

Making CONNECTIONS

MAKING CONNECTIONS 4 is an advanced academic reading and vocabulary skills book. It is intended for students who need to improve their strategic reading skills and build their academic vocabulary.

SKILLS AND STRATEGIES 4

Understanding Text Organization

In most academic texts, writers use different forms of organization as they present supporting details for their ideas. They often use these different forms of organization for sections of text, paragraphs, or within individual sentences. They use formatting, specific words, or punctuation to signal these organizational structures. Becoming familiar with the most common forms of organization and their signals will help you understand academic texts.

Examples & Explanations

A New Post-Surgery Remedy

①After surgery, most patients just want to go home. ②Patients recover more quickly at home, so most doctors support the practice, but they face a **dilemma**. ③If they send patients home too soon after surgery, then they may develop complications. ④It is vital to watch these patients carefully until they are out of danger. ⑤The ideal **solution** would be remote monitoring. ⑥This option has recently become available in the form of small patches that can be attached to the skin. ⑦The patches contain sensors that send information to the patient's doctor. ⑧Several studies have demonstrated that allowing post-surgery patients to return home with a skin patch can **result in** lower medical costs. ⑨One study showed that the patch **led to** a 25 percent drop in the number of days a patient spent in the hospital, with **similar** health outcomes to those who remained in hospital care.

The overall organization of this passage is problem-solution. However, several other forms of text organization are found within this structure.

Headings often give a clue to organization. This heading includes a word, *remedy*, which suggests a solution.

In sentence 1, the writer introduces the topic: the claim that patients do not want to remain in the hospital after they have had surgery.

In sentence 2, the writer uses the word *dilemma* to announce that the claim presents a problem.

The problem is clearly identified in sentence 3 with an *if-then* expression, which indicates cause and effect. Sentence 4 provides details.

In sentence 5, the word *solution* signals a possible resolution. Sentences 6 and 7 provide details about this resolution.

In sentence 8, the writer does several things.

a. He continues to discuss the solution, but as part of the solution, he begins a section that has cause-and-effect organization, with the signal *result in*.

b. He also makes a claim – a skin patch can result in lower health costs – leading the reader to expect some evidence for the claim.

Sentence 9 offers the first piece of evidence to support the claim. It uses both cause-and-effect organization, with the signal *led to*, and comparison organization, with the signal *similar*.

Each unit begins with an in-depth study of key skills and strategies for reading academic texts, helping students to learn how and when to use them.

In addition, writers may use formatting, such as headings, lists, and bullets, as well as punctuation, to signal text organization.

Strategies

These strategies will help you recognize and understand text organization.

- Look for signals of broader text organization, like section headings and bulleted lists while you preview or read an article.
- While you read, look for more local signals of text organization, such as words, phrases, and punctuation.
- After identifying a text organization signal, scan ahead to find information that is linked to this type of organization. For example, if the signal indicates a list, look for items in the list. If a signal indicates a problem, identify the problem and then look for a solution.
- Expect several types of text organization within a single reading. Some will structure larger portions of the reading; others will only give structure to short sections.
- Writers do not always provide explicit signals to indicate text organization. In these cases, you will need to infer how the text is organized.

Skill Practice 1

Read the following sentences. Highlight the text organization signals and check (✓) the type of organization they signal. A signal may be a single word or a phrase, and there may be more than one signal in an item. The first one has been done for you.

- The fatal misdiagnosis of their daughter in 1993 **led** a British couple **to** develop an app to help doctors arrive at more accurate diagnoses.
a ____ compare/contrast b ☒ **cause/effect** c ____ definition
- The app has several components. One section provides all possible diagnoses. A second section helps the user rule out irrelevant ones and narrow down likely possibilities.
a ____ classification b ____ definition c ____ problem/solution
- Errors in diagnosis are the most serious patient safety issue. Hospitals are starting to develop systems to catch these errors before patients get hurt.
a ____ problem/solution b ____ cause/effect c ____ definition
- Many hospitals have difficulty maintaining a sterile environment.
a ____ cause/effect b ____ comparison/contrast c ____ problem/solution
- Periodic outbreaks of infections in hospitals are often blamed on bacteria and fungi that grow on walls, floors, and bedding.
a ____ problem/solution b ____ cause/effect c ____ definition

Students learn strategies for approaching academic texts and skills for consciously applying the strategies.

FEATURES

- Critical thinking skills
- Real-time practice of skills and strategies
- Study of the Academic Word List

UNIQUE TO THIS LEVEL

Reading 5 texts are by experts in technology, science, business, and engineering. A concluding activity targets vocabulary common to the unit discipline.

Before You Read

Connecting to the Topic

Discuss the following questions with a partner.

- 1 How would you describe the difference between scientists and engineers?
- 2 What are some major engineering failures or even engineering disasters that you know of (for example, the collapse of a bridge or building, the failure of a major project)? Describe one of them.
- 3 What do you think the causes of such failures might have been?
- 4 It has often been said that failure is the best teacher. Do you agree? Why or why not?

Previewing and Predicting

Reading the title, section headings, and the first sentence of each section can help you predict what the reading will be about.

A Read the section headings and first sentences of sections I–IV in Reading 5, and think about the title of the reading. Then read the following topics. Write the number of the section where you think each topic will be discussed.

SECTION	TOPIC
	Successful engineering projects that are built on failures
	A history of design problems based on overconfidence
	The contrasting roles of scientists and engineers on design projects
	Examples of good designs that do not need improvement
	Failures that occurred as a result of ambitious but unrealistic designs
	The importance of failure in engineering success
	Problems with pursuing perfection in designs

B Compare your answers with a partner's.

While You Read

As you read, stop at the end of each sentence that contains words in **bold**. Then follow the instructions in the box in the margin.

282 • UNIT 4

Predicting the content of a text is critical for reading college books, and students practice this skill extensively before beginning each reading.

Each unit contains 5 readings, providing students with multiple opportunities to practice applying the skills and strategies.

Students learn how to use the skills and strategies by applying them to each text while they read it.

READING 5

Selections from *An Engineer's Alphabet*

by Henry Petroski

I. Failure

1 Understanding the concept of failure is central to understanding engineering and the engineering design process. In fact, an operational definition of engineering could be that engineering is simply the avoidance of unintended failure. The results of the calculations engineers carry out and the data they collect and analyze in experiments would be virtually meaningless without a sense of how those results or data compare with the critical, or failure values. Whenever engineers work with a steel structure, an electronic device, or a machine, they need to know, for example, the maximum load the structure can support, the maximum current it can take, the maximum rainfall it can accommodate, or the maximum temperature at which it can operate. Without such knowledge, there is no understanding of the limits within which the system can operate without failure.

2 Although often associated with the catastrophic collapse of a structure or the total breakdown of a system, the term "failure" can also mean the inability of design to fulfill completely its intended function. Thus, a skyscraper that is in no danger of collapsing, yet is so flexible that the occupants of its upper floors get queasy¹ when moderate winds blow in a certain direction, could be considered a design failure. The excessive flexibility of the structure should have been anticipated and the design modified.


3 There is also a paradox associated with design: that failures, through the lessons learned from them, provide invaluable information on how to achieve subsequent successful designs. An example of failure leading to success is the history of the repeated failures of suspension bridges in the early nineteenth century. By studying those failures and their causes, the engineer John Roebling came to understand what was needed in the design in order to achieve a successful suspension bridge, which he did, most famously the Brooklyn Bridge that spans the East River in New York City to this day.

WHILE YOU READ 1

As you read this paragraph, choose three words for vocabulary cards. Underline them so you can return to them when you have finished reading.

WHILE YOU READ 2

Use the context and your knowledge of word parts to guess the meaning of *excessive*. Does it mean (a) dangerous or (b) more than expected?



The Brooklyn Bridge

¹ *queasy*: feeling as if you are going to vomit

READING 5 • 283

FROM THE SERIES AUTHORS

"Reading is an interactive process, in which readers use their knowledge of language, text organization, and the world to understand what they read."

"Reading is goal-oriented and strategic; good academic readers know when to use the right reading skills."

Students continually review the skills and strategies, helping them build up a valuable set of tools for reading academic texts.

Skill Review

In Skills and Strategies 7, you learned that writers do not always state information directly. Sometimes a writer implies ideas or states facts from which the reader must make inferences.

Review paragraphs 6–11 in Reading 2. Read the inference statements below based on information in these paragraphs. Then find a sentence from the paragraph in parentheses that supports the inference. The first one has been done for you.

1 Inference: Many Americans lost their jobs when GM moved its automotive production to Mexico. (Par.6)

Evidence: In the 1980s, General Motors (GM) closed 10 American factories and moved its production to Mexico.

2 Inference: GM's IT infrastructure was leading in inefficiency. (Par. 7)

Evidence:

3 Inference: The insourcing process at GM is gradual. (Par. 8)

Evidence:

4 Inference: Some of the employees at overseas call centers have limited English skills. (Par. 9)

Evidence:

5 Inference: Though some companies are now bringing outsourced jobs back to their headquarters, outsourcing remains a widespread practice. (Par. 10)

Evidence:

Compare your answers with a partner's. Discuss how the evidence supports the inference.

Vocabulary Development

Definitions

Find the words in Reading 2 that are similar to the definitions below.

- 1 existing commonly or happening frequently (adj) Par. 1
- 2 to bring together (v)
- 3 based on (adj)
- 4 to call back (v)
- 5 to return (v)
- 6 a strong feeling (n)
- 7 a situation (n)
- 8 a fee (n)
- 9 some (adj)
- 10 a corporation (n)
- 11 central (adj)
- 12 made (v)
- 13 to call back (v)
- 14 to move (v)
- 15 announce (v)

Words in Context

Complete

consolidate
delegate

- 1 We need to consolidate our resources.
- 2 It is important to mark the delegates.
- 3 The manager delegated the task to a subordinate.
- 4 The business is preoccupied with the market.
- 5 There is a lot of work with the machines.
- 6 The company is planning to launch several new products.

Academic Word List

The following are Academic Word List words from Readings 1 and 2 of this unit. Use these words to complete the sentences. (For more on the Academic Word List, see page 299.)

advocates (n)	converted (v)	initiatives (n)	sector (n)	subsidiary (n)
assembled (v)	core (adj)	paradigm (n)	security (n)	valid (adj)

- 1 For many consumers, patriotism is a / an _____ issue when they decide on purchases.
- 2 The corporation sold its _____, which was a smaller electronics company, and made a good profit.
- 3 In the 1990s, outsourcing became the dominant _____ for managing labor demand.
- 4 Local politicians are usually strong _____ of any program that promises jobs to their community.
- 5 In almost every business _____, examples of outsourcing can be found.
- 6 During times of economic uncertainty, many workers worry about the _____ of their jobs.
- 7 The manager presented a / an _____ argument for why he needed to hire additional employees.
- 8 In the early days of computers, many hobbyists _____ the machines themselves.
- 9 Most businesses _____ to the metric system decades ago.
- 10 The start-up company launched several new _____ to raise capital.

Students expand their vocabularies by studying key words from each reading and academic words from each unit.

THE APPROACH

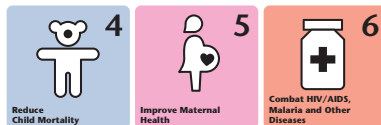
The *Making Connections* series offers a skills-based approach to academic reading instruction. Throughout each book, students are introduced to a variety of academic reading and vocabulary-building skills, which they then apply to high-interest, thematically related readings.

Beyond the Reading

Critical Thinking

Readings 1 and 2 present information about advances in mHealth and how they may improve health and wellness. Reading 2 emphasizes the positive impact these applications could have on global health and makes several recommendations about where mHealth funding and efforts should be concentrated.

A Work with a partner. Consider the three health-related United Nations Millennium Development Goals (MDGs):



B Based on what you read in this unit and your own knowledge, answer the questions below. Review the readings if necessary.

- 1 Do you agree with the funding recommendations in Reading 2? Explain why or why not.
- 2 For which MDG do you think mHealth solutions will be the most useful?
- 3 In what situation(s) would you personally find an mHealth application useful or helpful?
- 4 Do you think that the application you chose in number 3 could be extended to meet any of the health-related MDGs?
- 5 In Reading 1, you read that mHealth solutions have been made possible by three developments: (1) more powerful sensors, (2) cloud-based computing storage, and (3) wireless data transfer. Which of these will be most important for meeting health-related MDGs and why?

Research

As you have read, many NGOs and philanthropic organizations are eager to embrace mHealth applications as a means of solving global health problems. Choose one of the MDGs and research a health problem that is not discussed in the readings. You may want to begin with the United Nations MDG website.

Choose one that you think could be improved with an mHealth application. Take notes on the problem and how an mHealth application could contribute to a solution. You do not need any technical knowledge. Assume only that the mHealth

102 • UNIT 2

SYNTHESIZING

Critical thinking includes connecting new information to information you learned in previous readings.

Each unit develops students' higher level thinking skills, such as evaluating and synthesizing information.

Students also learn to read more quickly, a valuable skill for extended academic texts.

MAKING CONNECTIONS

Exercise 1

Writers may connect ideas between sentences in many different ways. The second sentence may:

- a describe a **result** or **effect** of what is reported in the first sentence
- b provide a **solution** to a problem described in the first sentence
- c provide a **contrast** to what is described in the first sentence
- d add a **detail** or details to support the more general information in the first sentence

How does the second sentence in each pair of sentences below connect to the first sentence? Write *a*, *b*, *c*, or *d* on the line depending on whether it is a result, a solution, a contrast, or a supporting detail.

- 1 Only 24 percent of the population of Sub-Saharan Africa has access to electricity. Even those fortunate enough to have such access often experience highly unreliable service with outages more than 50 days a year.
- 2 Tariffs on power in most countries in the developing world range from U.S. \$.04 to U.S. \$.08 per kilowatt hour. In spite of the poor service, the cost in Sub-Saharan Africa can be more than double the rate of neighboring countries.
- 3 Efforts to stabilize and rehabilitate dilapidated power grids and scale up power generation capacity are likely to take many years and millions of dollars. Ultimately, an alternative path – the use of leapfrog technology and the development of local solutions – may be a preferable option.
- 4 Communities that are not connected to a power grid or have no access to a consistent source of electricity often rely on kerosene. This is hardly an ideal alternative as it is a major source of home fires, and its noxious fumes contribute to the two million annual deaths from indoor air pollution.
- 5 Alfredo Moser, a mechanic in São Paulo, Brazil, had to endure constant power blackouts, which had a very negative impact on his business. In response, in 2002, he invented the bottle bulb – a plastic bottle of water with bleach mounted in the roof, which gives 50 watts of illumination at no cost.

296 • UNIT 4

The unit ends with a study of academic connectors, helping students learn how to navigate dense academic text.