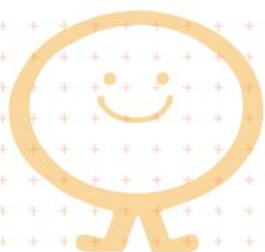


2026 年度

英文精読

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STUDY COLLABO.



11.

People today are worried about food safety. As a result, the popularity of “organic” farming of fruits and vegetables is increasing. But what exactly does organic farming mean?

It is probably easier to explain what organic farming is not. Organic farming does not use pesticides or fertilizers. Instead, this style of farming uses natural methods to protect plants and help them grow. So, organic agricultural products are thought to be generally safer than non-organic ones.

In the United States, about two percent of all food is grown using organic methods. The U.S. government officially licenses farms as “organic” if they pass an examination. Presently, there are about 10,000 licensed farmers in the U.S., and this number is growing by about 20% a year.

12.

In addition to food safety, another reason for the popularity of organic fruits and vegetables is that they taste better. This is why many restaurants only buy organic products.

A lot of people think organic farming is not competitive compared to other methods because it cannot grow the same quantity of food. However, new research has shown that organic farming only grows, on average, about five percent less than non-organic methods. Still, organic food today is more expensive than non-organic food. But when the environmental and health costs of non-organic farming are considered, such as the pollution of water by pesticides, most people would agree that the higher price of organic farming is in fact a small price to pay for our health and safety.

13.

When we watch kittens and puppies playing, we realize that through play they are learning how to live. They learn various physical skills, such as how to jump over barriers without getting hurt. They also learn social interaction. For example, if a kitten bites his sister too hard, she will get angry and bite him back. These physical and social skills form part of the training that young animals need in order to grow up.

Just as kittens and puppies learn about how to live through play, so do children. But in present-day Japan, especially in cities, there is not much space for children to play in. Children need to release their energy for their mental and physical health. They need space, especially outdoors, so that they can run, jump, and yell.

14.

Another point to consider is how much time children have to play. Some people say that four to five hours a day of playing outdoors with others is necessary, even for twelve-year-olds.

It is very doubtful, however, whether any Japanese children get that much free time. Concerned about their future in an increasingly competitive society, parents generally tell their children to study more; very few would tell them to go out and play.

What do these children do at home when they are not studying? They tend to spend time by themselves. They play video games or watch TV, for instance. These activities do not teach them how to get along with others. This can only be learned through playing with other children. They need to play without being told what to do by adults in order to learn about leadership and group harmony on their own. Outdoor space is particularly suitable for this purpose. Children need a proper outdoor environment where they can freely spend their time playing with friends.

15.

Bamboos are the fastest-growing plants on Earth. A typical bamboo grows as much as 10 centimeters in a single day. Certain species grow up to a meter during the same period, or about 1 millimeters every 2 minutes. You can actually see the plant grow in front of your eyes. Most species of bamboo reach maturity in just 5 to 8 years. Compare this to other popular hard woods that barely grow an inch in a week. Trees such as oak can take up to 120 years to reach maturity. But when it comes to flowering, bamboos are probably one of the slowest plants in the world. The flowering of bamboos is an interesting phenomenon, because it is a unique and very rare occurrence in the plant kingdom. Most bamboos flower once every 60 to 130 years. The long flowering intervals remain largely a mystery to many scientists.

16.

These bamboos exhibit another strange behavior – they all flower at the same time, all over the world, irrespective of geographic location and climate, as long as they were derived from the same mother plant. It is as if the plants carry an internal clock ticking away until the preset alarm goes off simultaneously. This mass flowering phenomenon also attracts small animals, mainly rats. The sudden availability of fruit in huge quantities in the forest brings in tens of millions of hungry rats who feed, grow and multiply at alarming rates. After they eat all the bamboo fruit, the rats start consuming crops – both in storage as well as in the field. So, a bamboo flowering event is almost always followed by famine and disease in nearby villages. In the northeastern Indian state of Mizoram, the terrible event, known in the local language as mantam or “bamboo death” occurs almost like clockwork every 48 to 50 years, when the local bamboo species blooms and produces fruit.

17.

Acid indigestion is a common problem affecting millions of people around the world. There are several other names for acid indigestion, including upset stomach, acid reflux, indigestion and heartburn. As the name suggests, there is usually too much acid in the stomach, which causes a burning sensation in the stomach that can move up into the throat. The intensity can range from being mildly uncomfortable to extremely painful. Some people suffer from it permanently, while most people only experience it once in a while. Overeating, a poor sleeping position or eating too much oily or spicy food can cause it. Sugary foods and alcohol can also cause it.

18.

Being a common problem, a variety of remedies are sold in drugstores, and in some countries, you can even get remedies at convenience stores. One widespread myth about acid indigestion is that the best way to reduce the symptoms is by drinking milk. This is probably because milk is viewed as a comfort food, and it is often considered to be good for the stomach. However, milk actually contains acid, so it is not the best remedy for reducing stomach acid. Despite this, many still believe in the milk myth.

One scientifically surprising phenomenon is that freshly squeezed lemon juice is much more effective for acid indigestion than milk. Everyone knows lemons are high in acid, so how could they possibly be good for reducing acid? Oddly enough, when consumed, fresh lemon juice magically neutralizes the acid in our system. So, if you are ever suffering from acid indigestion, instead of drinking milk, try fresh lemon juice mixed with cold or hot water. Make sure it is juice from fresh lemons because canned or bottle lemon juice usually has added sugar, which can make acid indigestion worse. Fresh lemons may be one of the best ways to reduce acid in the stomach.

19.

A fly can do one thing extremely well: fly. Recently, a team of British scientists declared that the common housefly is the most talented aerodynamicist on the planet, superior to any bird, bat, or bee. A housefly can make six turns a second; hover; fly straight up, down, or backward; land on the ceiling; and perform various other show-off maneuvers. And it has a brain smaller than a sesame seed.

Michael Dickinson, who studies fly flight in his lab at the California Institute of Technology, says the housefly isn't actually the best flier. "Hoverflies are the be-all and end-all," he says. They can hover in one spot, dash to another location, and then race back to their original hovering point—precisely.

Scientists, engineers, and military researchers want to know how creatures with such small brains can do that. Maybe they could reverse-engineer a fly to make a robotic device that could reconnoiter dangerous places, such as earthquake zones or collapsed mines.

20.

Dickinson's laboratory works with fruit flies. Researchers put them in chambers and manipulate the visual field, filming the flies in super-slow motion, 6,000 frames a second. Dickinson is interested in knowing how flies avoid collisions. He has found that certain patterns, such as 90-degree turns, are triggered by visual cues and two equilibrium organs on their backs that function like a gyroscope.

Flies have only a dozen muscles for maneuvering, but they're loaded with sensors. In addition to their compound eyes, which permit panoramic imagery and are excellent at detecting motion, they have wind-sensitive hairs and antennae. They also have three light sensors on the tops of their heads, which tell them which way is up. Roughly two-thirds of a fly's entire nervous system is devoted to processing visual images. They take all this sensory data and boil it down to a few basic commands, such as "go left" and "go right."

