Answer Key

UNIT 1

First Tier

Pre-Reading
DISCUSSION (PAGE 2)
Answers will vary.

Post-Reading
Basic Comprehension
SHORT ANSWER (PAGE 4)
Possible answers:
1. His main point is that humans believe they have domesticated plants and animals, but perhaps they have domesticated us.
2. DNA analysis and unique experiments
3. breeding

MATCHING (PAGE 5)
1. 12,000
2. 14,000
3. 100,000–135,000
4. 4,500
5. 10,000
6. 10,000

Vocabulary
MULTIPLE CHOICE (PAGES 5–6)
1. a
2. b
3. a
4. d
PARAPHRASING (PAGES 6–7)

Possible answers:

1. In the twentieth century, there was much speculation among archaeologists as to how domestication of plant species began.
2. Because domestication of plants occurred around the same time in different parts of the world, some speculated that global climate played a role.
3. Although global climate seems almost certain to have played some role, the exact mechanism by which climate affected domestication remained speculative.
4. Some theorists speculated that agriculture began in areas where plant species such as wild wheat were plentiful.
5. No matter exactly where and how plant species were first domesticated, domestication was marked by a divergence of traits of the domesticated species from its wild relative.
6. Domesticated wheat has diverged from wild wheat in several ways: it stays on its stalk longer when it is ripe, it has thinner husks, and each plant produces many more seeds.
7. Early agricultural practices likely encouraged this divergence.
8. Early agriculturalists may have selected mutant plants with these divergent traits and intentionally or unintentionally provided a situation more favorable to their growth than to that of plants with wild traits.

Reading Focus

Grouping Information

CATEGORIZING (PAGE 8)

Possible answers:

<table>
<thead>
<tr>
<th>Unintentional</th>
<th>Deliberate</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td>use of fire</td>
<td>invention of the wheel</td>
<td>development of agriculture</td>
</tr>
<tr>
<td>discovery of penicillin</td>
<td>development of writing</td>
<td>domestication of the dog</td>
</tr>
<tr>
<td></td>
<td></td>
<td>invention of the airplane</td>
</tr>
</tbody>
</table>
Second Tier

Pre-Reading

DISCUSSION (PAGE 9)

Possible answers:

1.
   a. The DNA of a “genetically modified species” is artificially altered to produce a desired characteristic whereas a “hybrid species” is produced by breeding individuals from two different varieties or species.
   b. “Species” refers to all of the individual organisms of a particular type, whereas an “individual” is only one organism.
   c. Both words refer to different types of things. In everyday speech and writing, “variety” is more commonly used than “species” to talk about different types of things. In biology, two different “varieties” of organisms are two groups that differ from each other in some characteristics but belong to the same species.

2. Answers will vary.

Post-Reading

Basic Comprehension

SHORT ANSWER (PAGE 17)

Possible answers:

1. To produce its own insecticide
2. Answers will vary.
3. Biotechnology doesn’t use the old rules that govern nature.

MULTIPLE CHOICE (PAGES 18–20)

1. a 7. d
2. b 8. c
3. b, c 9. a
4. a, b 10. c
5. a 11. a
6. b 12. d
Vocabulary

MULTIPLE CHOICE (PAGES 21–22)

1. a 4. a
2. b 5. d
3. c 6. c

PARAPHRASING (PAGE 23)

1. Researchers have worked to modify the genetic code of plants so that many kinds are sterile.
2. A commodity like corn or pork can help figure out how much money a farmer can make.
3. In the Andes, ancestors of modern potatoes were harvested.
4. In artificial selection, people make a deliberate choice about which trait is better and then help people with that trait to thrive.
5. Regardless of all the experience people have with growing plants, nature is still intractable.
6. Pollan talks about his trying to cultivate the genetically modified crop.

Reading Focus

MULTIPLE CHOICE (PAGE 24)

1. a 3. c
2. d 4. d

Building a Text Model

PART 1: ORGANIZATIONAL TECHNIQUE

SHORT ANSWER (PAGE 25)

1. a
2. Possible answer: Including personal narrative helps to retain readers’ interest and connect the author’s main points to real life. Alternating scientific, economic, and historical processes helps demonstrate how important the phenomena the author discusses are to human society. However, some readers may have more difficulty locating the author’s main points and following the threads of argument than they would in a more classically-organized piece, which has discrete pieces of argument and support for a single thesis.
### PART 2: PARAGRAPH ORGANIZATION

#### COMPLETION (PAGES 26–27)

Possible answers:

<table>
<thead>
<tr>
<th>Paragraph Number(s)</th>
<th>Organizational Descriptor</th>
<th>Main Idea</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>historical/scientific analysis</td>
<td>Hybrid plants have developed through a process of coevolution with humans.</td>
</tr>
<tr>
<td>2–4</td>
<td>personal narrative</td>
<td>Genetically modified potatoes can produce their own insecticides, but Pollan has questions about their safety and desirability.</td>
</tr>
<tr>
<td>5–8</td>
<td>historical/scientific analysis</td>
<td>Genetic modification has created a revolution in agriculture, but is being marketed as “nothing new.”</td>
</tr>
<tr>
<td>9–10</td>
<td>personal narrative</td>
<td>The NewLeaf potatoes came with a complex grower’s guide that prohibited saving potatoes to plant the following year.</td>
</tr>
<tr>
<td>11–14</td>
<td>historical/economic analysis</td>
<td>Modified crops are intended to solve environmental problems of modern agriculture but also to give companies like Monsanto intellectual property rights to crops it develops.</td>
</tr>
<tr>
<td>15–19</td>
<td>historical analysis</td>
<td>All domestication includes a process of artificial selection for characteristics valued by a culture, but only traits naturally found in a species can be selected for domestication.</td>
</tr>
<tr>
<td>20–25</td>
<td>scientific analysis</td>
<td>Genetically modified crops differ from traditional crops in that they allow traits that can’t be found in a species to be incorporated into it.</td>
</tr>
<tr>
<td>26</td>
<td>historical analysis</td>
<td>Monsanto’s GM endeavors have grown from a small, not-quite-trusted set of plants in an enclosed greenhouse in 1984 to a worldwide enterprise affecting the world’s crops.</td>
</tr>
<tr>
<td>27–28</td>
<td>historical/scientific analysis (also includes personal narrative)</td>
<td>DNA can be implanted into a cell’s nucleus using an agrobacterium or a gene gun; using the gene gun is a fairly blunt and simple technique.</td>
</tr>
<tr>
<td>29</td>
<td>scientific analysis</td>
<td>Agrobacteria can carry desired genes into a plant, along with unique identifiers that help to maintain companies’ intellectual property rights.</td>
</tr>
</tbody>
</table>
**Putting Reading to Work**

**WRITING (PAGE 27)**

Answers will vary.

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**Third Tier**

**Pre-Reading (page 28)**

**DISCUSSION (PAGE 28)**

Answers will vary.

**Post-Reading**

**Basic Comprehension**

**MULTIPLE CHOICE (PAGES 40–42)**

1. b  
2. c  
3. d  
4. a  
5. c  
6. d  
7. c  
8. a, d  
9. c  
10. d

**SHORT ANSWER (PAGES 42–43)**

1. They question issues of intentionality.

2. 
   a. Behavior or tamability is the selective factor that causes the changes.
   b. This factor governs the body’s hormones and neurochemicals.
   c. Chemical changes could make animals respond similarly even if they are different species.

3. Both Belyaev and Morey believed changes observed in domesticated animals resulted from genetic changes that occurred during the selection process. However, Belyaev believed the key factor was not size or reproduction, but behavior—amenability to domestication.

4. c, e

5. It was in jeopardy due to a decreasing budget and changes in the Russian grant-awarding system.
TEXTUAL EVIDENCE (PAGE 44)

PART 1: An “X” should be placed next to every item except “Were dogs domesticated deliberately?” and “Does selection for pedomorphic traits explain most of the tameness in domesticated horses, cats, etc.?” (the second and fifth questions)

PART 2: Possible answer: (ranked)
1. Can a wide range of changes to domesticated species result from selection for a behavioral trait?
2. Do domesticated foxes demonstrate similar traits to domesticated dogs?
3. Can silver foxes be domesticated?
4. How many generations does it take to domesticate silver foxes?
5. Might domesticated foxes make good pets?

Vocabulary

NEAR SYNONYMS (PAGE 45)
1. drastic
2. bear out
3. interact with
4. mirror

MULTIPLE CHOICE (PAGES 46–47)
1. a
2. a
3. d
4. d
5. b
6. a

PARAPHRASING (PAGE 48)
Possible answers:
1. It seems domestication of animals inevitably involves physiological, morphological, and behavioral changes.
2. Every fox that escaped inevitably returned.
3. It is inevitable that scientists will have to stop the project if they don’t receive more money.
4. Some animals are not amenable to domestication.
5. Dogs are more amenable to following human orders than are cats.
6. Because money was an issue, amenability to the idea of selling foxes as pets grew.
## A. Differences between domesticated foxes and farmed or wild foxes

**Behavior:** The domesticated foxes are tame and seek to please humans and to receive human attention. This behavior includes whining, submissiveness, and pedomorphic traits, which could support Morey’s theory. It is also behavior that is influenced by changes to developmental mechanisms, which could support Belyaev’s theory.

**Development in early life:** Domesticated foxes respond to sound and sight earlier than wild foxes and show fear responses later. Rise in plasma corticosteroids came later in domesticated foxes. This tends to support Belyaev’s theory because these differences that increase the “window of bonding” with humans developed as a result of selection for a behavioral trait. The theory is also supported by the biochemical changes observed.

**Appearance:** Domestic foxes’ coats were different colors from wild foxes. Some had floppy ears and rolled tails. Some had shorter tails, shorter legs, orunderbites or overbites. Skulls of male foxes became “feminized.” The changes support Belyaev’s theory because they are the result of changes of timing during development. (Some might also support Morey’s theory, as some traits like floppy ears are characteristics of fox pups that adult wild foxes outgrow.) “Feminization” of the skulls neither supports nor refutes Morey’s theory since it can’t be concluded whether this constitutes pedomorphosis.

## B. How these differences support Morey’s and/or Belyaev’s theories

**Behavior:**

- This behavior includes whining, submissiveness, and pedomorphic traits, which could support Morey’s theory. It is also behavior that is influenced by changes to developmental mechanisms, which could support Belyaev’s theory.

**Development in early life:**

- Rise in plasma corticosteroids came later in domesticated foxes. This tends to support Belyaev’s theory because these differences that increase the “window of bonding” with humans developed as a result of selection for a behavioral trait. The theory is also supported by the biochemical changes observed.

**Appearance:**

- skull changes support Belyaev’s theory because they are the result of changes of timing during development. (Some might also support Morey’s theory, as some traits like floppy ears are characteristics of fox pups that adult wild foxes outgrow.) “Feminization” of the skulls neither supports nor refutes Morey’s theory since it can’t be concluded whether this constitutes pedomorphosis.

## C. Questions that are not answered by these findings

Would similar behavior emerge if species taxonomically more different from dogs were selected for tamability?

Answers will vary.
### DISCUSSION (PAGE 51)

Answers will vary.

### FOLLOW-UP (PAGE 51)

Answers with vary.

### WRITING (PAGE 51)

Answers will vary.

<table>
<thead>
<tr>
<th><strong>Biochemical mechanisms:</strong> Plasma corticosteroid levels in domesticated foxes were much lower than in wild foxes and their adrenal cortices responded less dramatically to stress. Domesticated foxes had higher levels of serotonin and associated chemicals.</th>
<th><strong>The changes support Belyaev’s theory because these are chemicals that affect development.</strong></th>
<th><strong>Answers will vary.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reproduction:</strong> Domesticated foxes become sexually mature earlier than wild foxes and have litters about one pup larger. They have a longer mating season and a few mate outside of the mating season once or twice a year.</td>
<td><strong>This somewhat supports Belyaev’s theory since selection for behavioral traits led to reproductive traits that were more similar to those of domesticated dogs than to those of wild foxes. It doesn’t fully support the theory since the researchers expected to breed foxes that could regularly reproduce twice a year with no set breeding season. However, this did not occur.</strong></td>
<td><strong>Answers will vary.</strong></td>
</tr>
</tbody>
</table>
UNIT 2

First Tier

Pre-Reading
DISCUSSION (PAGE 53)
Answers will vary.

Post-Reading

Basic Comprehension
SHORT ANSWER (PAGE 56)
Answers will vary.

MATCHING (PAGE 57)

1. f
2. d
3. b
4. e
5. a
6. c

MULTIPLE CHOICE (PAGES 57–58)

1. a
2. c
3. d
4. a
5. b

DRAWING CONCLUSIONS (PAGE 59)
Possible answers:
2, 4, 6, 8, 9, 11
Vocabulary

SHORT ANSWER (PAGE 60)

1. Answers will vary.
2. Possible answers:
   a. 5
   b. 4
   c. 7
   d. 6
   e. 2
   f. 3
   g. 1

Reasons for rankings will vary.

MATCHING (PAGE 61)

1. c
2. f
3. g
4. i
5. b
6. d
7. a
8. h
9. e

Reading Focus

Grouping Information

CAUSES AND EFFECTS (PAGE 62)

<table>
<thead>
<tr>
<th>Effects</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>eye damage</td>
<td>Vitamin A deficiency</td>
</tr>
<tr>
<td>difficulty climbing Mount Everest</td>
<td>extreme cold, storms, jet-stream winds, cross acclimation between cold and hypoxic reactions</td>
</tr>
<tr>
<td>difference between marasmus and kwashiorkor</td>
<td>difference in level of protein intake</td>
</tr>
<tr>
<td>kwashiorkor and oedema</td>
<td>free-radical membrane damage</td>
</tr>
<tr>
<td>impairment of responses to infections of gut and respiratory tract</td>
<td>Vitamin A deficiency</td>
</tr>
<tr>
<td>deaths in people with little eye damage</td>
<td>infections of the gut and respiratory tract</td>
</tr>
<tr>
<td>illnesses</td>
<td>pressure change</td>
</tr>
</tbody>
</table>
CATEGORIZING (PAGE 63)

Possible answers:

<table>
<thead>
<tr>
<th>Treated Strongly</th>
<th>Treated Weakly</th>
</tr>
</thead>
<tbody>
<tr>
<td>chapters on adaptation to heat and cold</td>
<td>coverage of all aspects of environmental physiology</td>
</tr>
<tr>
<td>discussion of survival in the face of weapons of mass destruction</td>
<td></td>
</tr>
<tr>
<td>explanation of the history of environmental physiology</td>
<td>explanation of adaptation and maladaptation in general</td>
</tr>
<tr>
<td>speculation about how humans might survive on other planets</td>
<td>explanation of how malnourished people are re-fed</td>
</tr>
<tr>
<td>the impression the book gave overall</td>
<td></td>
</tr>
<tr>
<td>use of engineering to explain biological concepts</td>
<td>use of engineering to explain biological concepts</td>
</tr>
<tr>
<td>use of engineering to explain life-supporting technologies</td>
<td></td>
</tr>
<tr>
<td>use of stories about famous disasters</td>
<td></td>
</tr>
<tr>
<td>final chapter</td>
<td></td>
</tr>
</tbody>
</table>

WRITING (PAGE 64)

Answers will vary.
Second Tier

Pre-Reading
DISCUSSION (PAGE 65)
Answers will vary.

MATCHING (PAGE 66)
1. e
2. a
3. f
4. b
5. d
6. c

Post-Reading

Basic Comprehension
MULTIPLE CHOICE (PAGES 79–82)
1. b
2. b
3. c
4. c
5. d
6. b
7. b
8. a
9. a
10. d
11. a
12. a

BEST EXPLANATION (PAGE 83)
Sentence 5

Vocabulary
MULTIPLE CHOICE (PAGES 84–86)
1. d
2. b
3. d
4. a
5. c
6. c
7. d
8. a
9. b
10. b

ANTONYM MATCHING (PAGE 86)
1. impossible to maintain
2. insufficient
3. give way to
4. reduction
5. begin
6. mild
7. fatiguing
8. external
9. weakness
PARAPHRASING (PAGE 87)

Answers will vary.

Reading Focus

SCANNING FOR NUMBERS (PAGE 88)

1. Mr. Blagden and his dog survived 15 minutes at 105°C—a temperature hot enough to cook food.
2. Sauna temperatures in which bathers commonly spend 15–30 minutes
3. Highest recorded temperature on earth
4. Hottest Japanese onsen where bathers commonly spend about 3 minutes
5. Highest core temperature survived without lasting complications
6. High temperature commonly reached in many deserts
7. Core temperature above which is generally fatal
8. Rectal temperature defining heat stroke
9. Onsen temperature at which Japanese bathers often spend up to 60 minutes

MATCHING (PAGE 89)

1. b 6. d
2. h 7. a
3. e 8. j
4. i 9. f
5. g 10. c

WRITING DEFINITIONS (PAGE 90)

Possible answers:

1. cardiac related to the heart
2. cardiovascular related to the heart and blood vessels
3. dehydration a state of having lost too much water
4. euhydrated having a good amount of water
5. hydration a state of having water
6. hyperthermic a state of having higher than normal body heat or temperature
7. hypohydration a state of having less water than normal
8. intravascular within the blood vessels
9. thermal related to heat
10. thermometer an instrument that measures temperature or heat
11. thermoregulatory regulating heat or temperature
Describing Processes

EXPRESSING RELATIONSHIPS (PAGE 90)

Answers will vary.

Putting Reading to Work

WRITING (PAGE 91)

Answers will vary.

Third Tier

Pre-Reading

DISCUSSION (PAGE 92)

Answers will vary.

Post-Reading

Basic Comprehension

MULTIPLE CHOICE (PAGES 106–8)

1. b 6. d
2. d 7. a
3. d 8. b
4. a 9. b
5. c 10. a, c

TRUE OR FALSE (PAGE 109)

1. T 6. T
2. F 7. F
3. F 8. F
4. F 9. T
5. T

SHORT ANSWER (PAGE 109)

Possible answers:

2. Even in high winds, it is better to get on the boat than to stay in the water.
3. Heavy clothes and boots can provide extra buoyancy. Remove them only if they prevent you from getting back in the boat.
4. Swimming and treading water waste energy.
7. If a shelter is too small, stay in it even if you can’t move around much.
8. Aspirin (and all other medications) should be avoided.
Vocabulary

NEAR SYNONYMS (PAGE 110)

Possible answers:
1. pitches; If a boat suddenly pitches to one side, a passenger could fall out.
2. limbs; Most people feel their limbs get cold before their torsos.
3. symptoms; Numbness and shivering are two symptoms of hypothermia.
4. slight; I made a slight mistake when I spelled her name. I wrote it as “Anne,” but it is really “Ann.”
5. impair; Clothing that is too tight can impair your movement.

PARAPHRASING (PAGES 111–12)

Possible answers:
1. When the body’s core temperature drops in a cold environment, a person succumbs to hypothermia.
2. Clothes can help you retain heat if you fall into the water.
3. Your proximity to land can influence your decision about whether to swim.
4. Vigorous exercise in cold water can actually cause your body to lose heat.
5. Even a stalwart swimmer can lose composure after suddenly falling into cold water.
6. One indication of hypothermia is that a person suddenly starts acting in uncharacteristic ways.
7. Sudden deceleration of a boat can cause an accident.
8. Alcohol is not a good thing when trying to revive a hypothermic person because it prevents true warming of the body.

MULTIPLE CHOICE (PAGES 113–14)

1. a  
2. d  
3. c  
4. d  
5. b  
6. c  
7. b  
8. a
Reading Focus

*Formal Verbs*

MATCHING (PAGE 114)

1. a
2. c
3. e
4. b
5. d

*Collocations*

MATCHING (PAGE 115)

1. **conduct**: a poll, a study, a survey, an experiment, research
2. **determine**: a cause; a limit, a maximum, a minimum, a reason, an effect
3. **assume**: a position, a reason, an appearance
4. **induce**: a physical condition, a reflex
5. **render**: aid, a service, assistance

*Integrating Information*

ANNOTATING TEXT (PAGE 115)

Answers will vary.

*Putting Reading to Work*

COMPOSING A PAMPHLET (PAGE 116)

Answers will vary.
UNIT 3

First Tier

Pre-Reading
DISCUSSION (PAGE 118)
Answers will vary.

Post-Reading
Basic Comprehension
MULTIPLE CHOICE (PAGES 121–22)
1. b 5. a
2. d 6. c
3. b 7. b
4. c 8. a

Vocabulary
MATCHING (PAGE 123)
1. b 6. h
2. e 7. f
3. j 8. d
4. i 9. a
5. c 10. g

Reading Focus
SCHEMATIC TABLE (PAGE 124)

<table>
<thead>
<tr>
<th>Characteristics of a Hub-and-Spoke System</th>
<th>Characteristics of Alternative Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>airlines can concentrate staff in big cities</td>
<td>higher number of small planes in operation</td>
</tr>
<tr>
<td>almost no spoke-to-spoke travel</td>
<td>lessons the region-wide impact of bad weather at a hub</td>
</tr>
<tr>
<td>fewer inefficient, half-filled flights</td>
<td>many different combinations of flights to and from smaller cities possible</td>
</tr>
<tr>
<td></td>
<td>relatively less crowded airports</td>
</tr>
</tbody>
</table>

Not used:
- every plane protected with a parachute
- requires massive rebuilding of airport runways
**Integrating Information**

**PLACE REFERENCES (PAGE 125)**

- Denver, Colorado
- Boston, Massachusetts
- Cleveland, Ohio
- Dayton, Ohio
- Memphis, Tennessee
- Savannah, Georgia
- St. Cloud Airport, Minnesota
- Iowa
- Chicago, Illinois
- Willow Run Airport, Detroit, Michigan
- Phoenix, Arizona

**SUMMARIZING (PAGE 126)**

Possible answers:

1. There are several ways a hub-and-spoke system is good for business. Airlines save money because planes are fuller, and they don’t have to maintain full crews at every airport. Also, hubs can contain full services so more amenities can be offered.

2. A hub-and-spoke system is bad because there are longer lines, more crowds, and more traffic resulting in frustrated passengers. Additionally, costly large-scale security systems are necessary at hubs because of a high volume of customer traffic. Another reason is bad weather at one airport affects many others and causes costly delays. Lastly, smaller airports lose their vitality.

**SYNTHESIZING (PAGES 126–27)**

Answers will vary.
Pre-Reading
DISCUSSION (PAGE 128)
Answers will vary.

Post-Reading
Basic Comprehension
MULTIPLE CHOICE (PAGES 134–35)
1. d
2. d
3. b
4. b
5. a
6. c

CHRONOLOGY (PAGE 135)
1. Vertical integration of the railroad industry occurs.
2. The Interstate Commerce Commission is created.
3. Four major domestic airlines are created.
4. The Civil Aeronautics Board is created.
5. Freddie Laker creates an airline offering extremely low fares.
6. United Airlines cancels service to Bakersfield, California.
7. The airlines record a net operating loss of $421 million.

Vocabulary
MULTIPLE CHOICE (PAGES 136–37)
1. b
2. d
3. a
4. c
5. a
6. a
7. d
8. c
9. b

PARAPHRASING (PAGES 138–39)
Possible answers:
1. Excellent marketing ensured that the new video game would sell well.
2. Most people wanting to start a new business need to depend on banks or investors for financing.
3. High gas prices accelerated the rise in ticket prices.
4. Slowly, the company phased in a new way to package its products.
5. Our public relations department tried to improve our image, but negative stories in newspapers and on the Internet undercut their efforts.
6. Stricter government regulation is the wrong approach altogether.
7. Computerized manufacturing ushered in an exciting new era for the company.
8. If you try to cut corners during production the quality of your product will suffer.
9. Because of mild weather this winter, the delivery schedule of our supplies remained stable.
10. Government regulators began a large scale program to monitor a huge number of pharmacies all across the nation.

MATCHING (PAGE 139)

1. i  
2. f  
3. e  
4. g  
5. b  
6. d  
7. a  
8. c  
9. h

Reading Focus

Putting Reading to Work

WRITING (PAGE 140)

Answers will vary.

Second Tier

Pre-Reading

DISCUSSION (PAGE 141)

Answers will vary.

Post-Reading

Basic Comprehension

MULTIPLE CHOICE (PAGES 144–45)

1. d
2. b
3. a
Reading Focus

Integrating Information

PREDICTING (PAGE 145)

Answers will vary.

INTERPRETING (PAGES 146–47)

Answers will vary.

MULTIPLE CHOICE (PAGES 147–48)

1. b
2. d
3. c
4. d

WRITING (PAGE 148)

Answers will vary.

Third Tier

Pre-Reading

DISCUSSION (PAGE 149)

Answers will vary.

Post-Reading

Basic Comprehension

SHORT ANSWER (PAGE 162)

Possible answers:

1. This paper addresses the concern that the air transportation system will not scale to meet demand.
2. Scalability is the ability to operate efficiently at several levels, especially under conditions that come with the growth of business.
3. The economy would be affected.
4. Air transportation can scale at the regional level. Making under-utilized airports more attractive will lead to the growth of secondary airport that already exist. Also, it could lead to the emergence of new secondary airports.
MULTIPLE CHOICE (PAGES 163–65)

1. a  6. c
2. b, c  7. d
3. a  8. b
4. a  9. a
5. d  10. a

Vocabulary

FILL IN THE BLANK (PAGES 166–67)

1. densely  7. extract
2. propogated  8. arc
3. manifested  9. sparse
4. node  10. constraints
5. temporally  11. degree
6. scale  12. spatial

MULTIPLE CHOICE (PAGES 168–70)

1. d  6. d
2. a  7. c
3. a  8. b
4. d  9. a
5. a  10. c

Reading Focus

Connecting Sentences Using This and This + Noun Phrase

MAKING NOUN PHRASES WITH THIS/ THESE (PAGES 170–71)

Possible answers:

2. This congestion causes
3. This slowdown was
4. This situation has
5. This description means
6. This representation/figure shows
7. This analysis shows
8. These deviations are; were
9. These secondary airports have
10. These regional jets have
**Parts of an Academic Journal Article**

**IDENTIFYING SECTIONS (PAGE 173)**

Possible answers:

<table>
<thead>
<tr>
<th>Part</th>
<th>Paragraph(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>information about the authors</td>
<td>28–29</td>
</tr>
<tr>
<td>introduction</td>
<td>2–4</td>
</tr>
<tr>
<td>methodology</td>
<td>5-6 (partially in 10, 13, 17, and 18)</td>
</tr>
<tr>
<td>findings</td>
<td>7–15, 19–20</td>
</tr>
<tr>
<td>discussion</td>
<td>16, 18, 20–24</td>
</tr>
<tr>
<td>conclusion</td>
<td>25–26</td>
</tr>
<tr>
<td>acknowledgments</td>
<td>27</td>
</tr>
</tbody>
</table>

**MATCHING (PAGE 174)**

Possible answers:

1. abstract b, e
2. methodology b
3. findings c, e, f
4. conclusions e
5. acknowledgments a
6. references d

**INTERPRETING AN ABSTRACT (PAGE 175)**

1. I
2. I
3. I
4. II
5. III
6. IV–V
7. VI
8. VI
9. VII
UNIT 4

First Tier

Pre-Reading
DISCUSSION (PAGE 177)
Answers will vary.

Post-Reading
Basic Comprehension
MULTIPLE CHOICE (PAGES 181–83)

1. d
2. a
3. c
4. d
5. c
6. c
7. b
8. a
9. c

COMPLETING A CHART (PAGE 183)

<table>
<thead>
<tr>
<th>Hurricane Audrey</th>
<th>Hurricane Camille</th>
</tr>
</thead>
<tbody>
<tr>
<td>It was tracked by a ground-based radar.</td>
<td>It resulted in a relatively low number of fatalities.</td>
</tr>
<tr>
<td>Warnings about it arrived too late.</td>
<td>It was tracked by satellite.</td>
</tr>
<tr>
<td>It struck Louisiana, Mississippi, and Virginia.</td>
<td>It struck Louisiana, Mississippi, and Virginia.</td>
</tr>
<tr>
<td>Local populations prepared for it in advance.</td>
<td>Local populations prepared for it in advance.</td>
</tr>
</tbody>
</table>

Not used:
Its winds were greater than 175 miles per hour.
No one was evacuated before it struck.
MAP WORK (PAGE 184)

SHORT ANSWER (PAGE 184)

Answers will vary.

Vocabulary

MULTIPLE CHOICE (PAGES 185–86)

1. a  7. a
2. b  8. b
3. d  9. a
4. c  10. c
5. c  11. d
6. a

MATCHING (PAGE 187)

1. c  6. i
2. h  7. j
3. a  8. g
4. f  9. d
5. e  10. b
GOVERNMENT AND CULTURAL TERMS (PAGE 188)

Possible answers:

Army Corps of Engineers: an army group responsible for the U.S. water resources

class-action lawsuit: when a group of people sues a person or organization

clergy: religious officials

county: an administrative division within a state
governor: the head of a state government in the U.S.

insurance adjuster: someone who works for an insurance company to determine the value of losses

National Guard: the U.S. militia, a reserve military force

National Hurricane Center: a branch of the National Weather Service that focuses on forecasting and providing warnings of hurricanes

National Weather Service: a national government organization that provides weather forecasts and warnings for the United States

parish: an administrative division of Louisiana similar to a county

Weather Bureau: a former national government organization that monitored weather and provided storm warnings; “the predecessor of the National Weather Service”

Reading Focus

Putting Reading to Work

WRITING AND DISCUSSION (PAGE 189)

Answers will vary.

Second Tier

Pre-Reading

THINKING AHEAD (PAGE 190)

Answers will vary.
Post-Reading

Basic Comprehension

MULTIPLE CHOICE (PAGES 199–201)

1. c 7. d
2. d 8. a
3. b 9. c
4. b 10. c
5. d 11. a
6. b 12. c

Vocabulary

MULTIPLE CHOICE (PAGES 202–3)

1. d 6. c
2. b 7. d
3. a 8. c
4. a 9. b
5. b 10. b

PARAPHRASING (PAGES 204–5)

Possible answers:
1. intentionally
2. inadvertently
3. abundant
4. anticipate
5. succumb
6. draw on
7. imperceptible
8. incipient
9. fluctuation
10. veneration

Reading Focus

Inference

MULTIPLE CHOICE (PAGES 205–6)

1. b
2. c
3. a
Polysemy

MULTIPLE CHOICE (PAGES 206–7)

1. c
2. c
3. d
4. b
5. a
6. b
7. d
8. b

Reading Focus

Building a Text Model

IDENTIFYING SUPPORTING DETAILS (PAGES 208–9)

Reasons for failure to anticipate a problem

1. Failure due to lack of experience
   a. i (Paragraphs 6-7)
   b. h (Paragraph 8)
   c. d (Paragraph 8)

2. Failure due to forgotten experience
   a. e (Paragraph 9)
      i. b (Paragraph 9)
      ii. c (Paragraph 9)
   b. f (Paragraph 10)
      i. a (Paragraph 10)
      ii. j (Paragraph 10)

3. Failure due to reasoning by false analogy
   a. k (Paragraph 11)
   b. g (Paragraph 12)

Putting Reading to Work

WRITING AND DISCUSSION (PAGES 210–12)

Answers will vary.
**Third Tier**

**Pre-Reading**

DISCUSSION (PAGE 213)

Answers will vary.

**Post-Reading**

SHORT ANSWER (PAGE 223)

Possible answers:

1. He first said he just wanted them. His real motive was money.
2. He frequently changed identities. He led a middle-class existence. He offered to pay for the damage to avoid arrest.
3. A lot of people who were needed to get a search warrant were on vacation for the holidays. Along with indifference, bureaucracy, and disorganization, Bland was free for longer.

**MULTIPLE CHOICE (PAGES 224–26)**

1. c  
2. d  
3. b  
4. d  
5. c  
6. a  
7. d  
8. d  
9. a  
10. b, c

**Vocabulary**

**MULTIPLE CHOICE (PAGES 226–28)**

1. a  
2. d  
3. d  
4. a  
5. c  
6. b  
7. c  
8. b  
9. d  
10. a  
11. d

**MATCHING (PAGE 229)**

1. j  
2. h  
3. g  
4. c  
5. d  
6. i  
7. e  
8. f  
9. b  
10. a
FIGURATIVE LANGUAGE (PAGES 230–31)

1. g  9. d
2. k  10. i
3. b  11. f
4. e  12. c
5. m  13. o
6. a  14. h
7. n  15. l
8. j

Reading Focus

Textual Organization

STRAIGHT NARRATIVE AND FLASHBACKS (PAGES 232–34)
Possible answers:

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>SN/FB</th>
<th>Time(s) of Flashback(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SECTION 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>SN</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SN</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>SN</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>FB</td>
<td>Jennifer Bryan’s training; when libraries were robbed</td>
</tr>
<tr>
<td><strong>SECTION 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>SN</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>SN</td>
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<tr>
<td>10</td>
<td>SN</td>
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<tr>
<td>12</td>
<td>SN</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>SN</td>
<td></td>
</tr>
<tr>
<td><strong>SECTION 3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>FB</td>
<td>when Bland used fake names</td>
</tr>
<tr>
<td>15</td>
<td>FB</td>
<td>when Bland used libraries to get ideas for fake names</td>
</tr>
<tr>
<td>16</td>
<td>FB</td>
<td>1973–1975; when Bland was in prison (perhaps 1975–1978)</td>
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<td>17</td>
<td>FB</td>
<td>when Bland created a new life</td>
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<td><strong>SECTION 4</strong></td>
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<tr>
<td>18</td>
<td>FB</td>
<td>during Bland’s earlier days of successful map theft</td>
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<tr>
<td>19</td>
<td>SN</td>
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<tr>
<td>20</td>
<td>SN</td>
<td></td>
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<tr>
<td>21</td>
<td>SN or FB</td>
<td>about earlier crimes in Baltimore</td>
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<td>22</td>
<td>SN</td>
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<tr>
<td>23</td>
<td>SN</td>
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<td>24</td>
<td>SN</td>
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<tr>
<td>SECTION 5</td>
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<td>----------</td>
<td>-----</td>
<td>----------------------</td>
</tr>
<tr>
<td>25</td>
<td>FB</td>
<td>Mills' creation of maps/sales of atlas maps</td>
</tr>
<tr>
<td>26</td>
<td>SN</td>
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<tr>
<td>27</td>
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<tr>
<td>31</td>
<td>FB</td>
<td>during Bland's earlier use of the Internet</td>
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<tr>
<td>32</td>
<td>SN</td>
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<tr>
<td>33</td>
<td>SN</td>
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<td>35</td>
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<tr>
<td>36</td>
<td>SN</td>
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<td>37</td>
<td>SN</td>
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<tr>
<td>38</td>
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<td></td>
</tr>
<tr>
<td>39</td>
<td>SN</td>
<td></td>
</tr>
</tbody>
</table>

**ORDER OF EVENTS (PAGE 235)**

a. 5  
g. 8  
b. 7  
h. 3  
c. 11  
i. 9  
d. 1  
j. 4  
e. 2  
k. 6  
f. 10  
l. 12