

LESSON 18

From **Silent Spring** (essay)
by Rachel Carson

We stand now where two roads **diverge**. But unlike the roads in Robert Frost’s familiar poem, they are not equally fair. The road we have long been traveling is **deceptively** easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road—the one “less traveled by”—offers our last, our only chance to reach a destination that assures the **preservation** of our earth.

The choice, after all, is ours to make. If, having endured much, we have at last asserted our “right to know,” and if, knowing, we have concluded that we are being asked to take senseless and frightening risks, then we should no longer accept the counsel of those who tell us that we must fill our world with poisonous chemicals; we should look about and see what other course is open to us.

A truly extraordinary variety of **alternatives** to the chemical control of insects is available. Some are already in use and have achieved brilliant success. Others are in the stage of laboratory testing. Still others are little more than ideas in the minds of imaginative scientists, waiting for the opportunity to put them to the test. All have this in common: they are biological solutions, based on understanding of the living **organisms** they seek to control, and of the whole **fabric** of life to which these organisms belong. Specialists representing various areas of the vast field of biology are contributing—entomologists, pathologists, geneticists, physiologists, biochemists,

ecologists—all pouring their knowledge and their creative inspirations into the formation of a new science of biotic controls.

“Any science may be likened to a river,” says a Johns Hopkins biologist, Professor Carl P. Swanson. “It has its obscure and unpretentious beginning; its quiet stretches as well as its rapids; its periods of drought as well as of fullness. It gathers momentum with the work of many investigators and as it is fed by other streams of thought, it is deepened and broadened by the **concepts** and generalizations that are gradually **evolved**.”

So it is with the science of biological control in its modern sense. In America it had its obscure beginnings a century ago with the first attempts to introduce natural enemies of insects that were proving troublesome to farmers, an effort that sometimes moved slowly or not at all, but now and again gathered speed and momentum under the **impetus** of an outstanding success. It had its period of drought when workers in applied entomology, dazzled by the spectacular new insecticides of the 1940’s, turned their backs on all biological methods and set foot on “the treadmill of chemical control.” But the goal of an insect-free world continued to recede. Now at last, as it has become apparent that the heedless and **unrestrained** use of chemicals is a greater menace to ourselves than to the targets, the river which is the science of biotic control flows again, fed by new streams of thought.

Exercise 1: Context Clues

Read the passage above, paying special attention to the words in dark type. These are the Master Words you will study in this lesson. As you read, look for context clues in the sentences and paragraphs around each Master Word. Circle any words and phrases that give clues to the meaning of the Master Words.

Master Words				
Place a check by words you feel you know; underline words you don’t know.				
alternative	deceptive	evolve	impetus	preservation
concept	diverge	fabric	organism	unrestrained

Exercise 2: Using Context Clues

Fill in the form for each of the Master Words listed below with context clues (if any), your definition, and the dictionary definition. If you have difficulty writing a definition, try using the word in a sentence instead.

1. **alternative** Part of Speech: *n.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

2. **concept** Part of Speech: *n.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

3. **deceptive** Part of Speech: *adj.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

4. **diverge** Part of Speech: *v.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

5. **evolve** Part of Speech: *v.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

6. **fabric** Part of Speech: *n.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

7. **impetus** Part of Speech: *n.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

8. **organism** Part of Speech: *n.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

9. **preservation** Part of Speech: *n.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

10. **unrestrained** Part of Speech: *adj.* Context Clues: _____

Your Definition: _____

Dictionary Definition: _____

• • • Exercise 3: Synonyms and Antonyms

Use the synonyms and antonyms in the word list to fill in the blanks except where you see an X.

	Synonyms	Antonyms
1. diverge	_____	_____
2. deceptive	_____	_____
3. unrestrained	_____	_____
4. preservation	_____	_____
5. concept	_____	_____
6. evolve	_____	_____
7. alternative	_____	X
8. impetus	_____	_____
9. organism	_____	X
10. fabric	_____	X

Word List	
being	idea
choice	lawless
creature	meet
destruction	misleading
develop	protection
disciplined	separate
halt	stimulus
hindrance	structure
honest	

• • • Exercise 4: Sentence Completion

From the Master Words, choose the appropriate word for the blank in each of the following sentences. Write the word in the space provided at the right.

- Ava's writing style has continued to ...?... in interesting ways.
- The ...?... of relativity is difficult to grasp.
- Most diseases are caused by ...?... (s) so tiny that they can be seen only through a microscope.
- The flood gave ...?... to the plan to relocate people to higher ground.
- When the ice cracked beneath Neil's feet, he realized that the solid appearance of the pond had been ...?... .
- "Vacation!" Logan sighed. "To feel ...?... , liberated from homework and tests."
- Several civic groups pressed for the ...?... of the historic building.
- A huge boulder caused the creek to ...?... into two smaller streams.
- A trip to the art museum was suggested as (a, an) ...?... to the theater party.
- Immigrants from every nation have become part of the ...?... of our society.

• • • Exercise 5: Shades of Meaning

Many words have both a denotation and a connotation. The *denotation* is the dictionary meaning of a word; the *connotation* is the emotional content the word may carry. For example, the words *stingy* and *thrifty* have similar denotations, but their connotations are quite different. *Stingy* has a negative connotation because it describes someone who is selfish. *Thrifty* has a positive connotation when it describes someone who is careful with money but who is otherwise generous. Some words have a neutral connotation, neither especially positive nor especially negative.

Each sentence below contains a pair of synonyms in parentheses. Write the word with the connotation indicated in bold type after the sentence. Use a dictionary if necessary. An example is done for you.

My neighbor is (stingy, thrifty) with his money. **(positive)**

thrifty

1. When journalists leave out important information, their reports can become (deceptive, underhanded). **(neutral)**

2. With long life experience, many seniors have (evolved, mutated) into wise and broad-minded people. **(positive)**

3. The fiery speech was the (impetus, incitement) for the riot. **(negative)**

4. The horses ran (unrestrained, rampant) when they smelled smoke. **(negative)**

5. The artist's creative mind (diverged, strayed) from the ordinary. **(neutral)**

• • • Exercise 6: Figurative Language: Extended Metaphor

In the passage, biologist Carl Swanson uses an extended metaphor, a figure of speech that compares essentially unlike things to focus on an important similarity. He compares science to a river, and then notes several specific ways in which the two are alike. In the chart below, write all the ways in which science and a river are alike, with a brief explanation. One comparison is done for you as an example.

Science	River
begins unpretentiously	is nothing special at its source

Write About It: Summary

Write a paragraph-by-paragraph summary of the passage from *Silent Spring*. Use at least five Master Words or words related to the Master Words in your summary.

Unit Word Study

Classic Roots and Affixes (*para-*, *lyze*, *-d*; *in-*, *fin*, *-ite*)

The Master Word **paralyzed** is composed of the Greek prefix *para-*, which means “beside, beyond, altered,” or “irregular,” and the Greek root *lyein-*, which means “loosen or untie.” The *-d* at the end of the word forms the past tense or the adjective form of the word. Putting those meanings together, you get “abnormal loosening or loss of control.” There is also a Latin prefix *para-*, which means “in defense against.” Use this information and a dictionary of etymology to complete the exercise below.

Matching

Write the letter of the matching etymology after the word on the left.

- | | | |
|----------------------|-------|---------------------------|
| 1. paramedic | _____ | a. defense against a fall |
| 2. paranormal | _____ | b. beyond the mind |
| 3. paralegal | _____ | c. next to writing |
| 4. paragraph | _____ | d. beside each other |
| 5. parachute | _____ | e. alongside a doctor |
| 6. parasite | _____ | f. beyond normal |
| 7. parallel | _____ | g. beside the food |
| 8. paranoia | _____ | h. alongside a lawyer |

Writing Definitions

The Master Word **infinite** is made up of the Latin prefix *in-*, which means “not” or “the opposite,” the Latin root word *finis*, which means “end,” and the adjective-forming suffix *-ite*.

Use a dictionary and/or dictionary of etymology to explain the meaning of each part of the following words. On the second line, write a sentence using the word. An example has been done for you.

infinite the quality (-ite) of being without (in-) end (fin)
The toddler seemed to have an infinite amount of energy.

1. **definitive**

2. **final**

3. **confine**

4. **affinity**

Unit Word Study

Academic Vocabulary

Some of the Master Words in Unit 4 are part of your academic vocabulary. These are words that you might not use often in daily conversation but that you use to understand concepts in academic areas.

The sentences below are the type you might encounter in a school assignment, test, or textbook. Write the word that best completes each sentence.

alternative	authority	brief	concept	definitive
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1. Write (a, an) ...?... description, no more than a paragraph, of cell division.

2. Check into the ...?... of your sources: Is the author reliable? Is the work recent?

3. Although several people had made strides in classifying plants before him, Linnaeus created the ...?... classification system of living things that has been used since.

4. Your textbook presents one view of the problem. Explain (a, an) ...?... that opposing historians have presented.

5. By the time the Declaration of Independence was signed, the ...?... of participatory government was not new to the American colonists.

Domain-Specific Words

Domain-specific words are those that are used in a certain subject area, such as math or science.

Words in the following list are from the domains of science, language arts, and social studies, as noted in parentheses in the first column. For each word, work in pairs to write a brief definition as it is used in the domain. Then give an example and think of other words like it. Use your textbooks or other sources as needed. The first one is done for you.

Word	Definition as Used in the Domain	Example	Other Words Like It (synonyms)
1. biography (language arts)	a person's life story	biography of Lincoln	life story, narrative account
2. infinite (math)			
3. environment (science, social studies)			
4. martial (social studies)			
5. fictional (language arts)			

Unit Assessment

I. Read the passage below. Then answer questions 1–8.

Four-Winged Birds

In 1915, an **ornithologist** named William Beebe first put forward the **concept** that as birds **evolved** from dinosaurs, they passed through a four-winged stage. There was little evidence to support his view, but a finding in 2003 made people realize that Beebe had been ahead of his time. In that year, Xing Xu, a renowned **authority** on dinosaurs, found fossil remains of dinosaurs in which the **presence** of long feathers on the back limbs is very **apparent**.

For some time, scientists had assumed that the four-winged design faded before true birds made their appearance, but in 2013 Xing Xu found more fossils—this time of early birds—that clearly show four wings. Xu speculates that the second set of wings protruding from the legs probably helped the early birds turn or glide, possibly like a bi-plane.

Other scientists are **wary** of the assumption that these feathers were used for flight. Some argue that the leg feathers could have been a **mere** “developmental quirk” and point out that there is no proof that these back wings were even aerodynamic. And if they were used in flight, why did they then eventually disappear?

Xu answers these questions by examining the possible **impetus** for flight. Tree-dwelling dinosaurs could have developed wings and the ability to fly

and glide in order to expand their range. These tree dwellers may then have gradually moved from life in the treetops to life on the ground. With this move, long stiff feathers on the back limbs would have been in the way. The purpose of the front and back limbs might have then **diverged**, with the front limbs dedicated to flapping-wing flight and the back limbs to getting around on land. Xu explains, “In the early evolution of flight, different animal groups always try to use as much surface as possible. Once the major flight organ is well developed, the animal just fires the other organs.”

Xu himself admits that future discoveries of birds with scales rather than feathers on their hind limbs from the same era—about 130 million years ago—would weaken his position and suggest that the four-winged creatures were a side branch rather than the main line of bird evolution. Yet even those who question the use of the back wings in flight are excited by the recent developments and the part they may play in understanding the evolution of bird flight. As paleontologist Mark Norell of the American Museum of Natural History in New York notes, “The origin of flight is not going to come from just one discovery.”

Questions 1–3: Find the word most nearly **opposite** in meaning to the given word.

1. evolved is most nearly **opposite** in meaning to

- | | |
|-------------|------------|
| Ⓐ prospered | Ⓓ declined |
| Ⓑ turned | Ⓔ deserted |
| Ⓒ denied | |

2. authority is most nearly **opposite** in meaning to

- | | |
|-------------|-----------|
| Ⓐ amateur | Ⓓ author |
| Ⓑ scientist | Ⓔ doubter |
| Ⓒ expert | |

3. presence is most nearly **opposite** in meaning to

- | | |
|-----------------|--------------|
| Ⓐ pretense | Ⓓ absence |
| Ⓑ appearance | Ⓔ likelihood |
| Ⓒ disappearance | |

continued

Unit Assessment

Questions 4–6: Find the word most similar in meaning to the given word.

4. ornithologist is most **similar** in meaning to

- (A) fossil expert (D) bird scientist
- (B) geologist (E) dinosaur scientist
- (C) reptile scientist

5. concept is most **similar** in meaning to

- (A) idea (D) guess
- (B) hypothesis (E) possibility
- (C) contradiction

6. apparent is most **similar** in meaning to

- (A) shadowed (D) hypothetical
- (B) uncertain (E) unlikely
- (C) obvious

Questions 7–8: Choose the answer about the part of speech of the given word as used in the sentence.

7. What is the part of speech of the word **wary** as used in the sentence below?

Other scientists are **wary** of the assumption that these feathers were used for flight.

- (A) verb (D) adverb
- (B) noun (E) preposition
- (C) adjective

8. What is the part of speech of the word **impetus** as used in the sentence below?

Xu answers these questions by examining the possible **impetus** for flight.

- (A) verb (D) adverb
- (B) noun (E) preposition
- (C) adjective

Questions 9–10: Choose the answer with the words from the unit that best fit the blanks and complete the sentence.

9. Was it (a, an) ...?... accident, or did the back wings appear as an important adaptation as birds ...?... ?

- (A) definitive – aged
- (B) fictional – aged
- (C) historical – obscured
- (D) mere – evolved
- (E) mere – evinced

10. The purpose of the two sets of wings ...?... when life on the ground became (a, an) ...?... to life in the treetops.

- (A) attached – impetus
- (B) evolved – presence
- (C) diverged – alternative
- (D) diverged – environment
- (E) obscured – organism

Unit Assessment

II. Read the passage below and answer the questions that follow.

I felt the same vague terror which had come to me before and the same sense of some **presence**. I turned to wake Jonathan, but found that he slept so soundly that it seemed as if it was he who had taken the sleeping draught, and not I. I tried, but I could not wake him. This caused me a great fear, and I looked around terrified. Then indeed, my heart sank within me. Beside the bed, as if he had stepped out of the mist, or rather as if the mist had turned into his figure, for it had entirely disappeared, stood a tall, thin man, all in black. I knew him at once from the description of the others. The waxen face, the high aquiline nose, on which the light fell in a thin white line, the parted red lips, with the sharp white teeth showing between, and the red eyes that I had seemed to see in the sunset on the windows of St. Mary's Church at Whitby. I knew, too, the red scar on his forehead where Jonathan had struck him. For an instant my heart stood still, and I would have screamed out, only that I was **paralyzed**. In the pause he spoke in a sort of **keen**, cutting whisper, pointing as he spoke to Jonathan.

—from *Dracula: A Mystery Story* by Bram Stoker

11. What word is most similar to the word **presence**?
- Ⓐ gifts Ⓒ composure
Ⓑ company Ⓓ absence
12. Which phrase from the passage best helps the reader understand the meaning of **paralyzed**?
- Ⓐ For an instant
Ⓑ In the pause
Ⓒ I would have screamed out
Ⓓ my heart
13. Which dictionary definition below best matches the use of the word **keen** in the passage?
- Ⓐ *adj.* pungent or acrid
Ⓑ *adj.* eager; enthusiastic
Ⓒ *adj.* clever and smart
Ⓓ *adv.* piercing

III. Read the passage below and answer the questions that follow.

Out of the corner of his eye Crosby also noted with some interest the hesitating hoverings of a human figure, which had passed and repassed his seat two or three times at shortening intervals, like a ...?... crow about to ...?... near some possibly edible morsel.

—from “The Romancers” by Saki

14. Which pair of words best completes the blanks in the passage?
- Ⓐ adolescent ... nest
Ⓑ tired ... caw
Ⓒ hungry ... hide
Ⓓ wary ... alight
15. Which two words or phrases from the passage best help the reader answer question 14?
- Ⓐ hoverings, human
Ⓑ figure, passed
Ⓒ hesitating, crow
Ⓓ repassed, intervals

Unit Assessment

IV. Read the passage below and answer the questions that follow.

The chase was a long one, and when my aunt at last ran the bird to a **standstill** she was nearer home than she was to the shooting party; she had left that some five miles behind her.”

“Rather a long run for a wounded pheasant,” snapped Amblescope.

“The story rests on my aunt’s **authority**,” said Treddleford coldly, “and she is local vice-president of the Young Women’s Christian Association. She trotted three miles or so to her home, and it was not till the middle of the afternoon that it was discovered that the lunch for the entire shooting party was in a pannier attached to the pony’s saddle. Anyway, she got her bird.”

—from “A Defensive Diamond” by Saki

16. Which words or phrases best help you understand the meaning of the word *standstill*?

- Ⓐ long one, nearer home
- Ⓑ shooting party
- Ⓒ chase, at last
- Ⓓ ran the bird, nearer home

17. In the third paragraph, what is the meaning of the word *authority*?

- Ⓐ testimony
- Ⓑ expert
- Ⓒ official
- Ⓓ power

V. Writing a Narrative: The Power of Birds

Several passages in this unit focus on birds. For as long as people have been around, birds have held a power over humans, often taking a prominent position in folklore. Do some research to find a folktale in which one or more birds are the central characters. Retell that folktale in a narrative. The following Master Words from Unit 4 may be especially useful as you write your narrative. Try to use as many as you can.

alight	deceptive	environment	keen	obscured
apparent	derisive	frantic	mere	snobbery
bound	elation	infinite	namesake	wary

Editing for Conventions

When you revise and edit your narrative, pay special attention to these concerns.

- Use parallel structure.
- Use a variety of phrases and clauses to add interest to writing.
- Use a semicolon to link closely related independent clauses. Use a colon to introduce a list or quotation.
- Capitalize and spell correctly.