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READING

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SSS Reading

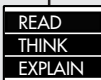
This test measures how well students are achieving the benchmarks in Florida's Sunshine State Standards.

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Permission has not been granted for reprinting the poem *The Leaf and the Tree* by Edna St. Vincent Millay. Questions associated with this poem have been provided in this Test Book.

After you have read each poem, article, or passage, answer the questions in this Test Book.



This symbol appears next to questions that require short written answers. Use about 5 minutes to answer each of these questions.

A complete and correct answer to each of these questions is worth 2 points.
A partially correct answer is worth 1 point.



This symbol appears next to questions that require longer written answers. Use about 10 to 15 minutes to answer each of these questions.

A complete and correct answer to each of these questions is worth 4 points.
A partially correct answer is worth 1, 2, or 3 points.

Read the poems “Woman with Flower” and “Offspring” before answering Numbers 1 through 7.



**Naomi Long Madgett,
1923—**

Naomi Long Madgett, a native of Norfolk, Virginia, born July 5, 1923, earned a B.A. from Virginia State University (1945), an M.Ed. from Wayne State University (1955), and a Ph.D. from the Institute for Advanced Studies (1980). She was raised in New Jersey, Missouri, and New York, and since 1946 has lived in Detroit, where she worked in the forties and fifties as a reporter and later as a teacher in the public schools. A poet and publisher (Lotus Press), she is the author of the poetry collection *Remembrance of Spring* (1993) and nine other books.

Woman with Flower

I wouldn't coax the plant if I were you.
Such watchful nurturing may do it harm.
Let the soil rest from so much digging
And wait until it's dry before you water it.
The leaf's inclined to find its own direction;
Give it a chance to seek the sunlight for itself.

Much growth is stunted by too careful prodding,
Too eager tenderness.
The things we love we have to learn to leave alone.

Offspring

I tried to tell her:

This way the twig is bent.
Born of my trunk and strengthened by my roots,
You must stretch newgrown branches
Closer to the sun
Than I can reach.

I wanted to say:

Extend my self to that far atmosphere
Only my dreams allow.

But the twig broke,
And yesterday I saw her
Walking down an unfamiliar street,
Feet confident,
Face slanted upward toward a threatening sky,
And
She was smiling
And she was
Her very free,
Her very individual,
Unpliable
Own.

Naomi Long Madgett: “Woman with Flower” from *Star by Star*. Copyright © 1965, 1970. “Offspring” from *Pink Ladies in the Afternoon*. Copyright © 1972, 1990. Reprinted by permission.

Answer Numbers 1 through 7. Base your answers on the poems "Woman with Flower" and "Offspring."

- 1 Read these lines from the poem "Woman with Flower."

**I wouldn't coax the plant if I were you.
Such watchful nurturing may do it harm.
Let the soil rest from so much digging**

What is the meaning of the word *nurturing* as it is used in these lines?

- A. conceit
- B. corrupting
- C. fostering
- D. gallantry

- 2 Read these lines from "Woman with Flower."

**The leaf's inclined to find its own direction;
Give it a chance to seek the sunlight for itself.**

Based on the rest of the poem, which sentence best restates the meaning of these lines?

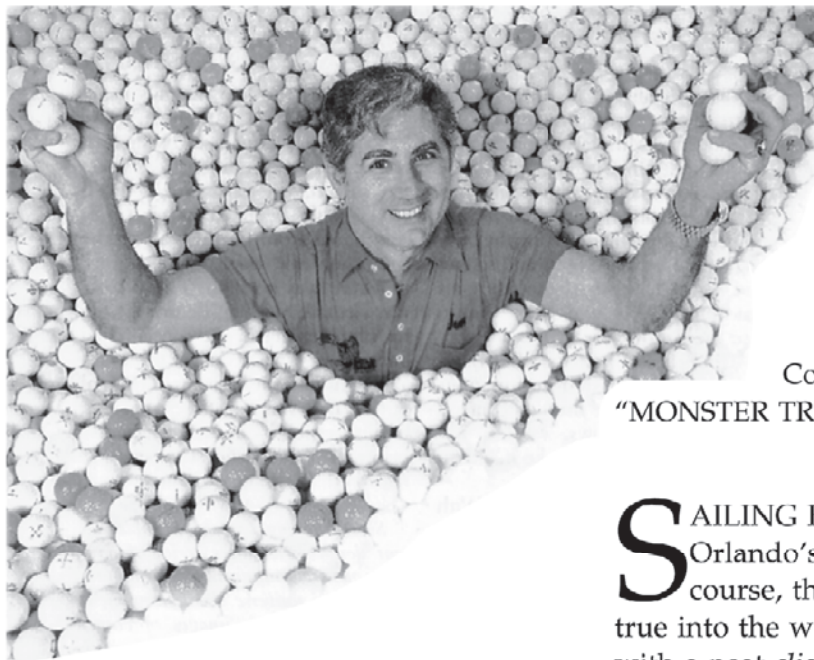
- F. The leaf isolates itself from other leaves.
- G. The leaf wants to create its own illusions.
- H. The leaf prefers to seek its own destination.
- I. The leaf avoids previously established paths.

- 3 The author of "Woman with Flower" suggests that "Too eager tenderness" will most likely

- A. prompt a loved one to flee.
- B. compel a loved one to be resentful.
- C. amplify the anxieties of a loved one.
- D. restrict the development of a loved one.

- 4 Which word best describes the tone of “Woman with Flower”?
- F. indifferent
 - G. instructive
 - H. reverent
 - I. somber
- 5 The speaker of “Offspring” does not refer to herself in the last 10 lines of the poem. Why does the author most likely structure the poem in this way?
- A. to indicate the daughter’s growing separation from the speaker
 - B. to suggest that the speaker is becoming a more sociable person
 - C. to show that the speaker is describing someone else’s observations
 - D. to emphasize the daughter’s diminishing importance to the speaker
- 6 Which phrase best describes both the gardener in “Woman with Flower” and the speaker of “Offspring”?
- F. devoted, but anxious
 - G. distressed, but cautious
 - H. attentive, but impractical
 - I. industrious, but indecisive
- 7 Which excerpt best expresses the theme of both “Woman with Flower” and “Offspring”?
- A. “Let the soil rest from so much digging . . .”
 - B. “Much growth is stunted by too careful prodding . . .”
 - C. “The things we love we have to learn to leave alone.”
 - D. “Extend my self to that far atmosphere / Only my dreams allow.”

Read the article "20,000 Golf Balls Under the Sea" before answering Numbers 8 through 13.



Condensed from
"MONSTER TRUCKS & HAIR-IN-A-CAN"
by Bill Geist

20,000 Golf Balls Under the Sea

*Only a true entrepreneur¹
could find the hidden treasure.*

SAILING HIGH off the eighth tee at Orlando's Grand Cypress golf course, the ball climbs straight and true into the warm, blue sky, powered—with a neat *click!*—by a state-of-the-art graphite-shafted driver. Descending a bit early, the dimpled sphere falls short of the green, landing in a charming lake.

"Attaboy!" whoops Jim Reid, sitting in a golf cart on the shores of the water hazard.²

Next comes a ball flying low off the tee. It skips once, twice, three times on the water, before sinking to Davy Jones's pro shop³ beneath it.

"It's a sweet sound, isn't it?" Reid asks, listening to the *bloop! plop! kerplunk!* of golf balls landing in the lake.

He has reason to cheer. Where others see grief and frustration, Jim Reid sees opportunity. "Basically, I profit from the mistakes of others," he says. Reid began capitalizing on those mistakes in 1981,

¹ **entrepreneur:** a person who organizes, operates, and assumes the risk for a business venture

² **water hazard:** a water obstacle (such as a pond) on a golf course

³ **Davy Jones's pro shop:** a reference to Davy Jones's locker, commonly understood as the bottom of the sea

becoming the Used Golf Ball King of Florida.

He moved there from Oklahoma in 1971, taking a job as a surveyor. He met Beverly, who worked for the phone company, and married her. They bought a little house.

Jim took up scuba diving, scouring shipwrecks for gold doubloons and such. Then one day he put on his scuba gear and hopped into a water hazard on the Rolling Hills golf course in Longwood, just to see what he could see.

"What I saw was amazing," Jim recalls. "The entire bottom was solid white. Thousands of golf balls!"

He examined a bunch in the daylight. "Most of them looked just like new," he recalls. He showed them to the course manager, who offered Reid ten cents a ball.

Reid dived back in. He came up with more than 2,000 balls that day, making almost as much as he was normally paid for a week's work. After talking it over with Beverly, he decided to take the plunge: quit his job and go golf-ball diving full time.

"It was kind of embarrassing," Reid admits. "When people ask you what you do for a living and you say you dive in mudholes for golf balls, they kind of back off."

But dive he did, and the harvest was plentiful. First he brought home carloads of balls and cleaned them in Beverly's washing machine. Beverly, although supportive, drew the line at letting Jim destroy her machine, so he bought his own.

The neighbors didn't care for the idea either. Imagine listening to 500 golf balls go round and round in a washing

machine until all hours of the night. So Jim hired the neighbors.

Over time he experimented with technology. He tried cleaning the balls in a cement mixer, but the process scoured the dimples off the balls and they wouldn't fly straight. A golf pro called to complain about this; later he called back to say it wasn't so bad after all—everybody was signing up for lessons.

Reid and his staff of neighbors went back to washing the balls, which they then perched on trios of nails and spray-painted. They boxed them up and sold them at half the price of new balls.

Word spread, and other divers began to take an interest. Jim bought balls from them. Soon, semitrailer trucks were backing up to his garage, bringing in old muddy balls and taking them away like new. Not able to hire *all* the complainers in his neighborhood, Jim moved his business to an industrial area.

"How's the fishing today?" Jim yells to divers unloading the catch of the day on his dock.

"Pretty good," says one of them. "About 2,500 balls, I'd say."

"Get 'em over at Grand Cypress?" Jim asks.

"Yeah. Off the tee there on the ninth," the diver replies, graciously divulging a hot spot to the other divers.

Divers collect eight cents a ball. One diver, Dan Becher, is at the top of his trade, probably the best Used Golf Ball Diver in the state. In 1993 he



retrieved 652,000 balls. He drives an El Camino with a car phone and makes about \$50,000 a year.

But Reid stresses it's no picnic out there: "It takes a special breed of person to be down there for hours in the dark with snakes and eels—and your imagination."

Water hazards range as deep as 50 feet. Divers tell of stepping on broken glass or jagged pieces of metal. Several have been struck by golf balls. Reid himself was hit by lightning while underwater.

It is late afternoon and the used-golf-ball fleet keeps coming in, one diver after another with the harvest of a bounty of bad shots.

After the balls are unloaded, they are counted, rinsed, and marinated in a vat of Jim's secret sauce, a whitener. And he does mean secret. Employees have to sign a five-page pledge that they will not divulge its contents.

After whitening, the balls are sprayed with an acrylic. They are then sorted by brand and quality by people sitting at a table and dropping balls into a contraption that has plastic pipe running every which way before finally emptying the balls into buckets. The ones in bad condition used to be sold to cruise ships

for use on the ultimate water hazard—but environmental regulations put a stop to that. Now they're being stored in case someone ever comes up with a nifty use for them.

"When I quit my job," Jim said, "I figured I'd have to find 2,500 golf balls a week to break even." Between 80,000 and 100,000 balls a *day* now arrive at the Orlando company, called Second Chance Golf Ball Recyclers, from courses as far away as Hawaii. In 1993 Second Chance had gross revenues of about \$5 million.

"The only thing that could hurt Second Chance now," Reid says, "is if one of the major companies comes up with a floating golf ball. But that would hurt them worse. The way it is now, everybody but the guy who hits the ball makes money."

Some 200 million new golf balls are manufactured every year. Where do they all go? *Blop! Plop! Kerplunk!*

"When will they ever learn?" I ask Jim. "Never, I hope."

After selling Second Chance for \$5.1 million in May 1994, Jim Reid now relaxes on his yacht, the Ball Bandit. "I may take up golf," he says. "You know, I've never played the game."

Answer Numbers 8 through 13. Base your answers on the article “20,000 Golf Balls Under the Sea.”

- 8** Which word BEST describes Jim Reid’s approach to business?
- F. foolhardy
 - G. optimistic
 - H. skeptical
 - I. solitary
- 9** Which experience influenced Jim Reid to change his career?
- A. finding 2,500 golf balls a week
 - B. collecting 652,000 golf balls in 1993
 - C. retrieving 2,000 golf balls in one day
 - D. earning eight cents a golf ball for retrieval
- 10** Which of the following is an example of an obstacle Jim Reid turned into a business advantage?
- F. painting dirty golf balls that pro shops will not sell
 - G. storing damaged golf balls that cruise ships will not use
 - H. hiring his neighbors when they complained about the noise
 - I. employing other divers when they complained about the competition

11

Select one of the following personality traits and show how it helped Jim Reid build a successful career. Use details and information from the article to support your response.

READ
THINK
EXPLAIN

Daring

Hardworking

Imaginative

12

What is the MAIN drawback to Jim Reid's business?

- A. Diving is hazardous work.
- B. Employees are hard to find.
- C. Golf balls are difficult to clean.
- D. Competition is steadily growing.

13

What was the author's purpose in writing this article?

- F. to entertain the reader with a story of one man's ingenuity
- G. to teach new golfers the importance of avoiding water hazards
- H. to provide entrepreneurs with a plan for starting new businesses
- I. to demonstrate the necessity of accommodating troublesome neighbors

Read the article "The Police Beat" before answering Numbers 14 through 19.

The Police Beat

by Wayne Dawkins

an excerpt from *My First Year as a Journalist*

Wayne Dawkins is an assistant metro editor at the Courier-Post in Camden/Cherry Hill, New Jersey, where he also was an editorial writer. He also writes a weekly opinion editorial column that covers topics such as urban issues, race relations, and diversity. He has a bachelor's degree in journalism from Long Island University and a master's degree in journalism from the Columbia University Graduate School of Journalism, where he received a distinguished alumni award in 1990. He is the author of *Black Journalists*, *The NABJ Story*, published by August Press.



Young reporters often get assigned to cover the police beat because it requires a lot of energy. You definitely learn from it, but it's a beat that doesn't get the priority it deserves. It really deserves experienced people because it's a sensitive beat.

A lot of things in journalism you learn by osmosis. Coworkers don't tell you directly and textbooks can't teach you, but in certain situations you have to make ethical calls by trusting your instincts. No one is there to tell you the right course of action to take. In interviews, for example, you can ask official sources really tough questions because they're sophisticated about talking to the press. But it's different when talking with ordinary people, and you need to know when you may be taking advantage of them or invading their privacy. I try to make it as clear as possible that I am from the newspaper, that my intent is to write stories, and not try to mislead them. Being so eager to get a story, some reporters may misrepresent themselves.

Five or six reporters and two editors were based at my office. There was a strong New England influence at Westchester-Rockland newspapers, which felt different from my first journalism experience as an intern in Brooklyn. With hard news and fast-breaking stories, the *Argus* editors were very detail-oriented, making sure you got all the essential elements. There was so much breaking news, but if you had holes in your stories, the editors still would ask, “What about this? What about that? Was a weapon found near a crime scene?” I wouldn’t be angry at the editors for asking. I’d be madder at myself for forgetting to ask in the first place. They wanted this information, so I’d pick up the phone and call or find some other way to get it. Later on, I had a better idea of what questions to ask. You have to get those important details.

One of the biggest things I learned that first year is that you have to be accurate. The *Argus* is an afternoon paper, and covering the police beat, I was the only reporter who wrote on deadline. One of the editors, Nancy Keefe, would often yell at me, even when I was writing brief items for the police notebook, about minor style rules such as when to abbreviate “street” or “avenue.” It was a big thing to her. Aside from style, which is cosmetic, I also learned to make sure to get the facts right, the names right. Sometimes stories about events that had happened at six or seven that morning would get printed in the paper so quickly that the public could read them by eleven. When you’re writing with not that much time, you have to work hard to get it right, and when you get it wrong, you hear about it—that day.

There’s one mistake I always wince about. We ran a Monday feature called “Spotlight,” where each reporter on a rotating basis had to write a twenty-five-inch profile of a person in the community who had done something interesting in a job or hobby. I did one on a local woman, a schoolteacher, and I spelled her name wrong throughout the story. That was terrible. This was a profile, not just a story that I had to write fast. You don’t take things for granted, especially with names.

The paper also emphasized good writing. At newspapers you often have very strong writers, or very strong reporters, and some with a rare ability who are good at both gathering information and telling a story. I learned a lot about both, although I’m probably a stronger reporter. If I can go out and look at something, or interview someone face-to-face, I can craft a pretty good story. Some people

can sit in their offices and turn out beautiful copy without seeing what they're writing about. I have to see it.

My editor, Nancy Keefe, would take time working with me on writing. After I was there about seven months, she left and was replaced by Steve Burgard, who also came in early and read a lot of my copy. Steve, who is now at *The Los Angeles Times*, always asked a lot of questions about facts in the story. It wasn't that he changed things. He just wanted to make sure he understood the story and that the details checked out. I knew why Steve was doing what he was doing. If something was wrong, he'd point it out and say, "Maybe you should do it this way." Some editors annoy reporters because they make changes without asking and ruin the meaning of a story. The rare times when there was time, stories would kick back to us, and we'd get another chance at trying to improve them. I'm grateful for that. There are a lot of reporters who think they're hotshots¹ and who don't know how bad their copy is. I got rigorous training where I worked. When I moved on, my stories didn't have to be heavily rewritten.

I had decided to be a journalist when I was fifteen. My favorite subjects in school were social studies and English. I liked to write and read, and had developed the newspaper reading habit. I was used to seeing my parents read the paper, and I had an uncle in Panama who was a newspaperman. I started as a sportswriter in high school, covered sports in college, then switched to news stories, and eventually was an associate editor. I now have bachelor's and master's degrees in journalism, and I'm glad I do. I have some designs to teach.

At the end of my first year in Mount Vernon, I joined the National Association of Black Journalists. Recently I wrote a book, *Black Journalists, The NABJ Story*, a history of modern-day African-American journalists who have broken into mainstream journalism since the 1960s. I felt there was nothing out there that told that story. I feel an obligation as an African-American journalist to increase our numbers in daily journalism and all parts of the craft.

¹ **hotshots:** slang for people of impressive, often aggressive skill

Answer Numbers 14 through 19. Base your answers on the article "The Police Beat."

- 14 How did Dawkins change after working with the *Argus* editors?
- A. He learned to ask the right questions for a story.
 - B. He learned to meet deadlines in a timely manner.
 - C. He began to check his own work for errors in grammar.
 - D. He became familiar with the newspaper-making process.
- 15 Dawkins regrets having misspelled a person's name in a profile he wrote. Why is this error more embarrassing to him than other errors he has made?
- F. His subject was a schoolteacher.
 - G. He had a reputation to maintain.
 - H. His editor failed to catch the error.
 - I. He had no excuse for such an error.

- 16 Read these sentences from the article.

... she left and was replaced by Steve Burgard, who also came in early and read a lot of my copy. Steve, who is now at *The Los Angeles Times*, always asked a lot of questions about facts in the story.

What is the most likely meaning of the word *copy*?

- A. a printout of a newspaper
- B. editorial criticisms of writing
- C. grammatical concerns in writing
- D. text that reporters write for the paper

17

Using what you have learned from “The Police Beat,” explain why the duties of a newspaper editor are important. Use details and information from the article to support your answer.

READ
THINK
EXPLAIN

18

“The Police Beat” was written in the same style as

- F. a news report.
- G. a formal speech.
- H. a persuasive paper.
- I. a personal narrative.

19

Why did the author write “The Police Beat”?

- A. to present the lessons learned by a first-year reporter
- B. to encourage the reader to take up a career in journalism
- C. to describe the process by which a report becomes a news story
- D. to relate the experiences of one reporter while covering crime stories

Read the article "Electric Tomatoes" before answering Numbers 20 through 24.

Electric Tomatoes

by Steve Nadis

When a caterpillar feeds on a tomato leaf, the plant moves swiftly to protect itself, systematically releasing "proteinase inhibitors"—proteins that interfere with the caterpillar's digestion—throughout the plant, especially in the leaves. But how does the message get from the wounded leaf to the rest of the plant?

Most scientists believed the alarm was spread by chemical messengers until a team of researchers headed by David Wildon—a biologist at the University of East Anglia in Norwich, England—made a shocking discovery. An injured leaf, the researchers found, sends an electrical signal to warn neighboring leaves of imminent danger. It's a "terribly tiny current" driven by an electrical potential difference of only 20 millivolts, says Wildon, who measured the voltage after electrodes were attached to the plant's surface.



"Right now, all we can say is that there is a correlation," Wildon notes. "If you wound the plant, you'll see an electrical signal accompanied by a biochemical response." To learn more about the reaction, Wildon's

team plans to insert electrodes within the plant tissue (rather than on the surface) to determine what's going on at the cellular level.

The findings may help explain other mysteries surrounding plants. For example, many plants start to flower in springtime, as days grow longer,

but plants sense the change in the day length through their leaves, while flowers begin to bloom at the buds. "There must be a signal from the leaf to the growing points," Wildon says. "So far, no one has come up with a convincing chemical mechanism. Maybe an electrical signal is involved."

"Electric Tomatoes" from *Omni Magazine* June 1994. Reprinted by permission of *Omni*, copyright © 1992 Omni Publications International, Ltd.

Answer Numbers 20 through 24. Base your answers on the article "Electric Tomatoes."

- 20 What is the function of the "proteinase inhibitors" in tomato plants?
- F. They produce electrical impulses.
 - G. They create nutritional substances.
 - H. They protect the plant from insects.
 - I. They protect the plant from diseases.
- 21 Prior to this research, most scientists believed that plants spread alarms through
- A. chemical signals.
 - B. physical messages.
 - C. biological mechanisms.
 - D. electrical transmissions.
- 22 What question do scientists hope to answer with further research?
- F. Do plants send chemical messengers that register pain?
 - G. Do plants create cell tissues that help rebuild the leaves?
 - H. Do plants create proteinase inhibitors that warn them of danger?
 - I. Do plants send electrical signals that tell them it is time to grow?

Read the passage "Walking" before answering Numbers 25 through 30.

LINDA HOGAN

Walking



It began in dark and underground weather, a slow hunger moving toward light. It grew in a dry gully beside the road where I live, a place where entire hillsides are sometimes yellow, windblown tides of sunflower plants. But this one was different. It was alone, and larger than the countless others who had established their lives further up the hill. This one was a traveler, a settler, and like a dream beginning in conflict, it grew where the land had been disturbed.

I saw it first in early summer. It was a green and sleeping bud, raising itself toward the sun. Ants worked around the unopened bloom, gathering aphids and sap. A few days later, it was a tender young flower, soft and new, with a pale green center and a troop of silver gray insects climbing up and down the stalk.

Over the summer this sunflower grew into a plant of incredible beauty, turning its face daily toward the sun in the most subtle of ways, the black center of it dark and alive with a deep blue light, as if flint had sparked an elemental¹ fire there, in community with rain, mineral, mountain air, and sand.

As summer changed from green to yellow there were new visitors daily: the lace-winged insects, the bees whose legs were fat with pollen, and grasshoppers with their clattering wings and desperate hunger. There were other lives I missed, lives too small or hidden to see. It was as if this plant with its host of lives was a society, one in which moment by moment, depending on light and moisture, there was great and diverse change.

¹ elemental: basic

There were changes in the next larger world around the plant as well. One day I was nearly lifted by a wind and sandstorm so fierce and hot that I had to wait for it to pass before I could return home. On this day the faded dry petals of the sunflower were swept across the land. That was when the birds arrived to carry the new seeds to another future.

In this one plant, in one summer season, a drama of need and survival took place. Hungers were filled. There was escape, exhaustion, and death. Lives touched down a moment and were gone.

I was an outsider. I only watched. I never learned the sunflower's golden language or the tongues of its citizens. I had a small understanding, nothing more than a shallow observation of the flower, insects, and birds. But they knew what to do, how to live. An old voice from somewhere, gene or cell, told the plant how to evade the pull of gravity and find its way upward, how to open. It was instinct, intuition, necessity. A certain knowing directed the seedbearing birds on paths to ancestral homelands they had never seen. They believed it. They followed.

There are other summons and calls, some even more mysterious than those commandments to birds or those survival journeys of insects. In bamboo plants, for instance, with their thin green canopy of light and golden stalks that creak in the wind. Once a century, all of a certain kind of bamboo flower on the same day. Whether they are in Malaysia or in a greenhouse in Minnesota makes no difference, nor does the age or size of the plant. They flower. Some current of an inner language passes between them, through space and separation, in ways we cannot explain in our language. They are all, somehow, one plant, each with a share of communal knowledge.

John Hay, in *The Immortal Wilderness*, has written: "There are occasions when you can hear the mysterious language of the Earth, in water, or coming through the trees, emanating²

² **emanating:** coming forth

from the mosses, seeping through the undercurrents of the soil, but you have to be willing to wait and receive.”

Sometimes I hear it talking. The light of the sunflower was one language, but there are others, more audible. Once, in the redwood forest, I heard a beat, something like a drum or heart coming from the ground and trees and wind. That underground current stirred a kind of knowing inside me, a kinship and longing, a dream barely remembered that disappeared back to the body.

Another time, there was the booming voice of an ocean storm thundering from far out at sea, telling about what lived in the distance, about the rough water that would arrive, wave after wave revealing the disturbance at the center.

Tonight I walk. I am watching the sky. I think of the people who came before me and how they knew the placement of stars in the sky, watched the moving sun long and hard enough to witness how a certain angle of light touched a stone only once a year. Without written records, they knew every night, the small, fine details of the world around them and of immensity above them.

Walking, I can almost hear the redwoods beating. And the oceans are above me here, rolling clouds, heavy and dark, considering snow. On the dry, red road, I pass the place of the sunflower, that dark and secret location where creation took place. I wonder if it will return this summer, if it will multiply and move up to the other stand of flowers in a territorial struggle.

It’s winter and there is smoke from the fires. The square, lighted windows of houses are fogging over. It is a world of elemental attention, of all things working together, listening to what speaks in the blood.

Walking, I am listening to a deeper way. Suddenly all my ancestors are behind me. Be still, they say. Watch and listen. You are the result of the love of thousands.

Hogan, Linda. “Walking.” Reprinted by permission of the author.

Answer Numbers 25 through 30. Base your answers on the passage "Walking."

- 25 With which statement would a botanist most likely agree?
- F. Change is continually taking place in plants.
 - G. Every plant on Earth has its own unique language.
 - H. The growth of living things is simple and predictable.
 - I. Children should be instructed in the language of the Earth.

- 26 Read this sentence from "Walking."

They are all, somehow, one plant, each with a share of communal knowledge.

What does the word *communal* mean?

- A. basic
 - B. diverse
 - C. growing
 - D. mutual
- 27 The author says that certain bamboo plants, although separated by space, are "all, somehow, one plant." They are considered to be one plant because they all
- F. grow in Malaysia.
 - G. bloom on the same day.
 - H. have the same stalk color.
 - I. are the same size and color.

- 28 The author includes this quote from John Hay.

“There are occasions when you can hear the mysterious language of the Earth, in water, or coming through the trees, emanating from the mosses, seeping through the undercurrents of the soil, but you have to be willing to wait and receive.”

Which statement best shows that the author has accepted John Hay’s philosophy?

- A. She has taken walks in the winter.
 - B. She has learned to watch and listen.
 - C. She has heard the birds summon each other.
 - D. She has gained knowledge about sunflowers.
- 29 Based on the passage, which action will the narrator most likely take in the future?
- F. She will transplant the lonely sunflower to a place with fertile soil.
 - G. She will collect seeds from the sunflowers along the unpaved road.
 - H. She will return to the spot where the sunflower bloomed in the spring.
 - I. She will explore a new walking path where numerous sunflowers grow.
- 30 How does the author help the reader better understand the passage?
- A. She uses imagery to help the reader visualize the setting.
 - B. She uses an illustration of the sunflower to reinforce the main idea.
 - C. She uses similes to help clarify her comparison of the sunflower to language.
 - D. She uses alliteration by repeating letter sounds to make the story easier to read and enjoy.

Read the article "Cutting Off the World's Roof" before answering Numbers 31 through 38.

Cutting Off the World's Roof

BY KEN HOWARD



The tremendous heights of mountains have fascinated humankind for ages. Geologists, however, wonder why mountains aren't even taller, and they have formulated theories to explain why peaks have not reached greater heights.

The mighty Himalaya would be higher were it not for a buzz saw made of ice.

Now that everybody is climbing peaks in the Himalaya, this so-called Roof of the World is starting to seem a lot closer to the ground. After all, Ramaposhi, Nanda Devi, and Nanga Parbat (mountains) are just five miles up. K2 and Everest reach five and a half, give or take a few hundred yards.

You probably drive farther than that to your local multiplex.¹ Jaded thrill seekers must be wondering why there are so few really tall mountain ranges on Earth, and why the ones we have aren't even taller.

Three Theories

Geologists wonder about that, too. Some of them

think that the problem lies on the supply side—that tall peaks are fast-rising peaks, and to make more of them Earth would have to shove its crust skyward faster than it actually does. Others say the important thing is how fast mountains are coming *down*: as mountains rise, they scrunch down under their own weight. Or

¹ **multiplex**: a movie complex with multiple theaters

perhaps they get their tops lopped off by erosion. So far, however, no one has had good numbers to support any of the various theories.

Now a team of California geologists say they do. And the numbers favor erosion. As the Himalayan mountains come up, glaciers shear off their tops like a buzz saw. In a younger, warmer, less glacier-friendly world, these peaks may have been much taller.

Evidence for the Erosion Theory

The geologists took five million satellite measurements of elevations in the northwest Himalaya and Karakoram ranges, where summits soar to heights of more than twenty-six thousand feet above sea level, and fed the numbers into computer programs designed to tease out slope angles, the amount of land at every elevation, and other features. The results showed that the snowcapped Himalayan peaks, the mountains that launched a thousand wall

calendars, make up only a small percentage of the total ground area—like pins sticking up through a piece of paper. The landscape as a whole lies thousands of feet closer to sea level.

The average elevation varies from place to place, but the statistics show that it corresponds to the elevation at which glaciers start to form. That's also where the sheer mountainsides start to level off. In other words, the rocks stop where the ice begins. In the Himalayan mountains, at least, it looks as if it's glaciers that are wearing the heights down.

"Landscape is trying to get higher, but surface processes are trying to erode it," says one of the researchers, Nicholas Brozović, a geomorphologist² at the University of California, Berkeley. "Glaciers effectively form a limit."

Evidence Against the Other Two Theories

Of course, a statistical match between glaciers and elevations doesn't

prove that glaciers are *controlling* the elevations. To strengthen their case, the researchers had to deal with the other possibilities. The faster-is-higher hypothesis was easy to eliminate. Because rocks of similar ages appear at different heights in different mountains, geologists know that some of these mountains are rising faster than others. In the area Brozović and his colleagues studied, the rate of rise changes from east to west. If speed were king, the sizes and shapes of mountains ought to vary from east to west, too. But the numbers showed that was not the case. So much for the supply side.

What about trickle down—the possibility that the mountains are collapsing under the force of gravity? When rock piles up so high that its weight exceeds its strength, the rock cracks, forming faults. Along those faults (which can be as much as forty miles long and several miles deep) huge blocks of rock may slide back toward the sea.

²**geomorphologist:** a person that studies the shapes or features of the earth

Faults like that are known to exist in the mountain-and-valley regions of the Himalaya, but they have been inactive for about twenty million years. That's too long to have affected the heights of the mountains today. And in any case, Brozović points out, it's unlikely that faults would turn up in just the right places to make terrain taper off right above the snow line.

How Glacial Erosion Works

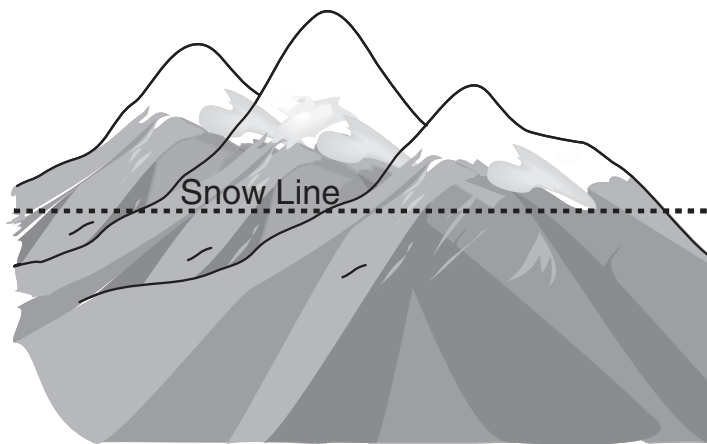
Glaciers, however, are in the right place. They start to form after a mountaintop pokes up

past the snow line. The faster the mountain rises, the more of its surface there is for the ice to cover; the more ice, the more erosion. High peaks are especially prone to glacial erosion, because they tend to catch clouds that might otherwise drop snow onto lower mountains nearby. That turns the peaks into what Brozović calls "topographic lightning rods"—catalysts for their own destruction.

But if that's so, how can snowcapped peaks exist at all? Because glacial scouring isn't perfect, Brozović says. It's bound to miss a few parts of a few mountaintops, or at least work too slowly to keep

them down. When it does, the survivors may grow so steep that ice slides off their sides before it builds up enough weight to do any damage. Or they may get so cold that they freeze to the rocks and stop sliding altogether. Motionless glaciers don't wear down mountains. The tallest, pointiest peaks, then, can become glacier-proof. Their height really does depend on the strength of the rock.

If Brozović and his colleagues are right, it may be no coincidence that the highest mountains in the world lie within thirty degrees of the equator. At higher latitudes (for example, in Alaska) the air



As this simplified diagram shows, glaciers are formed above the snow line. The snow line represents the altitude at which precipitation always falls as snow instead of rain. As glaciers move down a mountain, they erode its top, acting as a kind of "buzz saw."

is colder, so glaciers form at lower elevations, and mountains can't get as tall. It may also be true that mountains rise and fall along with long-term global temperatures. For most of the past two million years, Himalayan glaciers probably formed more than a thousand feet

lower than they do today and may have covered almost twice as much area. If the "glacier buzz saw" theory is correct, mountains should have been wearing away faster during the cold spells.

Warmer, drier climates, on the other hand, ought to produce fewer

glaciers and taller mountains. If so, the Himalaya should have been taller fifteen to twenty million years ago, when Earth was hotter, and it could grow again if the planet heats up for a million years or so in the future.

Howard, Ken. "Cutting Off the World's Roof" from *Earth*, December 1997, Vol. 6, No. 6. Reprinted by permission of Kalmbach Publishing. Photograph reprinted by permission of Index Stock Imagery.

Answer Numbers 31 through 38. Base your answers on the article “Cutting Off the World’s Roof.”

- 31** From reading the article, the reader can infer that the “world’s roof” will
- F. be avoided by adventure seekers.
 - G. increase in elevation in the future.
 - H. continue to be studied by geologists.
 - I. be affected by major fault movements.
- 32** According to the article, why have faults not affected the heights of the mountains in the Himalaya range?
- A. The faults run from east to west.
 - B. The faults are in the wrong places.
 - C. The faults are too deep and too wide.
 - D. The faults have been inactive too long.

33 Describe the glacier erosion theory and explain how erosion helps determine the altitude of mountain ranges. Use details and information from the article to support your answer.

READ
THINK
EXPLAIN

- 34 According to the article and the diagram, the highest mountains are affected by erosion because
- F. large glaciers form and move down the inclines.
 - G. large faults occur and weaken exposed surfaces.
 - H. tall peaks are heaviest and thus have the greatest faults.
 - I. tall peaks are formed quickly and thus are the least stable.

- 35 Read this sentence from the article.

High peaks are especially prone to glacial erosion, because they tend to catch clouds that might otherwise drop snow onto lower mountains nearby.

What does *prone to* mean?

- A. altered by
 - B. inclined to
 - C. resistant to
 - D. weakened by
- 36 How can snowcapped mountain peaks exist despite glacial erosion?
- F. Glacial scouring may miss a few parts of a mountaintop.
 - G. Glacial formation occurs below the snow line of a mountain.
 - H. Glacial force is not strong enough to remove all the snow from a mountaintop.
 - I. Glacial movement is very rapid and leaves some snow behind on the mountain.

- 37** According to the article, why would a mountain range closer to the equator probably be more challenging to a mountain climber than one farther away?
- A. The highest mountains exist within thirty degrees of the equator.
 - B. The climbers cannot tolerate climbing mountains in higher latitudes.
 - C. The air on mountains is uncomfortable for breathing at high altitudes.
 - D. The climate on mountains close to the equator is too unstable for climbers.
- 38** The author of this article would most likely make the statement that mountains must
- F. move with Earth's crust.
 - G. crumble when faults occur.
 - H. yield to the forces of nature.
 - I. sink under their own weight.

Read the article "There's More to Forests than Trees; There's a World of Hidden Wildlife" and the poem "The Leaf and the Tree" before answering Numbers 39 through 45.

There's More to Forests than Trees; There's a World of Hidden Wildlife

Dead trees are crucial to forest life; a single fallen log can harbor dozens of different species.



Clinging to dead wood, a deer mouse searches for truffles and other fungi that have taken root on and near the decaying log.

by Jay Heinrichs

What came first, the tree or the log? A simple question if there ever was one: a log is a dead tree. But see beyond the tree to the forest, and the question grows infinitely more complicated. An increasing number of researchers say that, in terms of the whole forest, the log is father to the tree. A dead trunk is a participant in a vital process that goes on even after the wood crashes to the ground.

Unseen by the casual observer and as yet poorly understood by the scientist, a hidden world of birds and insects, tiny

microbes and shy animals contributes to the death of a forest and the life of its successor. The fulcrum¹ of this vast living machinery is the log. Seething with plant and animal invaders, it bursts forth with a forest's next generation. The log is thus as much a symbol of life as it is of death. "The forest is a living organism," explains biologist Chris Maser. "As part of that organism, the fallen tree is only superficially dead; it supports the larger being."

In an earlier phase, of course, the log is that triumph of self-contained organisms, a living tree. A thriving white pine in the Northeast, for example, may reach maturity after a century, when it towers over other trees and plants. But, paradoxically, when the pine passes its prime, its association with the rest of the forest becomes even more lively.

A healthy tree is mostly impermeable to the outside world; the bark, which contains a potent natural fungicide, presents a formidable barrier to enemies. Boring insects find it tough, and its waterproof qualities keep moisture in. As time goes on, however, the barrier begins to break down. The bark loosens from the tree, and bark beetles find entry. They bore a labyrinth into the protein-rich inner bark and lay eggs for their wood-chewing larvae. Fungi and bacteria hitch a ride on the beetles. The tiny microbes contain enzymes that begin dissolving the wood cells, making chewing even easier for insects.

¹ **fulcrum:** central support



Crawling across the underside of a fallen tree, a spider encounters a forest of fungi mycelium (left). Researchers have found that some fungi release a chemical that stimulates the growth of seedlings in a woodland.

And the invasion begins. Decades before the pine ever falls, the surrounding forest is preparing it for fallen logdom. At the same time, the tree becomes an increasingly important wildlife host. A downy woodpecker bores into it to find insects. A rotting cavity begins to form—an ideal nesting site for a pair of flickers. The hole admits the outside world to the center of the tree, and heart rot begins to set in. The trunk is now structurally unsound. A fierce spring storm bends the pine too far, and with a vicious crack most of the tree falls to the forest floor.

According to Chris Maser, this is when the *real* action begins. The 49-year-old wildlife research biologist, formerly with the Interior Department in Oregon, believes the fallen tree serves as a locus for creatures that in turn are crucial to the renewal of the forest. He and retired Forest Service mycologist² Jim Trappe have pioneered in research revealing this strange relationship between small mammals, young trees and so-called “dead” logs.

Although the most intensive studies have been conducted in the old evergreen forests of the Northwest, new data are beginning to indicate that the discoveries of Trappe and Maser may hold true in temperate forests around the world. As more people look into ecosystems elsewhere, they seem to be reaching one common conclusion: the fallen log is not just an element of the forest but a participant in its many functions.

² **mycologist:** a biologist dealing with the study of fungi

The Importance of Old Growth

NOWHERE are logs more important to the self-renewal of forests than in the Pacific Northwest. There, ancient stands of evergreens called “old growth” serve as laboratories for investigations into the role of fallen trees in forest ecology. The resulting discoveries are more than interesting bits of science; a research-inspired debate over whether to let dead trees lie has become a controversial environmental issue in the Northwest today.

Some of the most impressive forests consist of old-growth stands of Douglas fir trees ranging in age from 250 to more than 1,000 years. Beneath these giants lies an understory that provides habitat for a variety of animals, as well as fungi and insects that help renew young forests. “Old growth is an investment in the next stand,” says Chris Maser, a former federal biologist.

The investment is diminishing rapidly.

Most of the precious little old growth that remains—some three million acres—is on federal land, where more than a square mile per week of it is being logged off to become lumber.

Efforts to save old growth by the National Wildlife Federation and other groups have focused on the role such woodlands play in sustaining long-term forest production and providing high-quality water and wildlife habitat. The United States Forest Service has created a plan that preserves pockets of old trees for the northern spotted owl, a species that depends on ancient forests for survival. But, conservationists fear, saving the species

in the short term may not keep old growth intact over the long run.

“We can’t just save islands of it,” says Rick Brown, a Federation resource specialist in Oregon. Brown advocates a reserve system that spans age groups of forests, including unmanaged stands that will become future old growth.

Short-sightedness could be disastrous, warns Maser. “By converting old growth to young stands, we’re redesigning forests,” he says. “We can’t duplicate what nature has been doing for centuries. And we cannot have a sustainable timber industry without a sustainable forest.”

Permission has not been granted for reprinting the poem *The Leaf and the Tree* by Edna St. Vincent Millay. The following questions associated with this poem have been provided in this Test Book.

Answer Numbers 39 through 45. Base your answers on the article "There's More to Forests than Trees; There's a World of Hidden Wildlife" and the poem "The Leaf and the Tree."

- 39 If the article by Jay Heinrichs were reprinted in a science textbook, which title would be most accurate?
- A. "Fallen Trees: Life Goes On"
 - B. "The Importance of Tree Bark"
 - C. "The Role of Tree-Eating Larvae"
 - D. "Tree Munchers: Insects of the Forest"
- 40 Chris Maser can be called a pioneer because
- F. of his success in saving the northern spotted owl.
 - G. of the research he has conducted on forest renewal.
 - H. he founded an organization to protect forests for wildlife.
 - I. he has done intensive studies on temperate forests worldwide.
- 41 According to the article, why is the Pacific Northwest important to the study of fallen timber?
- A. The region includes many Douglas fir trees with rotting cavities.
 - B. The region offers a sanctuary for many important animal species.
 - C. The region houses many logging businesses that support the studies.
 - D. The region contains many old trees that provide research opportunities.
- 42 With which sentence would Jay Heinrichs most likely agree?
- F. Nature does a better job of managing forests than humans do.
 - G. The Forest Service manages forests by preserving stands of old trees.
 - H. Conservationists and the federal government agree on forest management.
 - I. The United States timber industry has the most vital role in saving forests.

- 43** What do old growth forests in the Northwest have in common with forests all over the world?
- A. They contain pine trees and other evergreens.
 - B. They rely in part on the functions of fallen logs.
 - C. They are being studied by wildlife research biologists.
 - D. They face dangers from activities of irresponsible loggers.
- 44** In the poem, the narrator compares herself to a
- F. leaf.
 - G. cloud.
 - H. tree trunk.
 - I. lightning flash.
- 45** Which phrase could be applied to both Chris Maser and Edna St. Vincent Millay?
- A. artistic perception of wooded areas
 - B. deep appreciation for the life cycle of trees
 - C. public promotion of timberland management
 - D. strong concentration on the ecology of forests

READING

SUNSHINE STATE STANDARDS

Test Book

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