In many careers, previewing materials is essential to getting a job done well. Previewing strategies also help readers and writers keep focused as they work with and create texts.

Previewing Texts and Working with Topics

Sometimes the way you do a job really affects the final result. For example, a high school senior decided to paint his old worn-out car. Not being the mechanical—or artistic—type, he washed his car and dried it, and then he painted it with nine cans of red, high-gloss, bargain-brand spray paint. You can probably imagine the outcome. The painting process he used resulted in the creation of what he and his friends came to call The Bloodmobile. Indeed, the process he used affected the quality of the outcome.

The same principle is true for reading and writing. The early steps are important. Carefully following these steps will help you confidently begin the integrated reading and writing journey.

CHAPTER OBJECTIVES
After completing this chapter, students will be able to do the following:

• Examine a reading’s context.
• Preview a reading to identify its topic.
• Work with assigned writing topics.
• Develop and narrow a topic for an essay.
• Use prewriting strategies to generate ideas.

Connect BCE LearnSmart Achieve: Assign the topics “Reading, Vocabulary, and Study Skills” and “Writing Process” for adaptive learning to accompany the chapter.

Teaching Resources: See the Chapter Quiz.
EXAMINING A READING’S CONTEXT

When we preview a reading, we look it over and notice key elements rather than read it word for word. One key element is the reading’s context. The context of a reading consists of where it was published, who wrote it, and for whom it was written. Let’s consider some specific types of texts, their characteristics, and the insights we can gather from their contexts.

Types of Text

<table>
<thead>
<tr>
<th>Types of Text</th>
<th>NEWSPAPER ARTICLES</th>
<th>ARTICLES IN GENERAL-INTEREST MAGAZINES</th>
<th>ARTICLES IN SPECIAL-INTEREST MAGAZINES</th>
<th>ARTICLES IN ACADEMIC JOURNALS</th>
<th>BOOKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>Journalists, whose primary task is to report news and ideas</td>
<td>General-interest writers who are not necessarily subject experts</td>
<td>People with experience or background in the subject</td>
<td>Highly qualified experts with extensive background in the subject</td>
<td>Experts and nonexperts</td>
</tr>
<tr>
<td>Audience</td>
<td>General public</td>
<td>Wide range of readers</td>
<td>Readers interested in the subject</td>
<td>Experts in the subject</td>
<td>General or specialized audiences</td>
</tr>
<tr>
<td>Purpose</td>
<td>To inform or analyze (news articles) or persuade (editorials)</td>
<td>To inform, analyze, evaluate, or persuade</td>
<td>To inform, analyze, evaluate, or persuade</td>
<td>To inform, analyze, evaluate, persuade, or present new research</td>
<td>Varied purposes</td>
</tr>
<tr>
<td>Length</td>
<td>Often short</td>
<td>Varied</td>
<td>Varied</td>
<td>Varied, but generally long (3,000 + words)</td>
<td>Varied</td>
</tr>
<tr>
<td>Language and style</td>
<td>Journalistic (multiple short paragraphs)</td>
<td>Very little jargon or technical language, always explained and defined</td>
<td>Likely to include jargon and technical language</td>
<td>Likely to include jargon and technical language</td>
<td>Classifiable into genres (novels, textbooks); may use jargon and technical language</td>
</tr>
</tbody>
</table>

By thinking about the publication, its intended audience, and the writer’s purpose, you can develop insights about texts before reading them.

Practice examining contexts by completing the following exercise.
A careful preview of the reading can help you figure out what the reading is about—its topic. Being able to determine the topic of a reading is one of the most important reading skills. The topic can be expressed in a word or a short phrase. It will not be a complete sentence because a topic does not express a complete thought; it is only the subject or content with which the text is concerned.

**Example of a topic:** iPads in education

**Not a topic:** Although many schools are rushing to purchase iPads for their students, little research shows that learning on iPads is more effective than other methods of learning.

The second example is not a topic because it is a complete thought and is thus presented in a complete sentence.

A few techniques can help you determine the topic of a reading.

**Consider the Reading’s Title**

A title like “Five Weight-Training Techniques” is very helpful, as it clearly describes the topic of the reading. Not all titles, however, are as revealing. A title like “Alternatives” does not give us much information about the topic.

**Examine the Reading’s Headings**

Flipping through the text to examine its headings and subheadings will give you clues about the topic. Consider the textbook chapter headings in the illustration that follows.
The title tells us that the chapter is about environmental systems. Since section 2.4 is about energy, we can reasonably conclude that energy is an environmental system or is part of an environmental system. Looking at the subheadings, we have good reason to expect to learn about the connection between green plants and the sun. More specifically, we will learn about photosynthesis.

Look at the Reading’s Illustrations
A preview should also involve looking at any photos or illustrations. The illustration labeled “Figure 2.2” (below) from the same textbook chapter can help us predict content. Reading the caption is a quick way to see how the illustration connects to the headings and subheadings. In this case, the illustration gives us an example of a food chain. This picture helps us get a better idea of what the chapter title means when it refers to “environmental systems.”

From a simple preview of the chapter, we know we will be learning about systems such as those involving photosynthesis and the food chain. We can then think about what we already know about photosynthesis and the food chain so that when we encounter new information about those systems, we can have a frame of reference for the new knowledge, a place to plug the information into what we already know.
As you preview readings, you may find infographics, which are illustrations that combine artwork and text to convey information or explain topics. Maps are a common type of infographic. When you find infographics, take a minute to read through them. Look at the infographic “Measles & Rubella Initiative.” A good infographic can provide quality information about a text’s content.

To preview an infographic, you can use strategies similar to those that you use for text.

- **Read the title and subtitle for a clue to the topic.** In the infographic the title is followed by a subtitle, “A global partnership to stop measles & rubella.” What clues do the title and subtitle give you about the topic?
- **Notice the different visual elements.** How are the elements grouped together? Do they have explanatory captions or headings?
- **Check how colors and sizes are used.** Bright colors and large shapes are often used to draw the reader’s attention to aspects of the graphic that the creator thinks are important. Notice the use of the color red in this graphic. Why do you think red is used for some information?
- **Identify familiar images and what they mean.** One image used in the graphic is a syringe. What might readers think of when they see this image? What other images do you see? Do these images help you understand the graphic’s content and meaning?
- **Look for elements that are essentially traditional charts and graphs in disguise.** For example, the graphic that shows a row of children and has “78%” written above it could be expressed as a statistic on a chart.

If you found this infographic in a text, what would you think the text’s topic might be?
Once you’ve skimmed over the graphic, you should be able to identify its topic. How does the topic of the infographic relate to the topic of the entire reading? Use the other information you’ve gleaned from previewing the reading to answer that question.

**Look for Repeated Words and Phrases**

Another method for identifying the topic is to briefly scan the reading. **Scanning, or skimming,** simply involves glancing at each paragraph, perhaps reading a sentence or two on each page, and getting a sense of the kind of content and the kind of writing in the text. As you scan the reading, note any words that come up again and again. Look also for synonyms. Imagine skimming over an article and seeing these words constantly repeated:

- Flying
- Flights
- Fear of flying
- Phobia
- Paranoia
- Calm
- Anxieties
- Nervousness
- Worry
- Uneasiness

Once you’ve skinned over the graphic, you should be able to identify its topic. How does the topic of the infographic relate to the topic of the entire reading? Use the other information you’ve gleaned from previewing the reading to answer that question.
These words suggest that the reading’s topic is the fear of flying. Notice that some of the words are synonyms. Anxiety, worry, uneasiness, nervousness, fear—these words are all somewhat related in meaning. Finding the recurring words and synonyms will help you identify the topic at a glance.

Find Common Ideas
Some readings present a number of different elements, any one of which could be the topic. In such readings, asking what all these elements share may give you the topic of the reading. For example, consider these subheadings from a magazine article:

- Biodiesel Engines
- Hydrogen-Based Automobiles
- Natural Gas Vehicles
- Electric Cars

All the subheadings refer to vehicles that use alternative forms of energy. Thus the topic of the article is likely to be alternative-fuel vehicles.

Identifying Topics
Read each passage that follows, and identify its topic. Use the context information to help you, and circle any repeated words and synonyms.

1. Context: A short paragraph found in a community newspaper’s opinion section. The writer is a citizen of the community.

   Our town is woefully ill-prepared for flash floods. We do not have a recycling program. Our library has struggled to keep its doors open and has not had funds for new books for two years. In spite of these facts, the City Council is considering installing a new, expensive fence around the city park baseball field. The projects we need the most are not even being discussed. City Council members need to get their priorities in order and consider projects that will benefit all of the citizens in our town, not just sports enthusiasts.

   What is the topic? Deciding on town projects


   Although anxiety disorders are common, they often go undiagnosed for years. One reason for this delay in diagnosis is that the symptoms of anxiety can appear to be symptoms of other illnesses.

   In particular, anxiety disorders often produce physical symptoms such as intestinal discomfort, nausea, dizziness, shortness of breath, hyperventilation, and rapid heartbeat. Since these symptoms can be caused by physical ailments, people with anxiety often assume their disorder is physical. This assumption can lead them to even greater anxiety and worry because they fear there is something wrong with them and that they may die.

   All of the physical symptoms of anxiety—racing heartbeat, shortness of breath, hyperventilation, dizziness, nausea, and intestinal cramps—can converge on a sufferer at one time. This onslaught of physical symptoms can be terrifying. It can be hard for the victim to believe that the cause is “only anxiety” since the physical symptoms are so real.

   What is the topic? Physical symptoms of anxiety
WORKING WITH ASSIGNED WRITING TOPICS

Much of the writing you will do in college and the workplace will be based on topics assigned by your instructors or supervisors. Sometimes you will receive very specific topic information. For other writing assignments, you may be given a range of topic choices and will need to narrow the topic you choose. You will also encounter writing assignments that require you to supply your own topic.

In some ways, when an instructor selects the topic, the writing process is easier since the first step has already been completed for you. Nonetheless, you should plan to use four strategies to make sure that the paper you write fits the assignment.

Create an Assignment Page

Ideally, you will be provided with written instructions that tell you exactly what the topic is and how to approach it. If you do not have written directions, then you need to create your own page of instructions. Record all of the information about the assignment available to you. Here are some questions you should use to collect information for your assignment sheet:

• What is the topic?
• Is research required? If so, what kind of research is expected?
• Is research (or the use of sources such as the Internet) prohibited?
• What is the writing purpose—to inform, to analyze and evaluate, or to persuade?
• What is the due date?
• What is the length requirement?
• What formatting is expected? Has the instructor specified font type and size, spacing, and heading format? Do you need to include a word count? Do you need to use a particular documentation style, such as MLA (Modern Language Association) style or APA (American Psychological Association) style?

Finally, take note of who will be reading your paper. You will need to consider your audience as you make decisions about what to include and how to word your ideas. Often with academic writing tasks, the instructor is the only person who will read what you write. Even though the instructor is just an audience of one, keeping in mind that you are writing for your instructor is very important, as it will help you choose content, terminology, and a style appropriate for academic writing. Academic writing assignments always require formal writing, so avoid contractions and slang, use correct grammar and mechanics, and use third person.

Read and Reread the Assignment

A common writing mistake is to write about something that does not address the topic well enough. Understanding the assignment is imperative. Read the assignment instructions twice, making annotations to highlight each particular requirement. Merely reading through assignment instructions in a cursory fashion can lead to disastrous results. For example, students in a writing class were asked to write an essay about the morality of physician-assisted suicide. One student wrote a paper on why physicians’ assistants should not commit suicide. A second reading of the assignment instructions would have helped this student avoid the embarrassment of misunderstanding the topic and, as a result, receiving a low grade.
State the Paper’s Topic in the Form of a Question
If the topic is not offered to you in the form of a question, transform the instructions into a question, as in the following example.

**Original instructions:** Write an essay in which you examine how credit card companies exploit college students. Include a consideration of the various problems that result for students as a consequence of this exploitation.

**Instructions reworded as a question:** How do credit card companies exploit college students, and what are the problems that result from this exploitation?

Seek Help If You Need It
The best way to find help is to talk to your instructor. If your instructor is not available, work with a staff member at a writing lab or tutoring center. If you are confused about the topic or unsure how to begin, seek help before you go any further with your writing.

DEVELOPING AND NARROWING A TOPIC FOR AN ESSAY
Some assignments require you to generate your own topic. The best place to start this process is on a blank sheet of paper. Brainstorm about the subject by writing down everything that comes to mind. Do not evaluate your ideas at this time. Just allow yourself the freedom to write them down.

Brainstorming for Topics
On the next page are some strategies you can use to brainstorm ideas for possible topics.

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Teaching Resources: Some students do not like to read (or write) because they have little intellectual curiosity. Consider talking about the value of intellectual curiosity. Ask each student to write a question about which he or she is curious and conduct an Internet search to find its answer. See the IM for more suggestions to foster intellectual curiosity. Also, see the assignment “Are Your Curious?” in Connect BCE.

One way to find a topic is to consider an interesting scene, such as a photo of a street in New York City (top), and think of a question like “What advantages are there to living in a major city?” As you look at these photos, what questions come to mind? Can you think of a question that would lead you to a good essay topic?
• **Start with your own interests.** If you were not writing this paper, what would you be doing right now? What are your interests? What are you passionate about? Make a list.

• **Free your imagination.** If you had the time, money, energy, and ability, what activities would you pursue?

• **Reflect on the world around you.** Which world events affect or interest you? Are there issues about which you are passionate? Could you write an essay on one aspect of a particular world event?

• **Think about your life and your history.** You have a history of experiences and memories. What are some of these experiences or memories that are worthy of being recorded? Does your family tell the same stories again and again because they are fun to listen to? Have you learned lessons about life that might interest or benefit readers?

• **Visit your school’s or a virtual writing lab or tutoring center or your school or local library.** Librarians can help by guiding you to the resources that are available for topic selection. Some librarians will even help you think through topics that interest you and that would be suitable for your writing assignment. Writing center and tutoring center staff members are also good resources for topic development.

• **Use an online database available through your school or local library.** An online database is a collection of articles, studies, and other types of research information. Often, databases will also offer topic guides, such as “hot topics” or “current issues.” Ask a reference librarian where you should start. Remember that you are using the database for ideas about subjects, not to find actual sources. If you use an actual source, you must give credit to the source in your essay. Unless your instructor requires you to find a source, use the database for topic searches.

• **Use an Internet search engine like Google or Yahoo.** Search engines can be powerful and quick tools for generating information. However, be aware that information found on the Internet is not always reliable. Avoid sites that offer papers for sale. Those kinds of Web sites often pop up when you are browsing for topics. Your instructors are familiar with the kinds of papers these Web sites sell or give away, and using a paper written by someone else for your writing assignment is plagiarism.

**Narrowing Topics**

The topic you choose for an essay or other writing assignment (and sometimes even a topic that is assigned to you) needs to be adequately narrowed. For example, Raphael was considering majoring in music. When his instructor asked students to write an essay that discusses the daily activities involved in a job of interest to them, he decided to write about a job in the music industry. Though Raphael plays several instruments, he did not want to pursue a career as a performer. So he focused on finding jobs that do not include performing music.
To narrow the topic, Raphael started by breaking the subject into parts or types.

Next, he chose one type of music career—being a teacher—to discuss in his essay. After choosing “teacher,” Raphael identified the following three kinds of teachers.

At this point, Raphael determined that these topics could be narrowed even further. Thus he identified three types of “college music instructors.”

Raphael was then able to choose a narrower topic—the daily job activities of a band director—that was suitable for his assignment. To check whether he had sufficiently narrowed his topic to fit the scope of an essay, Raphael asked himself the questions that follow:
Questions for narrowing topics for an essay assignment

1. The programming on cable television
   Suitable for an essay

2. The importance of healthy lunches for schoolchildren
   Suitable for an essay

3. Dentistry
   How dentists can make patients feel comfortable

4. Why teens drop out of high school
   Suitable for an essay

5. Sleep
   Why people should take getting enough sleep more seriously

6. Stress
   Methods for combating stress at work

7. Homelessness
   How Seattle has dealt with homelessness

As Raphael did, you can use these questions to determine whether the topics you select are suitable for essays.

PRACTICE 5 Narrowing Topics for Essays

Use the “Questions for Narrowing Topics for an Essay Assignment” to consider each topic that follows. If the topic is suitable for an essay, write “Suitable for an essay.” If the topic is too broad, narrow it so that it would be suitable for an essay.

(continued)
8. Why tattoos are so popular
   Suitable for an essay
9. Religious tolerance in the United States
   Religious tolerance of Mormon missionaries in the southern United States
10. Cell phones
    Why the extra price for smartphones is justified

**USING PREWRITING STRATEGIES TO GENERATE IDEAS**

Writers do not start at the beginning, go through the middle, and then finish at the end all in a straight line. They might get partway through the writing process only to realize they need to return to an earlier step to clarify their ideas.

Masterful writers go back and forth constantly, often throwing out entire paragraphs or pages as they figure out what they want to say and how they want to say it. Sometimes they go back to texts they were reading to gather more ideas. As you compose, be willing to go back and revise, rethink, and rewrite when your paper would benefit from your doing so.

**Prewriting strategies**—methods for coming up with ideas—are particularly useful techniques to employ again and again. Once you determine a topic, you can use prewriting to generate ideas. You may find yourself returning to different prewriting strategies to develop more ideas as you write.

As you experiment with prewriting methods, suspend judgment; that is, do not be critical about what you write. Write everything that comes to mind. You can weed out unsuitable ideas after you finish prewriting.

Practice using the following prewriting methods to find one or two of them that work well for you. You might find that some strategies work better than others for a particular topic.

**Prewriting Strategy: Discussion**

**Discussing** ideas with others can be a useful prewriting strategy. Meet with other students—in person, online, or by phoning or texting—and talk about your ideas for the assignment. While classmates make good discussion partners, family members and friends can also help you with ideas. Tell your discussion partners about your writing task, and ask them how they would proceed. Take notes so that you can revisit the ideas later when you are developing an outline.

**PRACTICE 6 Using Discussion for Prewriting**

Imagine your task is to write an essay about a current trend, such as getting a tattoo or wearing a certain style of clothing. You must determine why the trend is popular and how it developed. Use discussion to (1) identify a trend, (2) make a list of the possible reasons for its popularity, and (3) determine, if possible, how the trend developed. Jot down your answers on a separate sheet.

Answers will vary.

Teaching Resources: See the PPT “Student Prewriting Responses” for actual prewriting examples from students responding to Practices 6–11.
Prewriting Strategy: Simple Listing

Some people love to make lists. Even if you are not one of those people, you might still find that listing is a helpful prewriting strategy. The best way to use listing is to first turn the topic into a question.

For example, Luisa’s topic for a writing assignment was the following: strategies for increasing exercise. First, she rewrote the topic as a question: What are some ways people can get more exercise? Next, she simply made a list of ways people could increase the amount of their daily exercise. Notice how her list, which follows, includes a wide variety of items. She did not censor any ideas at this stage; she wrote them all down and chose the best ones later on.

What are some ways people can get more exercise?
- go for a walk every day
- park farther away from entrances
- take stairs when possible
- join a gym
- join a community team (such as volleyball, baseball, and so on)
- find an exercise partner
- let their children be their "trainers"
- buy an exercise machine, such as an elliptical or treadmill
- buy a video and exercise with it
- use an online program for motivation
- hire a personal trainer
- do chores that require physical exertion, such as washing a car by hand
- find activities that combine exercise with fun, such as visiting and hiking in parks
- do the things they liked in childhood, such as bike riding, playing kickball, and so on

PRACTICE 7 Using Listing for Prewriting

Drawing on your own experience as a student, think about the following question: “What changes could be made in the public school system to increase student learning?” On a separate sheet, list at least ten ideas in response to the question.

Answers will vary.

Prewriting Strategy: Clustering

Clustering, or mapping, is a visual method of prewriting, illustrated on the next page. To use clustering, draw a circle in the middle of a sheet of paper, and in that circle write your paper’s topic. As you think of an idea related to the topic, put the new idea in a new circle. Use lines to show relationships among ideas. Do not censor any ideas during this process, and do not worry if your result is messy. The example on the next page shows how Samuel used clustering for an essay about common rites of passage for American youth. (A rite of passage is an event or ritual that marks the change from one life stage to another.)
Prewriting Strategy: Journalistic Questions

The six *journalistic questions* used by reporters can help you generate ideas about your topic. Think about your topic, and then consider these questions:

Who?  
What?  
Where?  
When?  
Why?  
How?

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**PRACTICE 8 Using Clustering for Prewriting**

Use clustering to come up with examples or illustrations for an essay. The topic for this essay is *family traditions*. On a separate sheet, draw a clustering chart to prewrite about this topic. Some items you might consider are types of traditions, problems with traditions, and feelings about traditions.

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**Prewriting Strategy: Journalistic Questions**

The six *journalistic questions* used by reporters can help you generate ideas about your topic. Think about your topic, and then consider these questions:

Who?  
What?  
Where?  
When?  
Why?  
How?

---

**Prewriting for essay due 4/25**

**Topic:** The effects of battle on a soldier  
**Who:** Soldiers, their families, health-care workers  
**What:** Veterans often come back with depression, anger, a sense of worthlessness, guilt, and extreme stress. All of these symptoms are part of post-traumatic stress disorder.  
**Where:** I will focus on veterans who returned from Afghanistan.  
**When:** When we are at war.  
**Why:** Extreme stress of war, not having enough mental health resources, feeling that warriors/soldiers should not have mental issues  
**How:** I will focus on how these effects are recognized and treated.
**PRACTICE 9 Using Journalistic Questions for Prewriting**

Consider the issue of cheating on tests. Use the six journalistic questions to explore this issue. Write your answers for the following questions on a separate sheet.

**Topic:** Cheating on tests
1. Who is involved?
2. What happens?
3. Where does it happen?
4. When does it happen?
5. Why does it happen?
6. How does it happen?
7. What can we do to prevent it?

Keep in mind that you may not need to use all the information these questions will produce. At this stage, do not censor any information. If you wish, use a computer to type in your ideas. The example at the bottom of the previous page shows Carolina’s questions and answers about a particular topic.

**Prewriting Strategy: Freewriting**

Freewriting is one of the simplest prewriting methods. To freewrite, simply think about your topic and write everything that comes to mind for a limited period of time, such as three minutes. You do not need to write in complete sentences; it is fine to jot down phrases and words that come to mind. If you cannot think of anything to write, then type or write the topic’s key words over and over. The point is not to censor ideas during this stage of writing. The example below shows Anita’s freewriting. Notice how she simply recorded everything that came to mind.

**Topic:** sleep deprivation

makes it hard to concentrate, makes it hard to stay awake at work and school, can’t live life well if you don’t get enough sleep, must take time for yourself, set a good example for your kids by going to bed on time, sleep, sleep, deprivation, not enough of it, why, because too much is going on, eat dinner too late, too many activities, maybe should cut down on activities, eat a simple dinner like sandwiches, make a time you must go to bed every night, stick to it, teach kids the same, sleep, make room comfortable, nice atmosphere, comfy bed, fluffy pillows

**Vocabulary Collection Word:**

**deprivation**

**Your in-context definition:**

**A dictionary definition:**

**PRACTICE 10 Using Freewriting for Prewriting**

Imagine that you are required to write an essay about the decline of manners in public. Give yourself two to three minutes to freewrite. On a separate sheet, write down everything that comes to mind during this time period. If you get stuck, write a key word like rude or polite or manners over and over until you think of new ideas.
Prewriting Strategy: Freetalking

Freetalking is just like freewriting, except you use speech instead of a pen and paper. For two to three minutes, simply talk out loud to yourself about the topic. Consider using a cell phone that records your voice or a small digital recorder. Take your time and think out loud. It might be helpful to imagine you are talking to a friend about the topic. If you get stuck, repeat the topic over and over again. Jot down new ideas as they come to mind.

Answers will vary.

Vocabulary Collection Word: eradication

Your in-context definition:

A dictionary definition:

CHAPTER ACTIVITIES

READING AND ANNOTATING

Below is a passage from the textbook Environmental Science: A Study of Interrelationships by Eldon Enger and Bradley Smith. This is the kind of textbook reading you will frequently encounter in college courses. Using the strategies in this chapter, preview the passage and jot down what you think the passage will be about. As you preview the text, identify the topic and try to predict what the main idea of the passage will be. Use annotations to mark key ideas. Additionally, mark any ideas that you find interesting. You will use your annotations for a later assignment.

Potential Consequences of Global Warming and Climate Change

It is important to recognize that although a small increase in the average temperature of the Earth may seem trivial, such an increase could set in motion changes that could significantly alter the climate of major regions of the world. Computer models suggest that rising temperature will lead to changes to the hydrologic cycle, sea level, human health, the survival and distribution of organisms, and the use of natural resources by people. Furthermore, some natural ecosystems or human settlements will be able to withstand or adapt to the changes, while others will not.
Poorer nations are generally more vulnerable to the consequences of global warming. These nations tend to be more dependent on economic activity that is climate-sensitive, such as subsistence agriculture, and lack the economic resources to adjust to the changes that global warming may bring. The Intergovernmental Panel on Climate Change has identified Africa as “the continent most vulnerable to the impacts of projected changes because widespread poverty limits adaptation capabilities.”

Disruption of the Hydrologic Cycle
Among the most fundamental effects of climate change is disruption of the hydrologic cycle. Rising temperatures are expected to result in increased evaporation, which will cause some areas to become drier, while the increased moisture in the air will result in greater rainfall in other areas. This is expected to cause droughts in some areas and flooding in others. In those areas where evaporation increases more than precipitation, soil will become drier, lake levels will drop, and rivers will carry less water. Lower river flows and lake levels could impair navigation, hydroelectric power generation, and water quality and reduce the supplies of water available for agricultural, residential, and industrial uses.

Some areas may experience increased flooding during winter and spring, as well as lower supplies of water during summer. In California’s Central Valley, for example, melting snow provides much of the summer water supply; warmer temperatures would cause the snow to melt earlier and thus reduce summer supplies, even if rainfall increased during the spring. More generally, the tendency for rainfall to be more concentrated in large storms as temperatures rise would tend to increase river flooding, without increasing the amount of water available.

Rising Sea Level
A warmer Earth would result in rising sea levels for two different reasons. When water increases in temperature, it expands and takes up more space. In addition, a warming of the Earth would result in the melting of glaciers, which would add more water to the oceans. Rising sea level erodes beaches and coastal wetland, inundates low-lying areas, and increases the vulnerability of coastal areas to flooding from storm surges and intense rainfall. By 2100, sea level is expected to rise by 15 to 90 centimeters (6–35 inches). A 50-centimeter (20-inch) sea-level rise will result in substantial loss of coastal land in North America, especially along the southern Atlantic and Gulf coasts, which are subsiding and are particularly vulnerable. Many coastal cities would be significantly affected by an increase in sea level. The land area of some island nations and countries such as Bangladesh would change dramatically as flooding occurred. The oceans will continue to expand for several centuries after temperatures stabilize. . . .

Changes to Ecosystems
Some of the most dramatic projections regarding global warming involve natural systems:

• Geographic distribution of organisms could be significantly altered by climate change. As climates warm, organisms that were formerly restricted to warmer regions will become more common toward the poles. The tundra biomes [habitats] of the world will be greatly affected because of the thawing of the permafrost, which will allow the northward migration of species. Similarly, mountainous areas will have less snow and earlier melting of the snow that does accumulate during the winter.
Coral reefs are especially challenged because they are affected both by an increase in water temperature and by an increase in the acidity of the ocean. When carbon dioxide dissolves in water, it forms an acid. An increase in acidity would cause the skeletons of corals and the shells of many other organisms to tend to dissolve. This would make it more difficult for these organisms to precipitate calcium salts from the ocean to construct their skeletons and shells.

Low-lying islands and shorelines will be especially impacted by rising sea level. Mangrove forests and marshes will be inundated and subjected to violent weather and storm surges.

Challenges to Agriculture and the Food Supply
Climate strongly affects crop yields. Yields will fall in regions where drought and heat stress will increase. In regions that will receive increased rainfall and warming temperatures, yields should increase. However, episodes of severe weather will cause crop damage that will affect yields. A warmer climate would reduce flexibility in crop distribution and increase irrigation demands. Expansion of the ranges of pests could also increase vulnerability and result in greater use of pesticides. Despite these effects, total global food production is not expected to be altered substantially by climate change, but negative regional impacts are likely. Agricultural systems in the developed countries are highly adaptable and can probably cope with the expected range of climate changes without dramatic reductions in yields. It is the poorest countries, where many already are subject to hunger, that are the most likely to suffer significant decreases in agricultural productivity.

Questions for Consideration
1. What is the topic of this textbook passage—global warming or rising sea levels? Explain and defend your answer in a paragraph.
2. How can global warming affect the growth of crops? Explain your answer in a paragraph.
3. Why should we be concerned with the issues raised in this reading? Explain your answer in two or three paragraphs.
4. What is the hydrologic cycle? Explain it in a paragraph.
5. What do the writers want students to know after reading this passage? Make a list of important items.

Using Models to Practice Composing
The model essay that follows was written by Kendra, a student in an environmental science class. Kendra’s assignment was to select a topic the instructor discussed in class and to explain why people should know more about that topic. Kendra remembered her instructor’s discussion of the effects of rising sea levels and chose to write her essay on why people need to know about rising sea levels. For support, she planned to use information from her in-class lecture notes and information from her textbook. The passage “Potential Consequences of Global Warming and Climate Change” you read in the Reading and Annotating activity is from Kendra’s textbook.

Follow the instructions below to see how Kendra used her text to write an essay.
1. Read the textbook selection below that Kendra used as a source, observing the types of annotations she created.

**Potential Consequences of Global Warming and Climate Change**
from *Environmental Science: A Study of Interrelationships*

**Rising Sea Level**
A warmer Earth would result in rising sea levels for two different reasons. When water increases in temperature, it expands and takes up more space. In addition, a warming of the Earth would result in the melting of glaciers, which would add more water to the oceans. Rising sea level erodes beaches and coastal wetland, inundates low-lying areas, and increases the vulnerability of coastal areas to flooding from storm surges and intense rainfall. By 2100, sea level is expected to rise by 15 to 90 centimeters (6–35 inches). A 50-centimeter (20-inch) sea-level rise will result in substantial loss of land in North America, especially along the southern Atlantic and Gulf coasts, which are subsiding and are particularly vulnerable. Many coastal cities would be significantly affected by an increase in sea level. The land area of some island nations and countries such as Bangladesh would change dramatically as flooding occurred. The oceans will continue to expand for several centuries after temperatures stabilize.

**Kendra’s Annotations**
- 2 reasons for rising sea levels: expanding water, melting glaciers
- Negative effects (good quote)
- Prediction (good info)
- Result: loss of land in North America (good quote)
- Flooding and loss of land in other areas

2. Kendra wrote the following essay. Read Kendra’s essay and the supplied annotations, which point out content and features. Insert your own annotations to mark writing strategies you would like to use in your essay.

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**Hayworth 1**
Kendra Hayworth
Dr. Miller
INRW 0402
13 November 2013

The Effects of Rising Sea Levels

Somewhere in the world a steady *drip, drip, drip* sound can be heard. The sound comes from a massive glacier, slowly melting as
the sun’s rays penetrate the thinning ozone layer and warm the ice. How can a little drip hurt? Multiply that single drop by millions across the world and soon the melting ice will form enough water to cause problems. In fact, scientists predict that the sea level will rise by 6-35 inches by 2100 (Enger). Global warming has already begun to increase the sea levels, and more people should be concerned about this potentially deadly phenomenon.

As sea levels rise, beaches and their communities are affected. An increase in sea level “erodes beaches and coastal wetland, inundates low-lying areas, and increases the vulnerability of coastal areas to flooding from storm surges and intense rainfall” (Enger). Beaches are thin strips of land. It does not take much erosion to cause a narrow strip of land to disappear completely. Sand dunes can be washed out when sea water rises, and then sea water can easily flood the low-lying areas. When Hurricane Sandy hit the eastern region of the United States, entire beach communities were destroyed.

While the human cost of this destruction is apparent, there is also an ecological cost. When marshes and wetlands disappear, the species that live in those areas are threatened. As Dr. Miller has explained, whenever one species decreases, there are chain reactions such as increases in other species. For example, if marsh birds disappear because the environment has changed, mosquito populations could increase. Eventually, the spread of diseases would...

Information from textbook

Kendra’s thesis statement

Major supporting detail 1: coastal regions affected

Quote: used as support

Explanation

Example

Transition sentence

Major supporting detail 2: species threatened

Explanations and examples
also increase since mosquitos carry disease. Ultimately, human life would be affected by these changes.

Rising sea levels will be a challenge for cities on the coast. In the United States, many major cities are on coastlines. Miami, New York, Los Angeles, New Orleans, Houston, Boston, and Seattle are among many cities that would be impacted by a rise in sea level. An increase in sea level of 20 inches “will result in substantial loss of coastal land in North America, especially along the southern Atlantic and Gulf coasts, which are subsiding and are particularly vulnerable” (Enger).

The impact of sea level rise could be devastating for coastal cities. The costs of relocating coastal populations and industries would be enormous, not to mention the social upheaval such changes would cause.

A rising sea level may not sound as alarming as a potential nuclear disaster or the threat of a disease like avian flu. However, the increase in sea level that is occurring right now is quite serious. More people need to know about the dangers that await if we do not make changes to stop the rise of the oceans.

**A READING AND WRITING ASSIGNMENT**

Using Kendra’s essay as a model, write your own essay about a topic you have recently learned about in one of your classes and consider important. Consult your textbook for that class as a source.
Alternatively, use a different portion of the textbook passage “Potential Consequences of Global Warming and Climate Change” as a source for an essay on another aspect of climate change about which people should be concerned.

Refer to the Quick Start Guide to Integrated Reading and Writing Assignments for help as you write this essay.

THINKING FROM AN INSTRUCTOR’S POINT OF VIEW

In a classroom setting, listening is important in at least two ways. For one, students have to focus on their instructors to learn the content covered in the course. Also, students must understand the instructions for assignments—what to read for homework, what to do for the next class, and so on. These tasks require basic listening tasks, yet some students have trouble with them.

If you were a college instructor, how would you help students learn to listen? Consider this scenario. The semester is fifteen weeks long, and it is week 9. Each week you have talked about the research essay due in week 10. There is a “no late work” policy in your class, so it is really important that students understand the assignment and its due date.

You leave some time during the last class of week 9 to answer students’ last-minute questions. A few students stay after class to get clarification about the assignment.

On the research essay’s due date, seven students out of twenty-five turn in their papers. That means only seven students will be eligible to pass because submitting the research essay is a requirement for passing. What follows are tears, apologetic e-mails, explanations about elderly relatives who died, and so on.

You do not want students to fail, but on the other hand, learning to listen and follow instructions is such an important life skill that you cannot send students the wrong message about listening. How do you proceed?

Write a paragraph or two explaining what you would say to students who failed to turn in their research papers. Write another paragraph or two presenting what you would say to your supervisor to explain why more than half your class failed.

ADDING TO YOUR VOCABULARY

This chapter's vocabulary words appear below.

editorial  cursory  deprivation  eradication
hydrologic  subsistence  storm surge

Choose five of the vocabulary words from this chapter that you would like to add to your vocabulary, and think about how you can use them this week. For example, one of this chapter’s words is cursory. You can often substitute cursory for hasty, as in the examples that follow.

Example:  I didn’t have time to study, so I looked over my notes in a hasty fashion.
I didn’t have time to study, so I looked over my notes in a cursory fashion.

List each of the five words you plan to use this week, and make note of a context in which you could use the new word.

Example:  Cursory. I can use this word to teach my little brother the difference between cleaning his room thoroughly and cleaning his room in a cursory way.
ADDITIONAL ASSIGNMENTS

1. In Practice 7, you wrote down ideas in response to this question: “What changes could be made in the public school system to increase student learning?” Using your prewriting, select two to four changes you believe would transform public education. Write an essay in which you present your ideas.

2. Study the infographic “Measles & Rubella Initiative,” which appeared earlier in this chapter. First, determine its topic. Then complete the following assignments.
   a. Why is measles and rubella prevention important enough for the federal government to create posters and campaigns? Use a prewriting method to generate a page of thoughts to answer this question.
   b. Select a health or environmental issue you believe people should be concerned about. Create your own infographic poster in which you present the topic, your point about the topic, and information to help you prove your point. Use color and images to emphasize information. For additional infographic models, go to www.google.com, click on “images,” and type in “infographics.” Hit the enter key and you will see a screenful of various infographics you can use as models.

Answers will vary depending on each student’s responses in Practice 7.

2. The topic is preventing measles and rubella.
   a. The topic is important because so many children die unnecessarily from these preventable diseases. The government wants parents to know that vaccinations are inexpensive and effective.
   b. Answers will vary.

EMOTIONAL INTELLIGENCE

A recent experiment shows the importance of optimism, a tendency to feel hopeful and positive about the future. A psychologist tested students at the University of Pennsylvania to determine whether optimism had an effect on grades. The experiment showed that by analyzing the level of optimism students had, researchers could more accurately predict the students’ college success than by analyzing their SAT scores! Students who were on the optimistic end of the scale earned better grades than did students who were pessimistic.

Think about optimism, pessimism, and how they affect a person’s success. Think of someone you know who is always optimistic. Has optimism made this person a better student or worker? Think of a pessimistic person you know. Has pessimism decreased this person’s effectiveness? Write a paragraph in which you speculate on this topic.

Answers will vary.

CULTURAL LITERACY

Many of the readings in this book concern issues in the fields of psychology and interpersonal communications. What are these two fields? Do some Internet research to determine what experts in these areas study. Write a paragraph explaining what the experts in each field focus on. Give credit to the sources you consult.

Answers will vary.

CRITICAL THINKING

To find the best solution to a problem, we must consider all of the possible solutions. An enjoyable way to practice this kind of critical thinking is to find an answer to a problem.

To start, select a simple but irritating situation that needs a solution. For example, a disorganized pile of papers in your house might be a problem. How could you solve the problem? What solutions might you use that would help you eliminate the problem? Cleaning up the pile of papers is a good start, but it is not a permanent solution to the problem. Keeping the pile from coming back requires a daily organization routine.

Answers will vary.
Find a minor problem in your life that needs a solution. Think critically and creatively about how you might be able to solve the problem. If you wish, work with a classmate and see how many creative solutions you can devise. Write a paragraph in which you explain the problem and the solution you believe will work.

**METACOGNITION**

Did you know that students can change their learning ability over time? If you were never successful in math in the past, that does not mean you cannot learn to do math well now. Your ability to learn can develop and increase over time. What seemed unattainable last year might prove quite achievable this year.

Make a list of your assumptions about your strengths and weaknesses as a learner. Note any subjects about which you have thought, “I’m just not good at that.” Next, think of a skill you found difficult at one time but later came to master. Write a paragraph explaining how you learned the skill. Finally, write a paragraph about whether you believe you can learn one of the weak subjects or skills you listed earlier. In your paragraph, explain the reasons for your beliefs.

*Answers will vary.*