Mailman" Newspaper



The Style Diner

with Food Critic Allison Dale

Westside Café on Bayside Drive advertises their chef as "The King of Soups." I visited the restaurant last weekend to find out what they mean. The soups weren't all perfect, but most of them were pretty close.

I was pleased to find that every soup at Westside Café includes home-made **broth** and fresh, local ingredients. The chef told me that he's always willing to pay extra for high-quality ingredients.

Their **thick soups** were excellent. The broccoli **cream soup** was so rich that it almost seemed like a dessert. The tomato **puree** was much simpler, but still delightful. I don't usually enjoy shellfish, but the clam **chowder** and lobster **bisque** were both nicely

seasoned. If you're visiting Westside Café for the first time, I recommend starting with the hearty chicken-potato **stew**. I only tried a few bites, but it was clearly the most filling meal on the menu.

The **clear soups** were not nearly as charming. I tried a beef **consommé** that seemed more like canned **bouillon**. The chef explained that this was due to the process of **clarification**, but I found it watery and uninteresting. It was the only soup I would not recommend.

Vocabulary

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

- 1 The thick soup with pieces of meat and vegetables is very filling. s _ _ _
- 2 The restaurant specializes in foods made by heating ingredients in liquid. _ o _ _ s
- 3 The last step in making a consommé is the process for removing solids and impurities. _ l a _ _ i c _ _ _ _ n
- 4 The chef created a new recipe for a soup with the solids strained out. c _ _ _ r _ o _ _
- 5 The restaurant makes its liquid bases for soups in-house. _ _ _ t h s
- 6 The customer prefers soups made with a mixture of solids. _ h _ _ k s _ _ _ s

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

Word BANK

chowder bouillon puree
cream soup consommé bisque

Thick soups with vegetables	Thick soups with shellfish	Clear soups
_____	_____	_____
_____	_____	_____

- 5 Listen and read the newspaper article about a soup restaurant again. What did the reviewer like about both the chowder and the bisque?

Listening

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

- ___ The beef consommé was not prepared correctly.
- ___ The woman would prefer a soup made with shellfish.
- ___ The man recommends cream soup.

- 7 Listen again and complete the conversation.

Server: Would you prefer the chicken-potato stew instead? It's 1 _____ than this one.

Customer: No, that sounds too heavy. I'd rather have something a little lighter, but still 2 _____.

Server: If that's what you're looking for, I'd recommend the 3 _____.

Customer: No, I 4 _____. Do you have something with vegetables?

Server: Let's see. Oh, of course. We have 5 _____ broccoli cream soup.

Customer: That 6 _____. Bring me that instead.

Speaking

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

USE LANGUAGE SUCH AS:

How do you like ...?
It's too ... for my taste.
I'd recommend ...

Student A: You are a restaurant server. Talk to Student B about:

- a problem with soup
- why he or she doesn't like the soup
- your recommendations

Student B: You are a customer. Talk to Student A about a problem with your soup.

Writing

- 9 Use the newspaper article about a soup restaurant and the conversation from Task 8 to write a customer satisfaction report. Include: a product that a customer ordered, why the customer was not satisfied, and actions taken to resolve the problem.



CAREER
PATHS

Journalism

Charles Moore - Jenny Dooley



Express Publishing

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1 Magazines

Get ready!

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

- 1 What are some popular types of magazines in your country?
- 2 What is the difference between a consumer magazine and a trade publication?



Inspiring
SCIENCE
Working on Robots that think

academic journal

literary magazine

Reading

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

- 1 The column suggests calling editors to find out if they are accepting work.
- 2 The column recommends submitting work to as many publications as possible.
- 3 According to the column, writers should subscribe to magazines.

Vocabulary

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

- 1 demographic
- 2 query
- 3 niche
- 4 variety
- 5 target audience
- 6 solicitation
- 7 subscription

- A a specialized area of a business
- B the group of people to which a publication advertises
- C a particular group in a population defined by a common factor
- D the state of having many different types or forms
- E a formal request for something
- F a question addressed to an official organization
- G a payment made in order to regularly receive a periodical

How to Get Published in **Magazines**

by *Cindy Lander*

So you wrote a great magazine article.
Now what?

First, determine your **target audience**. Who is interested in what you wrote? That is your **demographic**.

Next, determine the best type of magazine for your work. Your **niche** might be a **literary magazine** or a **consumer magazine**. There is a large **variety** of magazines to choose from. Perhaps your work is appropriate for a **trade publication** or **academic journal**. It just depends on the kind of writing you do. For example, don't submit a short story to a trade publication – it won't be printed. Instead, send it to a literary magazine.

Then, find out if the magazine has a **solicitation** for new work. Don't submit your work to magazines that are not accepting submissions. It's a waste of time. If you're not sure, send a **query** to the editor. Also, get a **subscription** to a few magazines. You need to be familiar with the writing style.

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

1 literary magazine / trade publication

A A _____ contains advertising content directed at a specific industry.

B Poetry is often published in a _____.

2 consumer magazine / academic journal

A A(n) _____ can publish information on just about any topic of general interest.

B The assignment was to read a(n) _____ and discuss it in a research paper.

5 Listen and read the advice column again. How can you find out if magazines are accepting articles?

Listening

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

1 What kind of magazine does the man want to write for?

A consumer magazine C literary magazine

B academic journal D sports magazine

2 What will the woman spend more time doing now?

A editing other writers' work C sitting at her desk

B being in nature D meeting interesting people

7 Listen again and complete the conversation.

Journalist 1: Hi Mia. I heard you just 1 _____ in *Birdwatchers Magazine*.

Journalist 2: That's right. I'm very happy.

Journalist 1: Congratulations! I'm thinking about changing 2 _____ for my own work.

Journalist 2: Really? Why's that?

Journalist 1: Well, I purchased a 3 _____ to a literary magazine and I really like it. In fact, I'm thinking about writing some short stories.

Journalist 2: That's a big change from the 4 _____ you write for.

Journalist 1: Yeah, it is. But I want to try something new.

Journalist 2: That's a good idea. That's why I wanted to try the birdwatching magazine. I think it'll be 5 _____.

Journalist 1: I'm sure it will. I guess that means you get to 6 _____ in nature?

Speaking

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

USE LANGUAGE SUCH AS:

I'm very happy.

Congratulations!

That's a good idea.

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

- the magazine you write for
- the magazine he or she writes for
- a new magazine that you hope to write for

Student B: You are a journalist. Talk to Student A about the magazine you write for.

Writing

9 Use the conversation from Task 8 to complete the publication query.

Publication Query

Magazine Name: _____

Date: _____

To Whom It May Concern:

I am writing to inquire about publishing my work in your magazine.

My experience: _____

My goals within this niche: _____

Please review my work and consider it for publication.

Sincerely,
R.E.

**CAREER
PATHS**



Medical

Virginia Evans
Jenny Dooley
Trang M. Tran, M.D.



Express Publishing

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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.

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

Reading

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

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

Vocabulary

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

- | | |
|---|---------------------------------------|
| 1 <input type="checkbox"/> lab technician | 4 <input type="checkbox"/> nurse |
| 2 <input type="checkbox"/> anesthesiologist | 5 <input type="checkbox"/> pharmacist |
| 3 <input type="checkbox"/> 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
STAFF DIRECTORY 
Patient
Consultation Form

Patient: _____

Doctor Consulted: _____

Issue: _____

Solution: _____

**CAREER
PATHS**

Plant PRODUCTION

Clare Reynolds - Jenny Dooley



Express Publishing

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10 Breeding

Get ready!

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

- Why might gardeners breed plants instead of letting them reproduce naturally?
- What are some qualities that gardeners might breed for?



The Biology of Plants

Introduction to Breeding

Scientists **breed** plants to produce certain **desirable** qualities. For example, suppose scientists want to produce flowers with a particular **scent**. They find related plants that already have this **trait**, and use them to **pollinate** each other. Consequently, the plants **yield progeny** that are likely to have that scent. This practice is called **interbreeding**. Then, another round of breeding, called **backcrossing**, strengthens the new genetic makeup. It involves breeding the progeny with one of its parents.

The above example illustrates **artificial selection**. It is an approach that has been used by gardeners for centuries. More recently, however, scientists have discovered ways to **manipulate** a plant's DNA. We call this process **genetic engineering**. For example, scientists might modify a plant's genes so that it has **resistance** to mold. Other times, scientists want plants with **two** desirable traits. Maybe they want vegetables with a particular **taste and appearance**. This is more effective with today's genetic engineering than with traditional artificial selection.

Vocabulary

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

- Certain insects naturally transfer pollen between flowers.
_ _ | | _ _ _ e
- Even an amateur gardener can control the reproduction of plants with artificial selection.
b _ _ _ _
- The plants' offspring exhibited a particular trait.
p _ _ _ _ y
- Breeding plants with red flowers will produce offspring that also have red flowers.
_ _ _ _ d
- Genetic engineers control the plants' DNA.
_ a _ _ p _ _ _ _
- Breeders often breed plants that share a particular quality.
_ r _ _ _
- Resistance to mold is a useful quality for plants to have.
_ _ s _ r _ b _ _

Reading

2 Read the textbook chapter. Then, complete the table.

Step	Benefit
Breeding plants with a desirable trait	1 _____ _____
Backcrossing	2 _____ _____
3 _____ _____	Works better than older methods of controlling genetics

- 4 Place the correct words and phrases under the correct headings: *appearance, backcrossing, interbreeding, scent, taste, artificial selection, genetic engineering, resistance.*

Breeding Methods	Traits
_____	_____
_____	_____
_____	_____
_____	_____

- 5 Listen and read the textbook chapter again. What is the relationship between artificial selection and genetic engineering?

Listening

- 6 Listen to a conversation between a job interviewer and a candidate. Choose the correct answers.

- What did the woman breed for during her previous project?
 - A a lower likelihood of wilt
 - B an improved appearance
 - C a resistance to mold
 - D a higher yield
- What is the problem with the man's high-yielding plants?
 - A They have an unpleasant taste.
 - B They have low resistance to mold.
 - C They cannot be bred with other plants.
 - D They take a long time to grow.

- 7 Listen again and complete the conversation.

Interviewer: Oh, interesting. What was the 1 _____ of the project?

Candidate: We wanted to create a tomato with both improved 2 _____ and wilt-resistance. We made a lot of progress.

Interviewer: That's excellent. Your work experience is very 3 _____ to our open position.

Candidate: That's great to hear. So, what exactly are you working on right now?

Interviewer: Well, we've developed bean plants that are resistant to mold. But our current cultivars have a really 4 _____ .

Candidate: Ah, I see. Now, you want to 5 _____ them with high-yielding plants.

Interviewer: Exactly. But so far, the high-yielding 6 _____ still have problems with mold.

Speaking

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

USE LANGUAGE SUCH AS:

Could you tell me more about ...?

What was the goal ...?

So you want to ...?

Student A: You are a job interviewer. Talk to Student B about:

- plant breeding projects that he or she has worked on
- goal of past projects
- a project that you are currently working on

Student B: You are a job candidate. Talk to Student A about your experience in plant

Writing

- 9 Use the textbook chapter to complete the project

Project Summary

Hort-Labs Plant Breeders

Purpose of the Project: _____

Overview of Project Procedures: _____

Project Outcome: _____

**CAREER
PATHS**

Beauty Salon

Jenny Dooley
Virginia Evans



Express Publishing

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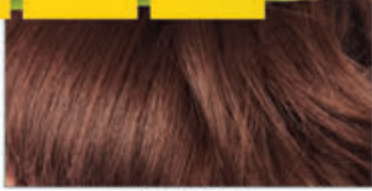
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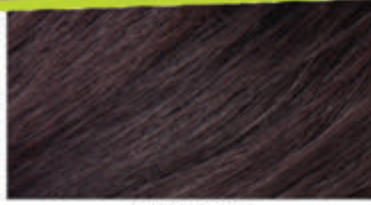
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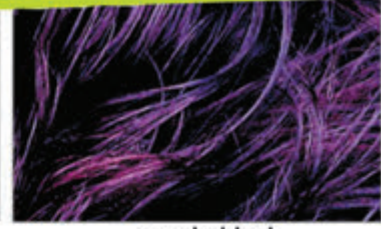
chestnut



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

Hairdresser Today - April Edition

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**

Denise Paulsen, PE
Jenny Dooley

ELECTRICAL ENGINEERING



Express Publishing

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Get ready!

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

- 1 What are some fields that make use of microelectronic technology?
- 2 Why microelectronics is popular in many fields?

Gregori Azarov

nanotechnology

Gregori Azarov is a design engineer with Overholt Microelectronics Systems who specializes in **nanotechnology**. Mr. Azarov has recently developed a version of an ultrasonic **transducer**. It is able to generate and detect ultrasound waves. The transducer is so small it can be inserted in individual cells. The transducer is one nanometer in length, which is **equivalent** to three atoms.

Mr. Azarov is currently working on building nano-scale **integrated circuits** and **semiconductors**. He is also an adjunct professor at Southwest State University. He teaches courses in nanoelectronics and nanolithography. Mr. Azarov will discuss the future of nanotechnology in engineering.

Reading

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

- 1 Ms. Mehra is an adjunct professor at Southwest State University.
- 2 Microsensors and microactuators are created using microlithography.
- 3 Mr. Azarov works on a research and development team.

Vocabulary

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

- 1 **microsensor / nanotechnology**
 - A The thermometer uses a _____ to get a temperature reading.
 - B _____ is actually used in some sunscreen lotions.
- 2 **microfabrication / semiconductor**
 - A The _____ of the microactuator took longer than expected.
 - B _____ are found in many modern electronic devices.
- 3 **research and development / integrated circuits**
 - A The computer company uses the newest _____ in their laptops.
 - B The _____ department at the company has won several awards.

Conference Speaker
Biographies

Neha Mehra

microelectronics

Neha Mehra is a senior design engineer with Reddington-Howard Medical Innovations. She received her Bachelor of Science degree in Microelectronics Engineering from State University. She then, completed a Master of Science degree in Electrical Engineering from International College.

Ms. Mehra specializes in the **microfabrication** of **MEMS** for use in medical equipment. Using **microlithography**, she creates **microsensors** and **microactuators**. She is a valuable member of Reddington-Howard's **research and development** team. She will be lecturing on the topic of the use of MEMS in various applications.

microsensor

integrated circuit

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

- | | |
|-----------------------|--------------------|
| 1 __ microlithography | 4 __ microactuator |
| 2 __ microelectronics | 5 __ equivalent |
| 3 __ MEMS | 6 __ transducer |

- A** a system that uses microfabricated mechanical and electronic elements
- B** the techniques used to produce microelectronics
- C** a device that converts one kind of energy into a different kind of energy
- D** something that is equal or has the same effect or meaning as something else
- E** a branch of electronics that specializes in the creation of very small circuits
- F** a very small device that supplies and transmits energy to operate something else

5 **Listen and read the speaker profiles again. What is the nano-scale transducer capable of doing?**

Listening

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

- 1 __ The woman found the MEMS lecture interesting.
- 2 __ The man is interested in working in research and development.
- 3 __ Both speakers will attend the nanotechnology lecture.

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

Engineer 2: The 1 _____ of the MEMS seems really challenging.

Engineer 1: Especially since the engineers are limited to working with 2 _____.

Engineer 2: That's true. What's next on the 3 _____?

Engineer 1: It looks like there's a lecture on 4 _____ in half an hour.

Engineer 2: Who's giving the lecture?

Engineer 1: Gregori Azarov.

Engineer 2: I read an article by him a few months ago. It was on building 5 _____ - _____.

Engineer 1: His biography says he also works on nano-scale semiconductors and 6 _____.

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

USE LANGUAGE SUCH AS:

How did you like ...?
I thought it was ...
Do you know ...?

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

- what he or she thought of the lecture
- what the next lecture is about
- whether or not he or she will attend the next lecture

Student B: You are another engineer. Talk to Student A about microelectronics.

Writing

9 **Use the speaker profiles and the conversation from Task 8 to create a comment card about the conference. Include which lectures you attended, what you thought of the lectures, and what you learned from the lectures.**



**CAREER
PATHS**



MEDICAL EQUIPMENT REPAIR

Virginia Evans - Jenny Dooley - John Lehnert



Express Publishing

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14 Preventing Infections

Get ready!

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

- 1 Why is cleanliness important in a hospital?
- 2 What is one way to prevent infections?



From: Sandra Green -Hospital Director
 To: All Staff
 Subject: Preventing Infections

ATTENTION HOSPITAL STAFF:

The flu season is approaching. It's important to maintain strict hygiene standards. **Contagious** new **viruses** and strains of **bacteria** cause problems in hospitals every year. I do not want that happening here.

Regularly wash your hands with **antimicrobial** soap. Clean surfaces with **disinfectant** according to the maintenance schedule. Dispose of **biohazards** carefully and correctly.

Should drug resistant flu strains appear, we must **quarantine** all infected persons. Do not enter quarantine areas without a **facemask**. We want to avoid **transmitting infections** any further. We want the patients on **antibiotics**, not the staff!

Thank you for your help,

Sandra Green
 Hospital Director



Reading

2 Read the email from a hospital director. Then, choose the correct answers.

- 1 What is the purpose of the email?
 - A to limit the use of antibiotic drugs
 - B to set new rules on using antimicrobial soap
 - C to remind the staff about hygiene standards
 - D to announce a new maintenance schedule
- 2 Which of the following is NOT recommended by the director?
 - A hand washing with antimicrobial soap
 - B taking antibiotics to avoid infection
 - C wearing a facemask around quarantined patients
 - D cleaning surfaces with disinfectant
- 3 What is required to enter quarantine areas?
 - A a facemask
 - B antimicrobial soap
 - C disinfectant
 - D antibiotic drugs

Vocabulary

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

- | | |
|-----------------|-----------------|
| 1 __ infection | 5 __ transmit |
| 2 __ facemask | 6 __ antibiotic |
| 3 __ quarantine | 7 __ contagious |
| 4 __ bacteria | |

- A to relay something from one person to another
- B single-celled organisms responsible for many human infections
- C a manifestation of parasitic microorganisms in the body
- D a covering worn over the mouth and nose
- E to isolate an individual to prevent transmission of microbes
- F something that kills bacteria in the body
- G moving easily from one person to another

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

1 antimicrobial / biohazard

A Dr. Wu washed his hands with a(n) _____ soap.

B The used syringes are a(n) _____.

2 virus / disinfectant

A Clean the counters with _____.

B The _____ can transmit to others easily.

5 Listen and read the email again. What can be worn to prevent transmission of infectious microbes?

Listening

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

1 ___ The woman forgot to wash her hands.

2 ___ The man repaired an IV pump near a contagious patient.

3 ___ The woman needs to use disinfectant on her tools.

7 Listen again and complete the conversation.

Supervisor: Kate, did you get my email?

BMET: I did. We're supposed to wash our hands more, right?

Supervisor: Yes, with 1 _____ soap. But there was more.

BMET: Is something wrong?

Supervisor: Unfortunately, yes. You just examined an IV pump in room 208, 2 _____?

BMET: Right. But I washed my hands after.

Supervisor: You didn't wear a 3 _____, though. And that patient has a 4 _____ infection.

BMET: I didn't realize. Is he supposed to be 5 _____?

Supervisor: No, but it's a nasty virus. Wash again and use 6 _____ on your tools.

Speaking

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

USE LANGUAGE SUCH AS:

Did you get ...?

You have ...

Wash again and ...

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

- an email on avoiding infections
- where he or she just worked on a device
- what he or she must do to avoid infection

Student B: You are a BMET. Talk to Student A about avoiding infection.

Writing

9 Use the conversation from Task 8 to complete the memo.



Anderson Hospital

ALL STAFF

This is a reminder. Several patients have _____ . If you work with or around them, please _____ .

Be careful. All staff should _____ many times a day. And clean all surfaces and equipment with _____ .



Glossary

- absorb** [V-T-U13] To **absorb** something is to take it in by chemical or physical action.
- access point** [N-COUNT-U12] An **access point** is a location on a patient's body from which the bloodstream can be entered.
- active electrode** [N-COUNT-U15] An **active electrode** is the source of electrical current in an electrosurgical procedure.
- airway pressure** [N-UNCOUNT-U11] **Airway pressure** is the instantaneous pressure in a ventilator system that is within a patient's airway.
- anesthesia** [N-UNCOUNT-U13] **Anesthesia** is a state of insensitivity to pain caused by the administration of gasses or drugs, or the induction of such a state.
- anesthetic agent** [N-COUNT-U13] An **anesthetic agent** is a gas or drug administered to produce insensitivity to pain.
- anesthetic machine** [N-COUNT-U13] An **anesthetic machine** is a device that provides anesthetic drugs to a patient, by converting a stored liquid substance into consumable gas.
- APGAR timer** [N-COUNT-U14] An **APGAR timer** is a timing device with audible timing indications, which assists in performing APGAR scoring on newborns.
- atrial fibrillation** [N-UNCOUNT-U7] **Atrial fibrillation** is what occurs when muscles of the atria contract in a nonsynchronized manner.
- automatic tourniquet** [N-COUNT-U9] An **automatic tourniquet** is a device placed on a body site to stop blood flow, typically using automated pumps and timing mechanisms.
- AV fistula** [N-COUNT-U12] An **AV fistula** is a surgical procedure that connects a vein to an artery, which increases the rate of blood flow and creates an access point for hemodialysis.
- backup battery power** [N-UNCOUNT-U13] **Backup battery power** is a supply of electrical energy that is available for use during a power failure.
- base unit** [N-COUNT-U1] A **base unit** is one of seven standard SI units that is the foundation of other SI units.
- bilirubin light** [N-COUNT-U14] A **bilirubin light** is a device that emits ultraviolet light, in order to break down excess bilirubin in an infant's body.
- bilirubin therapy** [N-UNCOUNT-U14] **Bilirubin therapy** is a procedure in which an infant is exposed to light in the 360 to 520 nM range, in order to break down excess bilirubin from its body.
- bioimaging** [N-UNCOUNT-U5] **Bioimaging** is the process of creating images of the inside of the body.
- bipolar operation** [N-COUNT-U15] A **bipolar operation** is an electrosurgical operation in which voltage is applied to a patient using two similarly sized electrodes.
- blanket** [N-COUNT-U14] A **blanket** is a piece of fibrous material used for covering, protection, or warmth.
- blend** [ADJ-U15] If an electrosurgery machine is on a **blend** setting, it is in between the settings intended to cut and to coagulate.
- blood warmer** [N-COUNT-U9] A **blood warmer** is a device that warms stored blood to body temperature.
- boost** [V-T-U7] To **boost** an electric charge is to increase it.
- camera** [N-COUNT-U3] A **camera** is a device that records visual images.
- canister** [N-COUNT-U13] A **canister** is a round or cylindrical container used for holding or storing things.
- capacitor** [N-COUNT-U7] A **capacitor** is a device that stores an electric charge using conductors and an insulator.
- catheter** [N-COUNT-U12] A **catheter** is a flexible tube that is inserted into the body to remove fluid, such as blood or urine.
- cauterize** [V-T-U15] To **cauterize** a wound or incision is to sear it with heat, in order to stop it from bleeding.
- channel** [N-COUNT-U3] A **channel** is a small gap or passage.
- charge storage** [N-UNCOUNT-U7] **Charge storage** is the act of maintaining an electrical charge for later use.
- CO₂ analyzer** [N-COUNT-U8] A **CO₂ (carbon dioxide) analyzer** is a device that measures carbon dioxide levels of breathing gas mixtures and air.
- coagulate** [V-I-U15] To **coagulate** is to change to a semisolid or solid state, especially fluids such as blood.
- compressed air** [N-UNCOUNT-U10] **Compressed air** is air that is forced to a higher pressure than the atmosphere.

compressor [N-COUNT-U10] A **compressor** is a pump or other device that increases the pressure of air.

confocal imaging [N-UNCOUNT-U6] **Confocal imaging** is a type of microscopy that uses a pinhole technique to create high-resolution images.

continuous [ADJ-U4] If something is **continuous**, it happens all the time and doesn't stop.

contrast [N-UNCOUNT-U5] **Contrast** is the relative brightness or darkness of parts of an image that are next to each other.

CPAP [N-UNCOUNT-U11] **CPAP (continuous positive airway pressure)** is the value of atmospheric pressure in the airway of a ventilator system, at which the system is always maintained.

crash cart [N-COUNT-U7] A **crash cart** is a mobile container carrying medical supplies for emergency resuscitation.

CT [N-UNCOUNT-U5] **CT (computed tomography)** is the process of creating three-dimensional images using X-rays.

cut [V-T-U15] To **cut** something is to open or divide it with a sharp-edged object.

cyclotron [N-COUNT-U6] A **cyclotron** is a type of particle accelerator used to produce the isotopes used in PET imaging.

defibrillator [N-COUNT-U7] A **defibrillator** is a device that applies an electric charge to the chest to control heart fibrillation.

densitometer [N-COUNT-U2] A **densitometer** is a device used to measure a material's density.

derived unit [N-COUNT-U1] A **derived unit** is an SI unit that is formed by a relationship between base units.

dialyzer [N-COUNT-U12] A **dialyzer** is an instrument that purifies blood, usually to compensate for a dysfunctional kidney.

digital [ADJ-U6] If an image is **digital**, it is produced by a computer and made up of individual pixels.

direct [ADJ-U4] If something is **direct**, it goes immediately to the place where it is needed.

discharge relay [N-COUNT-U7] A **discharge relay** is a device that sends an electrical charge from a charge storage capacitor to electrode paddles.

Doppler blood flow detector [N-COUNT-U8] A **Doppler blood flow detector** is a device that uses ultrasonic beams to measure the velocity of blood flow.

Doppler Effect [N-UNCOUNT-U5] The **Doppler Effect** is the observed change in wavelength or frequency due to the relative velocity of signal source and observer.

dry heat warmer [N-COUNT-U9] A **dry heat warmer** is a device that heats blood, by passing it through warm metal plates and a tube to a patient's blood stream.

electron microscopy [N-UNCOUNT-U6] **Electron microscopy** is a type of imaging that uses electrons to create pictures of very small objects.

electronic probe thermometer [N-COUNT-U2] An **electronic probe thermometer** is a device that measures temperature using an electronic sensor.

electrosurgery machine [N-COUNT-U15] An **electrosurgery machine** is a device that uses a high-frequency electric current to heat and cut tissue.

end inspiratory pressure [N-UNCOUNT-U11] **End inspiratory pressure** is the pressure in the airway of a ventilator system, which is at the end of the inspiratory phase.

endoscope [N-COUNT-U3] An **endoscope** is a device that is inserted into the body to view its interior.

endoscopy [N-UNCOUNT-U5] **Endoscopy** is the use of fiber optic cables to view the interior of the body.

endotracheal tube [N-COUNT-U2] An **endotracheal tube** is a hollow device that is inserted through the mouth or nose to allow breathing, or to suction bodily fluids.

expiratory pause [N-COUNT-U11] An **expiratory pause** is a period of 1 to 3 seconds at the end of a ventilator's expiratory phase, in which there is a constant pressure and no airflow.

face mask [N-COUNT-U10] A **face mask** is a piece of material that covers the nose and mouth, in order to deliver air from a respiratory ventilator.

feed [V-T-U5] To **feed** a tube into a patient's body is to slowly insert it through an opening, such as the nose or throat, or into a body cavity.

Glossary

- fetal heart detector** [N-COUNT-U2] A **fetal heart detector** is a device that detects a fetus's heartbeat.
- fetal monitor** [N-COUNT-U2] A **fetal monitor** is a device used during childbirth, which measures a fetus's heartbeat and its mother's uterine contractions.
- fiber optics** [N-UNCOUNT-U5] **Fiber optics** is the science and technology of sending light through special fibers.
- flexible** [ADJ-U3] If something is **flexible**, it can bend easily without breaking.
- fluid controller** [N-COUNT-U9] A **fluid controller** is a device that regulates the delivery of medical fluids, normally with a valve that opens and closes to allow droplets of fluid through a drip chamber.
- fluorophore** [N-COUNT-U6] A **fluorophore** is a molecule that emits light at one wavelength when it comes into contact with light of a particular, shorter wavelength.
- fMRI** [N-UNCOUNT-U6] **fMRI (functional magnetic resonance imaging)** is a process that measures activity in the brain by measuring changes in blood flow.
- footswitch** [N-COUNT-U15] A **footswitch** is a manual control or button, which is activated by applying pressure with the foot.
- forceps** [N-UNCOUNT-U15] **Forceps** are pincers used in surgical or laboratory procedures.
- gamma camera** [N-COUNT-U6] A **gamma camera** is a device that produces images by reading radioactive substances injected into the body.
- gas monitor** [N-COUNT-U13] A **gas monitor** is a device that measures the agents inspired and expired by a person, typically used with an anesthetic vaporizer.
- gas supply** [N-COUNT-U10] A **gas supply** is a supply of air used in a respiratory ventilator, usually filtered, compressed, and containing added oxygen.
- gasket-sealed** [ADJ-U14] If something is **gasket-sealed**, it is equipped with a piece of rubber or similar material that prevents it from leaking.
- gel** [N-COUNT-U5] A **gel** is a semi-liquid substance used to transmit sound waves more effectively during an ultrasound procedure.
- glucometer** [N-COUNT-U8] A **glucometer** is a device used to determine the approximate level of glucose in the blood.
- grounding electrode** [N-COUNT-U15] A **grounding electrode** is a conductor in an electrosurgical procedure by which electric current leaves a patient.
- hatch** [N-COUNT-U14] A **hatch** is a specifically sized opening, which allows passage from one area to another.
- heart-lung machine** [N-COUNT-U9] A **heart-lung machine** is a device that takes over the functions of a person's heart and lungs, normally used during heart surgery.
- heated** [ADJ-U13] If a humidifier is **heated**, it supplies moisture at a warm temperature.
- hemodialysis** [N-COUNT-U12] A **hemodialysis** is a medical procedure in which blood is removed from a patient via an access point, purified, and then returned to the patient.
- HFOV** [N-UNCOUNT-U11] **HFOV (high-frequency oscillation ventilation)** is a method of ventilation that delivers small volumes of air at a quick rate, which reduces problems associated with other ventilation methods.
- humidifier** [N-COUNT-U13] A **humidifier** is a device for keeping a room's atmosphere moist.
- hypothermia** [N-UNCOUNT-U13] **Hypothermia** is the condition of having an abnormally low body temperature, usually one that is dangerously low.
- I:E ratio** [N-COUNT-U11] An **I:E ratio** is a ratio of inspiratory duration to expiratory duration in a ventilation system.
- incubator** [N-COUNT-U14] An **incubator** is a contained area, which provides a controlled environment for the care of small or premature babies.
- infant** [N-COUNT-U14] An **infant** is a young child or baby, typically less than one year old.
- infant resuscitator** [N-COUNT-U14] An **infant resuscitator** is a device that provides intensive treatment to newborn babies, such as lighting, heating, and breathing assistance.
- inflate** [V-T-U9] To **inflate** something is to fill it with air or gas until it expands.
- infusion rate** [N-COUNT-U4] An **infusion rate** is a rate at which a drug is administered, or the rate at which it should be administered to be effective.