

Task 6

Work in pairs. First, stick a picture or a drawing of your school. Then describe to your partner where the following places are, using: **between, on the corner of, next to, opposite, to the left of, to the right of, in front of, behind.**

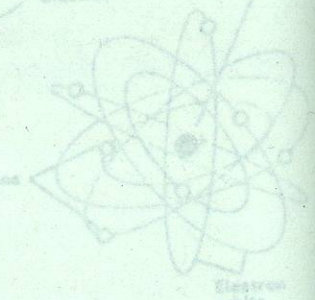
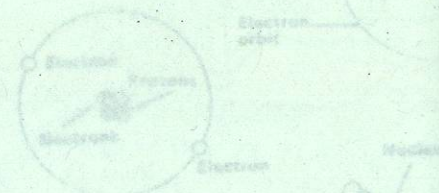
- 1 The library
- 2 The auditorium
- 3 The parking lot
- 4 The chemistry lab.
- 5 The cafeteria
- 6 The administration room
- 7 The gymnasium

Example

- 1 The library

2 Protons have a positive electric charge, while neutrons have no charge. There are as many electrons *between* the nucleus as there are protons *around* it, so the atom is electrically neutral.

3 Atomic number is the number of protons *outside* the atoms of the element, and the number of electrons that circle *inside* its nucleus.

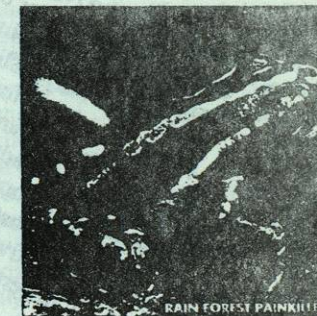


5 Health Care

Time to read!⁽¹⁾

From these titles, speculate about the content of the articles.

1 Who Was That Masked Stranger?



2 Cup of Prevention



3 The Vision Thing

4 A Jump on Pain



5 Check, Mate!

Unit 5

Now, read the articles as quickly as you can and decide which title is best suited to each one.

For people who regularly drink caffeinated coffee, tea or cola, surgery can be a headache—literally. In a study at the Mayo Clinic in Rochester, Minn., one out of four surgical patients who routinely drank such beverages experienced headaches following an operation, compared with only one in 14 caffeine abstainers. For the former, a postoperative caffeine fix significantly lowered headache risk.

The venom from a frog known to Ecuadorian Indians as the poison arrow frog contains a painkiller 200 times as powerful as morphine. On tests in mice, the chemical appears to work by a different mechanism from opiates, making it a candidate for the long-sought non-sedating, non-addictive painkiller. The painkilling venom component, called epibatidine, is itself poisonous, but according to a report in the journal *Science*, researchers believe they'll be able to produce non-toxic forms. And frog lovers everywhere should be happy to know that the researchers are using a synthetic version of the chemical, sparing the little amphibians back in the rain forest some potential pain of their own.

"When men lose against me they always have a headache . . . or things of that kind. I have never beaten a completely healthy man."—Zsuzsa Polgar, international chess grand master

The eyesight of more than a fifth of the world's population could be improved with eyeglasses, according to the World Health Organization. If you'd like to help, bring your old glasses to a LensCrafters store between November 9th and New Year's Day. They'll be cleaned, repaired, classified by prescription and distributed in developing countries around the world. On the home front, LensCrafters, which cosponsors the "Give the Gift of Sight" program with Lions Clubs International, will close more than 20,000 needy Americans. Exams and glasses for an estimated 20,000 needy Americans. To find a store where you can drop off your glasses, call 800-775-LENS or visit the local Lions Club.

CHECKUPS

A majority of the nurses and almost half of the doctors in a recent survey said they would refuse to perform mouth-to-mouth resuscitation on a stranger. Fear of transmittable diseases, primarily AIDS, was the reason given in the poll of 433 doctors and 152 nurses conducted by Dr. Jane Kauffman of the Loma Linda (Calif.) Medical Center. Ninety-nine percent of the reluctant resuscitators said they'd be willing to perform the procedure if an effective barrier mask were available. Kauffman recommends disposable resuscitation masks that cost about 15¢ each, be made available in restaurants and other public

Read

Test Your Fitness Level

Ken wants to build his muscles so that he can make the football team next year. Tara wants to be able to run the 100-yard dash fast enough to beat a rival at another school. Yukio is looking for an exercise to trim her body and help her lose some extra weight. David gets winded after five minutes in a neighborhood basketball game and would like to increase his playing time.

Do you recognize yourself in one of these four people? Physical fitness is a personal matter. Your interests and abilities differ from those of other people, yet improved physical fitness will increase your enjoyment of any activity you choose. Understanding the health benefits of physical fitness will also give you good reasons to get in top condition.

Benefits of Fitness

The ability of your heart, blood vessels, lungs, and muscles to work their best is called physical fitness. To be physically fit, you need a regular program of exercise. Exercise makes your muscles and bones strong. It works your circulatory and respiratory systems so that they deliver needed amounts of fuel and oxygen to your cells with less effort. Exercise also improves your coordination. In addition, it burns calories and aids the digestive system. Fitness helps you look better, manage your weight, and have more energy. Overall, people who are physically fit tend to be more healthy. They usually have lower blood pressure, fewer cases of heart disease, and increased resistance to disease.

Fitness Tests and Ratings

Testing for physical fitness is a good way to identify your physical strengths and weaknesses. The tests that follow measure different components of fitness. Each one shows how well certain parts of your body are working. You can be fit in one component and be unfit in others. Overall fitness requires a well-rounded approach to developing all the components. These tests will give you an idea of how fit you are overall. The tests are easy to take and need little equipment. If you test yourself, work with a partner. It is safer, and more fun. It also may be easier for someone else to measure your time and other factors.

Each test has a rating chart. The ratings range from poor to excellent. The ratings are based on performance. Keep in mind that these ratings give only a rough idea of your fitness. A good rating is within the reach of most young people who are free from physical disability.

Do not worry about how you rate against others, since comparisons may not be very helpful. For example, if a 125-pound person can do eight pull-ups and a 175-pound person can do only six, who is stronger? The heavier person does fewer pull-ups but is lifting an extra 50 pounds. Such a comparison is not very useful. Rather, use the tests to help you set the goals that work best for you. After a time of working to meet your goals, you may want to retest yourself to see how well you have progressed.

Cardiorespiratory Endurance

The ability of the heart, lungs, and blood vessels to send fuel and oxygen to the body's tissues during long periods of vigorous activity is called cardiorespiratory endurance [kahr dee oh RES pur uh tawr ee.] It is the single most important component of fitness because it greatly affects your overall health. High endurance shows that your heart, lungs, and muscles can work efficiently for a long time without tiring. A person with high cardiorespiratory endurance has more energy and "wind." Such a person tends to have a slower, stronger heartbeat than a less fit person. This is true when the person is at rest as well as when the person is active.

You can get a good idea of your cardiorespiratory fitness from taking certain tests. One test is the time it takes to run a distance of one mile. The higher your endurance, the more quickly you will be able to run the distance. Figure 14-3 provides standards for a one-mile run test. If you have not been active recently, do not take the test immediately. Instead, wait and take the test after you follow an exercise program for a while.

To take the one-mile run test, use an area where distance has been measured and marked out, such as a track or athletic field. Find out the number of laps it will take to complete a mile. For example, it will take you four laps to complete one mile on a 440-yard track. You may want to practice for a few days so that you can give it your best. Before taking the test, be sure to warm up your muscles by stretching and walking quickly for about five minutes. For the test, use a watch to time yourself, and go as quickly as you can. You may only be able to run a short distance at a time. If so, take turns running and walking, but keep going as quickly as you can for the whole distance. Your score is the time it takes to cover one mile.

	One-Mile Run		Pulse rate (30 seconds)
	Girls	Boys	
Outstanding	under 7:30	under 6:30	50 or less
Excellent	7:31-8:00	6:31-7:00	51-55
Good	8:01-8:30	7:01-7:30	56-60
Average	8:31-9:00	7:31-8:00	61-65
Fair	9:01-9:30	8:01-8:30	66-70
Low	9:31-10:00	8:31-9:00	71-75
Poor	10:01 plus	9:01 plus	76 plus

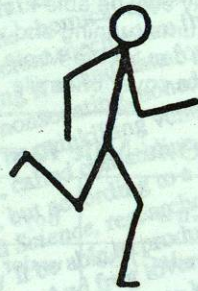
Figure 14-3 This table gives ratings for cardiorespiratory endurance tests. Times are given in minutes and seconds.

Task 1

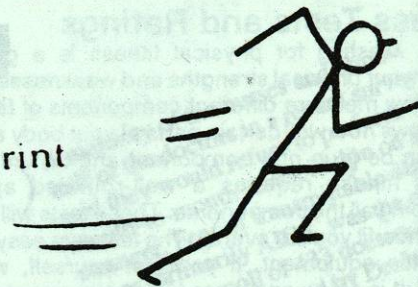
Decide whether the following statements are **True or False** Underline the answer in the text
Test your Fitness Level.

- _____ Physical fitness keeps off excess fat.
- _____ Exercise affects your coordination.
- _____ People who are physically fit tend to be healthier.
- _____ Cardiorespiratory endurance is one of the most important components of fitness.
- _____ Fitness increases the risks of heart disease.
- _____ A regular program of exercise is necessary for physical fitness.

run



sprint



Task 2

Complete some of the missing benefits of physical fitness according to the subheadings of figure 14-1.

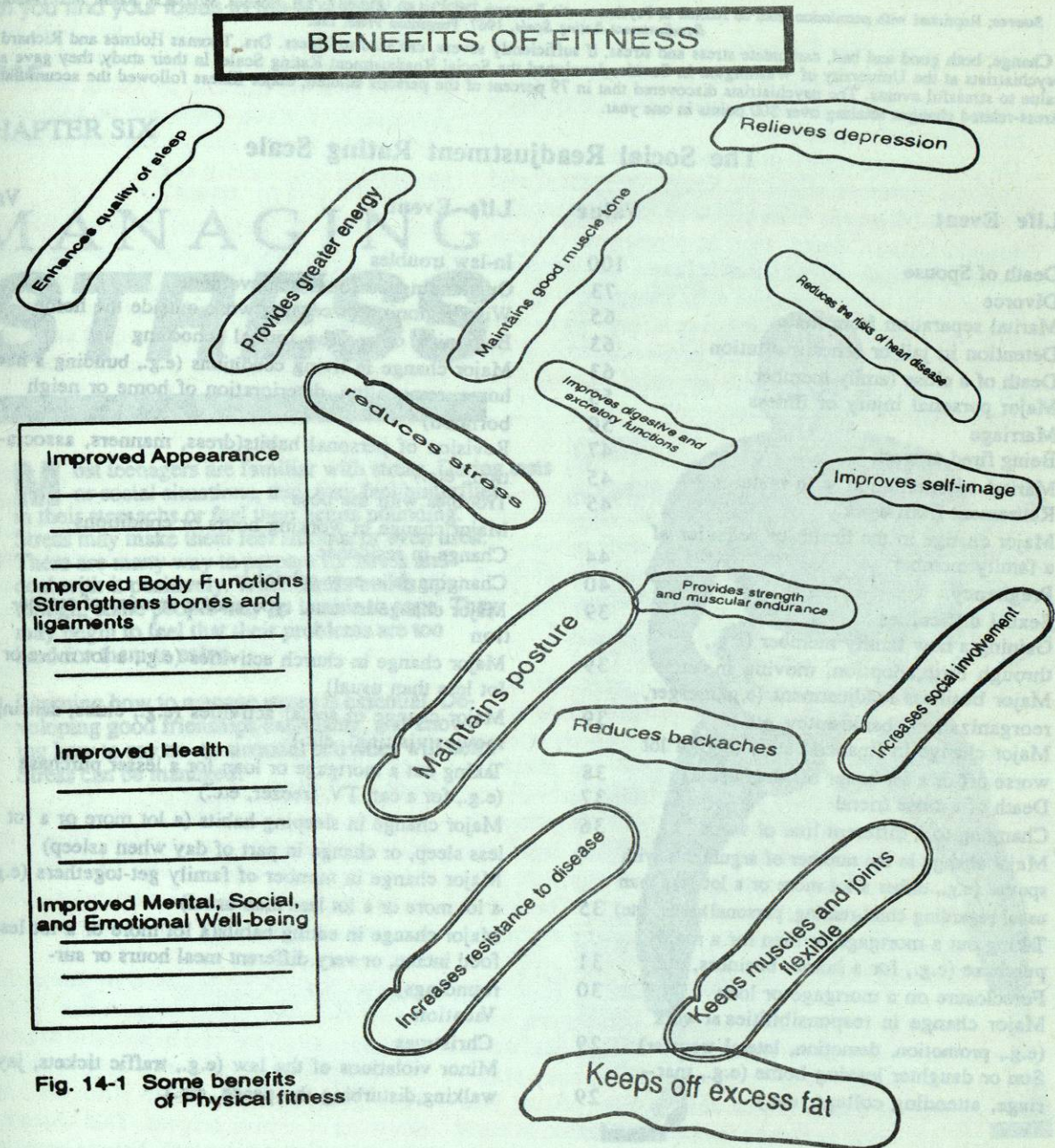


Fig. 14-1 Some benefits of Physical fitness

☐ Check your cardiorespiratory endurance!
You can check in the text... or consult your physical education teacher.

Stress: How Much Can Affect Your Health?

Source: Reprinted with permission from the Journal of Psychosomatic Research, Vol. 11 pp. 213-218. TH. Holmes, M.D. R.H. Rahe, M.D. *The Social Readjustment Rating Scale*, 1967, Pergamon Press, Ltd.

Change, both good and bad, can create stress and stress, if sufficiently severe, can lead to illness. Drs. Thomas Holmes and Richard Rahe, psychiatrists at the University of Washington in Seattle, developed the Social Readjustment Rating Scale. In their study, they gave a point value to stressful events. The psychiatrists discovered that in 79 percent of the persons studied, major illness followed the accumulation of stress-related changes totaling over 300 points in one year.

The Social Readjustment Rating Scale

Life Event	Value	Life Event	Value
Death of Spouse	100	In-law troubles	29
Divorce	73	Outstanding personal achievement	28
Marital separation from mate	65	Wife beginning or ceasing work outside the home	26
Detention in jail or other institution	63	Beginning or ceasing formal schooling	26
Death of a close family member	63	Major change in living conditions (e.g., building a new home, remodeling, deterioration of home or neighborhood)	25
Major personal injury or illness	53	Revision of personal habits (dress, manners, association, etc.)	24
Marriage	50	Troubles with the boss	23
Being fired at work	47	Major change in working hours or conditions	20
Marital reconciliation with mate	45	Change in residence	20
Retirement from work	45	Changing to a new school	20
Major change in the health or behavior of a family member	44	Major change in usual type and/or amount of recreation	19
Pregnancy	40	Major change in church activities (e.g., a lot more or a lot less than usual)	19
Sexual difficulties	39	Major change in social activities (e.g., clubs, dancing, movies, visiting, etc.)	18
Gaining a new family member (e.g., through birth, adoption, moving in, etc.)	39	Taking out a mortgage or loan for a lesser purchase (e.g., for a car, TV, freezer, etc.)	17
Major business readjustment (e.g., merger, reorganization, bankruptcy, etc.)	39	Major change in sleeping habits (a lot more or a lot less sleep, or change in part of day when asleep)	16
Major change in financial state (e.g., a lot worse off or a lot better off than usual)	38	Major change in number of family get-togethers (e.g., a lot more or a lot less than usual)	15
Death of a close friend	37	Major change in eating habits (a lot more or a lot less food intake, or very different meal hours or surroundings)	15
Changing to a different line of work	36	Vacation	13
Major change in the number of arguments with spouse (e.g., either a lot more or a lot less than usual regarding child-rearing, personal habits, etc.)	35	Christmas	12
Taking out a mortgage or loan for a major purchase (e.g., for a home, business, etc.)	31	Minor violations of the law (e.g., traffic tickets, jaywalking, disturbing the peace, etc.)	11
Foreclosure on a mortgage or loan	30		
Major change in responsibilities at work (e.g., promotion, demotion, lateral transfer)	29		
Son or daughter leaving home (e.g., marriage, attending college, etc.)	29		

Time to read!⁽²⁾

work with another student to discuss the following questions.

- a) What is "stress"?
- b) What situation can cause "stress"?
- c) What harmful effects can stress have on the body?

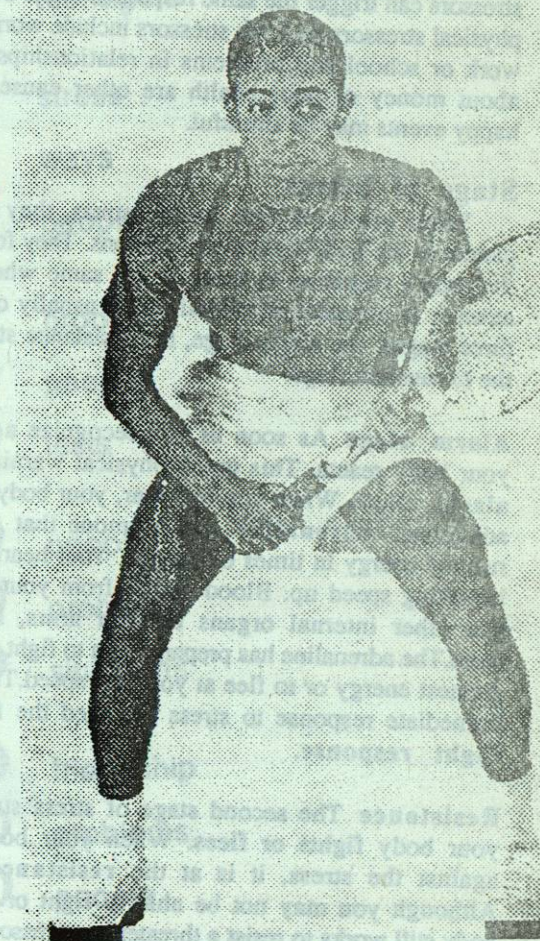
Can you find your ideas in the text fairly quickly!

Read

CHAPTER SIX

MANAGING STRESS

- 1 **M**ost teenagers are familiar with stress. During tests or social situations, they may feel butterflies in their stomachs or feel their hearts pounding. Stress may make them feel anxious or even tired.
- 5 There are many way to prepare for stress and deal with it positively. When stress builds up, though, some people may be unable to cope. They may begin to feel that their problems are too hard for them to solve.
- 10 Learning how to manage stress is essential. Developing good friendships exercising, and knowing how to say no to stressful activities will help. Stress can be managed.



Stress and Its Effects

Stress is as much a part of life as eating or sleeping. Stress is the body's response to a physical or mental demand or pressure.

The physical and mental demands are called stressors. Physical stressors might be hunger, thirst, or cold. Feeling tired, maybe from overwork, can be a physical stressor. Certain drugs, such as tobacco or caffeine, cause physical stress, too. Mental or emotional stressors can trigger the same responses in the body that physical stressors do. Such stressors include worry about work or school and problems in relationships. Worry about money or poor health are other causes. Even happy events may be stressful.

Stage of Stress

When scientists first studied stress, they found a pattern to the body's physical reactions. They found that the body's response to stress is the same whether the stressor is physical or mental. Stress usually occurs in three stages: the alarm stage, the resistance stage, and the exhaustion stage.

Alarm stage As soon as you recognize a stressor, your body reacts. This quick physical warning is the alarm stage. When you feel fear, your body releases adrenaline. Adrenaline is a hormone that causes a rush of energy in times of danger. Your heart rate and breathing speed up. Blood rushes from your stomach and other internal organs to your arms, legs, and brain. The adrenaline has prepared you to fight with your greatest energy or to flee at your top speed. The body's immediate response to stress is called the fight or flight response.

Resistance The second stage of stress starts when your body fights or flees. When your body works against the stress, it is at the resistance stage. Although you may not be able to fight or run, your body still works to resist a threatening stressor. In many cases, your body continues to respond as if it were in danger even after the stressor is gone.

In this stage, people overcome stress with defense mechanism. These are sometimes called coping mechanism. Coping means acting to correct a problem. Some mental coping behaviors are humor and denial.

Using a coping mechanism may help you control certain symptoms of stress. For example, you may be able to face a bad situation by joking instead of losing your temper. But you might not be able to stop your nervous perspiration. Few people can consciously stop the physical symptoms of stress.

Exhaustion If stress lasts too long, you may move into the third stage of stress. In the exhaustion stage, the body's defenses against stress are used up. You are unable to fight, flee, or resist a threat in any way. Your body and mind are so tired you can no longer resist the stressor. During the exhaustion stage people often become ill.

Stress and Illness

As you know, stress causes many changes in the body. Stress can weaken the body and increase the risk of disease. Stress for long periods weakens the body's disease-fighting system. Some physical disorders result from stress are psychosomatic. Psychosomatic illness [SY kuh soh MAT ik] is a physical disorder caused by stress rather than disease damage to the body. Psychosomatic illnesses are physical problems that may be triggered or complicated by stress. A psychosomatic illness is not, as many people believe, imaginary. It is simply a physical response to stress.

There are many kinds of psychosomatic illnesses with which you may be familiar. People may react in different ways. Sleep disorders are a common example. Worrying about something may make it hard to sleep. In some people, stress may result in sleeping longer than usual.

The skin can be bothered by stress. Studies have shown that cold sores, acne, hives, and other skin disorders can be triggered by stressful situations.

Digestive problems also may be psychosomatic. The immediate response to stress includes slowing down the digestive process. This change may cause "butterflies" in the stomach. Nausea, vomiting, diarrhea and constipation are also common results of stress.

Task 1

Tick (✓) the right circle according to the text on page 111.

- 1 **They** in line 2 refers to: tests teenagers situations
- 2 **Them** in line 4 refers to: stomachs hearts teenagers
- 3 **It** in line 6 refers to: stress ways people
- 4 **They** in line 7 refers to: problems people tests
- 5 **Their** in line 8 refers to: people problems situations
- 6 **Them** in line 9 refers to: friendship problems people