

**CAREER
PATHS**

Computing

Virginia Evans - Jenny Dooley Will Kennedy

Book

1



Express Publishing

Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Types of Computers	Magazine article	computer, desktop, laptop, notebook, personal computer, portable, power, server, tablet, workstation	Giving a strong response
2	Monitors	Article	aspect ratio, contrast, CRT, display, HD, LCD, monitor, resolution, response time, screen	Pointing out a difference
3	Keyboards	Blog post	Alt key, Caps Lock, Control key, diacritical mark, function key, keyboard, numeric keypad, QWERTY, Shift key, type	Giving instructions
4	Mice	Product listing	ball mouse, click, button, cordless mouse, laser mouse, LED mouse, mouse, scroll, scroll wheel, USB	Making a recommendation
5	Inside the Computer	Magazine article	case, CD drive, disk drive, fan, hard drive, heat sink, motherboard, port, power supply, processor	Describing a problem
6	Memory Storage Devices	Advertisement	burn, capacity, CD-R, flash drive, flash memory, GB, kB, MB, memory	Asking about size
7	Printers	E-mail	cartridge, dpi, ink, inkjet, laser printer, ppm, print, printer, toner, two-sided	Getting someone's attention
8	Scanners	Article	all-in-one, automatic document feeder, color depth, copy, flatbed, optical resolution, ppi, scan, scan area, scanner	Describing benefits
9	Cameras	Advertisement	compression, digital camera, digital zoom, JPEG, megapixel, optical zoom, pixel count, SD card, white balance	Giving a negative opinion
10	Smartphones	User manual	app, built-in feature, cell phone, GPS, MP3 player, service, smartphone, sync, touchscreen	Correcting a mistake
11	The User Interface	User guide	cursor, desktop, dropdown menu, folder, GUI, icon, organize, right-click, select, user	Asking about locations
12	E-mail 1	Article	address book, drafts folder, e-mail, e-mail address, e-mail client, inbox, junk mail, sent folder, trash folder, webmail	Asking about completed tasks
13	E-mail 2	E-mail	attach, Bcc, Cc, create, forward, recipient, reply, reply all, subject	Making an apology
14	E-mail 3	Article	attachment, bounce back, configure, domain name, exceed, maximum, POP3 server, SMTP server, spam, time out, typo	Identifying an error
15	Instant Messaging	E-mail	available, busy, chat, contact list, file transfer, IM, one-to-one, provider, real-time, screen name,	Asking for an opinion

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Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Word Processing: Uses	Guide	agenda, blank, business card, calendar, create, document, fax cover, memo, report, résumé, template, word processing	Talking about time
2	Word Processing: Actions	Manual	close, copy, cut, delete, edit, open, paste, redo, save, save as, select, undo	Changing your mind
3	Word Processing: Formatting	Memo	bold, bullet, center, column, font, format, indent, italic, margin, spacing, spell check, underline	Making a suggestion
4	Spreadsheets: Uses	E-mail	analyze, balance sheet, budget, data, database, equation, function, sales invoice, spreadsheet, timecard, track, workbook	Asking about a source
5	Spreadsheets: Actions	Webpage	calculate, chart, clear contents, clear formats, equal sign, filter, formula, formula bar, insert, sort, table, value	Clarifying instructions
6	Spreadsheets: Formatting	Troubleshooting guide	border, cell, column, lock, merge, printing area, row, set, shading, shrink to fit, split, wrap	Describing familiarity
7	Desktop Publishing 1	Advertisement	clip art, comprehensive layout, design, desktop publishing(DTP), online, on-screen, page layout, print, publish, WYSIWYG	Discussing purpose
8	Desktop Publishing 2	Note	A4, convert, find/change, item style, kerning, leading, letter, master page, paper size, PDF, typography	Describing degree
9	Image and Design 1	Advice column	blurry, design, file format, layer, lossless compression, lossy compression, photo, pixel, raster graphic, sharpening, scaling, thumbnail, vector graphic	Describing expectations
10	Image and Design 2	Instructions	blur, clone, crop, recompose, red eye, resize, retouch, sharpness, stamp, straighten, trim	Stating a negative opinion
11	Web Design and Web Development	Course descriptions	appearance, coding, content, CSS, functionality, navigation, usability, visibility, web design, web development	Describing differences
12	Web Browsing: Parts	User's guide	add-on, address bar, browser, bookmark, cookie, history, home page, search bar, tab, URL, webpage, website	Providing options
13	Web Browsing: Actions	Webpage	bookmark, disable, download, enable, enter, hang, link, load, log in, log out, refresh	Asking for help
14	Video Conferencing	Advertisement	audio input, bandwidth, codec, echo cancellation, face-to-face, multipoint, output device, video bridge, video conference, video conference system, visual input	Identifying a problem
15	Social Media	E-mail	advertise, blog, forum, friend, group, handle, link, profile, social media, social networking, trend	Making a prediction

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Express Publishing

Scope and Sequence

Unit	Topic	Reading context	Vocabulary	Function
1	Operating Systems	Letter	Apple®, color matching, customize, hardware, Linux®, Mac®, Microsoft®, OS X®, prepress, processing speed, software compatibility, upgrade, vulnerable, Windows®	Explaining an opinion
2	Media	Magazine article	Blu-ray, download, DVD, HD, media player, MP3, MPEG, multimedia, pause, play, stop, stream, upload	Asking about frequency
3	Networking: Devices and Equipment	Product listing	access point, antenna, cable, CAT-5, hub, modem, networking, router, switch, wireless network adapter	Asking for a favor
4	Networking: Types of Networks	Website	broadband, cable Internet, dial-up, DNS, DSL, Ethernet, hotspot, ISP, LAN, VPN, Wi-Fi, WLAN	Making a recommendation
5	Networks: Troubleshooting	Website	cache, clear, cycle, detect, disconnect, IP address, log in, password, plug in, renew, signal, TCP/IP	Providing reassurance
6	Viruses	Magazine article	host, embed, infect, overwriting virus, piggyback, replicate, resident extension, resident virus, Trojan horse, virus, worm	Describing concerns
7	Internet Crime	E-mail	backdoor, credit card, fraud, hack, hacker, identity theft, keylogger, malware, pharming, phishing, pretexting, security, spyware	Stressing a point
8	Anti-virus Software	Product description	anti-virus software, backup, block, detect, false negative, false positive, pop up, quarantine, removal, rootkit, update, web page analysis	Urging fast action
9	Firewalls	FAQs	access, default, deny, exception, firewall, incoming, packet, permission, permit, setting, traffic, unauthorized	Expressing confusion
10	Online Banking	Website	account activity, account number, bill pay, direct deposit, electronic funds transfer, electronic statement, monitor, online banking, payroll, PIN, site key, SSL connection	Clarifying a point
11	Telecommuting and Remote Access	E-mail	Basecamp®, centralize, conference call, Dropbox®, file sharing, message board, remote access, Skype®, telecommute, web-based	Expressing surprise
12	Careers in Computing	Magazine article	accounting, administrative assistant, blogger, computer literacy, computer science, data entry, IT, management, programmer, sales, software engineer, system administrator, tech support, web developer	Asking for more information
13	Cloud Computing: Types of Clouds	Magazine article	back end, cloud computing, community cloud, elasticity, front end, hybrid cloud, metered fee, private cloud, public cloud, scalability	Giving an example
14	Cloud Computing: SaaS	Website	application, deployment, distribution, hosted application management, install, pay as you go, Software as a Service(SaaS), software as a product, software license, software on demand, software suite	Expressing reservations
15	Cloud Computing: IaaS and PaaS	Advertisement	bandwidth, computing platform, hardware, Infrastructure as a Service(IaaS), infrastructure, outsource, Platform as a Service(PaaS), solution stack, storage, switch, utility computing	Making an admission

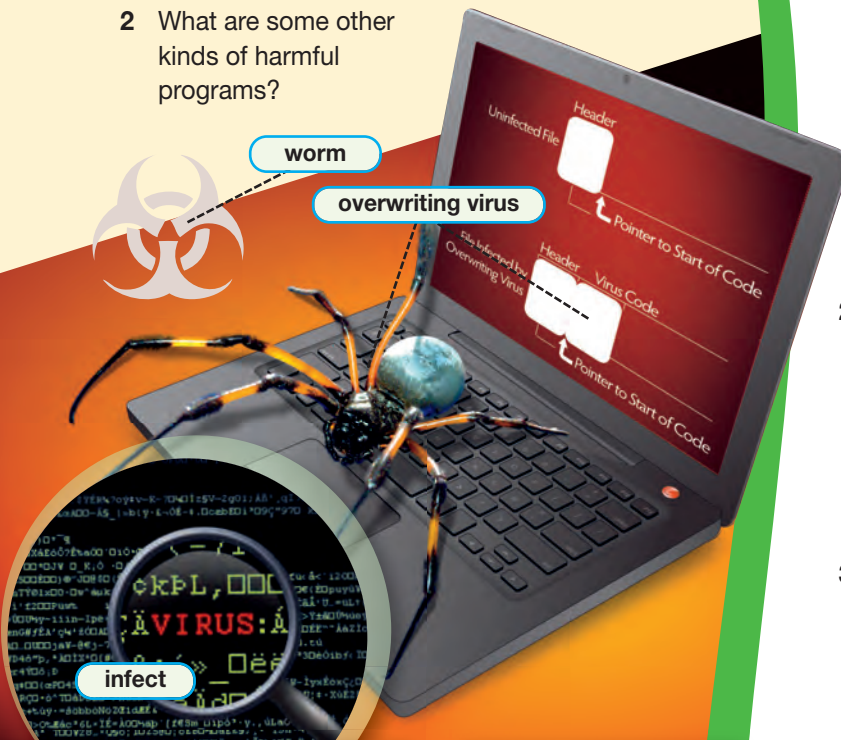
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Get ready!

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

- 1 What are some common types of viruses?
- 2 What are some other kinds of harmful programs?



Viruses 101

by Jorie McFadden

The fear that a **virus** may **infect** your computer is a familiar one for many. Even casual computer users know that unfamiliar files may **host** viruses.

While viruses are a well-known threat, many computer users do not know their enemy. There are many specific types of viruses that one needs to guard against.

One dangerous type of virus is an **overwriting virus**. These viruses not only spread malicious code, they also replace the information contained in other programs. They erase important information, sometimes rendering a computer entirely unusable.

Another common virus is a **resident virus**. They stay dormant until a particular event activates them. If your computer harbors resident viruses, you may not discover them until the damage is done. These and other viruses often install themselves in the **resident extensions** of other programs.

A Trojan horse is another destructive type of program. It's not technically a virus, because it doesn't **replicate**, but it's still dangerous. A **Trojan horse** looks like an ordinary, useful file or program. However, it has destructive programming **embedded** in it. This programming may also **piggyback** onto beneficial files.

Lastly, unlike viruses and Trojan horses, a **worm** does not need to attach itself to another program. It is particularly troublesome because it attacks computers directly.

Reading

2 Read the magazine article. Then, choose the correct answers.

- 1 What is the main purpose of the article?
 - A to describe the types of viruses and other harmful programs
 - B to explain how to avoid viruses
 - C to stress the importance of having anti-virus software
 - D to alert readers to the existence of a new virus type
- 2 Which of the following is NOT a threat to computers?
 - A a resident virus
 - B an overwriting virus
 - C a worm
 - D a resident extension
- 3 How is a Trojan horse different from a virus?
 - A It attaches to another program.
 - B It is harmful to your computer.
 - C It does not replicate itself.
 - D It spreads within a network.

Vocabulary


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

- | | |
|---------------------|-------------------------|
| 1 __ virus | 5 __ piggyback |
| 2 __ host | 6 __ resident extension |
| 3 __ embed | 7 __ overwriting virus |
| 4 __ resident virus | |

- A a harmful program that infects a computer
- B a virus that erases information by replacing it
- C to plant a harmful program within an ordinary program
- D a computer or program that carries a virus
- E a virus that is dormant until activated
- F the parts that are active even when a program is shut down
- G to attach to another program for transferring

4 Read the sentences and choose the correct words or phrases.


- 1 The **Trojan horse/worm** appeared to be a harmless video editing program.
- 2 The virus could **replicate/infect** itself and spread its copies to other computers.

5  Listen and read the magazine article again. Why might it be important to understand the types of programs that can threaten your computer?

Listening

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

- 1 ___ A virus has spread to several computers.
- 2 ___ The man has already checked the resident extensions.
- 3 ___ The woman suggests shutting down all of the computers.

7  Listen again and complete the conversation.

Employee 1: Gary reported that his desktop
1 _____. It won't even boot up.

Employee 2: 2 _____ looked at it?

Employee 1: Yeah, I checked it out earlier today.
3 _____ it's probably a virus.

Employee 2: 4 _____ it's not an overwriting virus, or we'll have trouble recovering his files.

Employee 1: He said he recently downloaded a new word processing program. 5 _____
_____ a Trojan horse.

Employee 2: Well, at least it would be 6 _____
_____ his computer.

Speaking

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

USE LANGUAGE SUCH AS:

I hope ...

Maybe it was ...

At least ...

Student A: You are an IT employee. Talk to Student B about:

- a co-worker's computer problems
- what might have caused the problem
- how to solve the problem

Student B: You are an IT employee. Talk to Student A about how to solve the problem.

Writing

9 Use the magazine article and the conversation from Task 8 to write an e-mail to an employee with a computer problem. Include: possible sources of the problem, virus types, and safety precautions.



Get ready!

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

- 1 What can make photos and other images appear blurry in a DTP layout?
- 2 What is the difference between raster graphic images and vector graphic images?

Tech Advice

Q

Whenever I import a **photo** into a **layer** of my CreativeDesign layout, the picture shows up **blurry**. What can I do to get clear photos into my page **designs**?

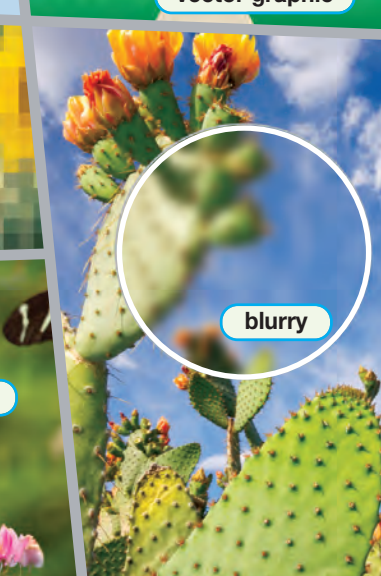
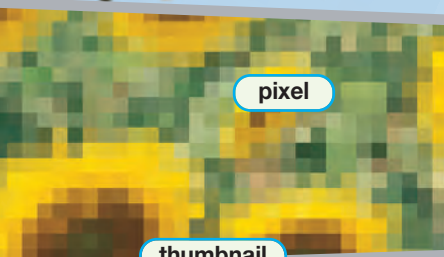
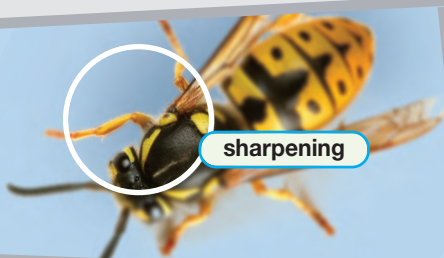
A

Look at how you're saving your photos. If you're saving your photos using **lossy compression**, your photos may blur. Save your photos using **lossless compression**. This will preserve the quality of your photos so that every **pixel** is visible. Make sure to save your photos in a **file format** that is compatible with CreativeDesign.

Remember to keep **scaling** in mind. If a photo is resized too drastically, it will become blurry. **Thumbnail**-sized photos should not be dramatically increased in size.

Make sure you're using the right type of image. Sometimes, a **vector graphic** will look better than a **raster graphic**, and vice versa.

Finally, don't forget the **sharpening** tool!



Reading

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

- 1 What is the purpose of the passage?
 - A to explain how to improve image quality
 - B to compare and contrast image types
 - C to discuss types of design layouts
 - D to recommend editing software
- 2 Which of these is NOT mentioned as a way to decrease image blurriness?
 - A Use compatible file formats.
 - B Increase the size of thumbnails.
 - C Save images using lossless compression.
 - D Check if raster or vector graphics work better.
- 3 Why should lossless compression be used when saving photos?
 - A to save disk space
 - B to convert to vector graphics
 - C to decrease the size of photos
 - D to preserve the quality of photos

Vocabulary

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

- | | |
|---------------------------|---------------------|
| 1 __ raster graphic | 4 __ vector graphic |
| 2 __ lossless compression | 5 __ file format |
| 3 __ lossy compression | 6 __ layer |

- A data compression which guarantees that all original data can be restored exactly
- B a type of data compression that loses some data
- C a particular way of coding information for storage in a computer file
- D an image made up of a configuration of pixels
- E a separate canvas that is laid over other canvases to create an image
- F an image containing lines, curves or shapes determined by mathematical equations

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

1 sharpening / scaling

- A _____ corrects an image that is blurry.
 B _____ calculates the necessary dimensions of an image in a document.

2 pixel / thumbnail

- A Each _____ in a picture can be only one of thousands or millions of colors.
 B A _____ provides a small preview of an image.

3 design / photo

- A Text, images, and graphics can be arranged into a _____.
 B A representation of a person or scene recorded by a camera is a _____.

5 Listen and read the advice column again. How can blurry photos be prevented?

Listening

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

- 1 ___ The man is working with a vector graphic.
- 2 ___ The woman doubts a sharpening tool can fix the problem.
- 3 ___ The man wants to create a thumbnail for a website.

7 Listen again and complete the conversation.

Employee 1: I'm trying to put this photo into the report. But it keeps **1** _____.

Employee 2: Hmm. Do you know what type of graphic it is?

Employee 1: I'm not sure.

Employee 2: Well, I can see the **2** _____, so it must be a **3** _____.

Employee 1: I see. I don't **4** _____ about this – is that the wrong kind?

Employee 2: No – you can use those or **5** _____.

Employee 1: Oh, good. So can you **6** _____?

Speaking

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

USE LANGUAGE SUCH AS:

What type ...?
It's probably a ...
Can you fix it?

Student A: You are an employee working with an image. Talk to Student B about:

- a problem with the image
- what kind of image it is
- how to fix it

Student B: You are an employee. Talk to Student A about a problem with an image.

Writing

9 Use the conversation from Task 8 to write instructions on working with a blurry image.

Struggling with a blurry image?

Try these tips:



- 1) Check the compression type. _____ leads to a loss of data, _____ does not.
- 2) Use photo-editing tools. _____
- 3) Be careful when scaling images. _____

Glossary

address book [N-COUNT-U12] An **address book** is an organized list of e-mail contacts.

all-in-one [ADJ-U8] An **all-in-one** machine is a single machine that combines printing, scanning, copying and faxing.

Alt key [N-COUNT-U3] The **Alt key** is a key that gives another key an alternative function when both keys are pressed at the same time.

app [N-COUNT-U10] An **app**, short for 'application', is a program designed for a specific use that can be purchased and downloaded wirelessly to a smartphone.

aspect ratio [N-COUNT-U2] The **aspect ratio** of a computer display is the ratio of its long side to its short side.

attach [V-T-U13] To **attach** is to include a downloadable document with an e-mail.

attachment [N-COUNT-U14] An **attachment** is a file added to an e-mail and sent along with it.

automatic document feeder [N-COUNT-U8] An **automatic document feeder** is a mechanized device that sends paper from a stack through a scanner or printer.

available [ADJ-U15] If you are **available**, you are online and capable of chatting on IM.

ball mouse [N-COUNT-U4] A **ball mouse**, also called a mechanical mouse, uses a rubber ball to track hand movements.

Bcc (blind carbon copy) [N-COUNT-U13] A **Bcc (blind carbon copy)** is a copy of an e-mail sent to someone in which the identities of other recipients is hidden.

bounce back [V-T-U14] To **bounce back** is to return an e-mail to the sender without it being delivered.

built-in [ADJ-U10] A **built-in** feature of a product is a feature the product already has at the time of purchase.

burn [V-T-U6] To **burn** a disk is to write data from a computer onto a disk.

busy [ADJ-U15] If you are **busy**, you are away from your computer or otherwise unavailable to chat.

button [N-COUNT-U4] A **button** is the part of a mouse that is pushed to select items on the computer screen.

capacity [N-UNCOUNT-U6] **Capacity** is the amount of storage space on a disk.

Caps Lock [N-COUNT-U3] The **Caps Lock** is a key on the keyboard that is used for typing all capital letters when it is pressed.

cartridge [N-COUNT-U7] A **cartridge** is a device that holds ink or toner in a printer and can be replaced.

case [N-COUNT-U5] A **case** is the outer protective enclosure that contains computer parts.

Cc (carbon copy) [N-COUNT-U13] A **Cc (carbon copy)** is a duplicate of an e-mail that has been sent to another person.

CD drive [N-COUNT-U5] A **CD drive** is a device that reads and writes data to compact disks.

CD-R [N-COUNT-U6] A **CD-R** is a disk that can be used to store data.

cell phone [N-COUNT-U10] A **cell phone**, also known as a mobile phone, is a wireless device that can make and receive phone calls.

chat [V-T-U15] To **chat** is to communicate with instant messages.

click [V-T-U4] To **click** an item on the screen is to place the cursor on it and press the mouse button.

color depth [N-COUNT-U8] **Color depth** is the number of different colors that a scanner can represent.

compression [N-UNCOUNT-U9] **Compression** is the process of reducing the size of digital photos by changing the way data is encoded.

CAREER
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Computing

Career Paths: Computing is a new educational resource for all professionals who want to improve their English communication regarding computing. Incorporating career-specific vocabulary and contexts, each unit offers step-by-step instruction that immerses students in the four key language components: reading, listening, speaking, and writing. **Career Paths: Computing** addresses topics including computer accessories, common programs, operating systems, online communication, and cloud computing.

The series is organized into three levels of difficulty and offers over 500 vocabulary terms and phrases. Every unit includes a test of reading comprehension, vocabulary, and listening skills, and leads students through written and oral production.

Included Features:

- A variety of realistic reading passages
- Career-specific dialogues
- 45 reading and listening comprehension checks
- Over 400 vocabulary terms and phrases
- Guided speaking and writing exercises
- Full answer key and audio scripts
- Complete glossary of terms and phrases

The **Teacher's Book** contains a full answer key and audioscripts.

The **audio CDs** contain all recorded material.



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