



วิชาภาษาอังกฤษ

Guessing meaning of the unknown words &
Reading Comprehension

โดย

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I. Guessing meaning of the unknown words

Ochre find reveals ancient knowledge of chemistry

The oldest ochre-processing toolkits and workshop ever found have been unearthed, indicating that as far back as 100,000 years ago, humans had an understanding of chemistry.

South Africa's Blombos Cave lies within a limestone cliff on the southern Cape coast, 300 km east of Cape Town. It's known for its 75,000-year-old rich deposit of artefacts such as beads, bone tools and ochre engravings. Some engravings date as far back as 100,000 years.

Archaeologist Christopher S. Henshilwood from the University of Witwatersrand in Johannesburg and University of Bergen, Norway has been excavating at the site since 1992, and has reported the discovery of a mixture, rich in ochre, stored in two abalone shells. It dates back to the Middle Stone Age – 100,000 years ago. Ochre is a term used to describe a piece of earth or rock containing red or yellow oxides or hydroxides of iron. It can be used to make pigments, or paints, ranging from golden-yellow and light yellow-brown to rich red. Its use spans the history of humans—from those living more than 200,000 years ago, to modern indigenous communities.

Made from an array of materials, this mixture, which could have functioned as wall, object and skin decoration or skin protection (action in a similar way to modern-day sunscreen), indicates the early developments that occurred in the people who originally used the site.

“(Judging from) the complexity of the material that has been collected from different parts of the landscape and brought to the site, they (the people) must have had an elementary knowledge of chemistry to be able to combine these materials to produce this form. It's not a straightforward process,” said Henshilwood.

II. Reading Comprehension

Choose the best answer.

Passage A:

To whom this may concern,

My partners and I had to work over the weekend recently, so we decided to reward ourselves with something sweet. We had heard excellent things about your café from others in the office, so we walked over in eager anticipation.

There was a small crowd outside your restaurant, but we were willing to wait up to an hour if it meant we could get a table for the four of us. We spoke with the hostess and were told it would be up to 30 minutes before we could be seated. 45 minutes later, we were still waiting for a table. After complaining twice to the hostess, who seemed to have forgotten about us, we were finally led to a table for two near the restrooms.

As I mentioned, we were a party of four. The hostess didn't seem to understand the problem, and just walked away. We managed to find two extra chairs, and we then squeezed ourselves around the tiny table. Still, we were excited about trying the desserts, so we decided to order one of everything.

To make a long story short, the food took over an hour to arrive. When it did get to the table, the doughnuts were dried out, the cheesecake was bitter, the slice of chocolate cake was so small that we finished it in two bites, and the German fruit cake had a hair on it. In addition, one of the plates was dirty. To top it all off, you charged us for every refill of our coffees.

I hope you can address all of these issues, and once again deserve the excellent reputation which you have somehow built.

Best Regards,

Janet Brown

1. What did the partners want to eat at the café?

- (A) tea (C) just coffee
(B) a large lunch (D) dessert

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2. How did the writer hear about the café?
- (A) walking by it
 - (B) on the radio
 - (C) recommendation from co-workers
 - (D) an advertisement in the newspaper
3. What was the problem with their table?
- (A) It was too small.
 - (B) It smelled bad.
 - (C) It was near the hostess stand.
 - (D) It was dirty.
4. What did they order?
- (A) one doughnut each
 - (B) one of all the chocolate desserts
 - (C) all the snacks on the menu
 - (D) only coffee
5. Why were they depressed about the bill?
- (A) They never got their coffee refills.
 - (B) They were charged for too many desserts.
 - (C) Coffee refills weren't free.
 - (D) The cake was too expensive.
6. What is the purpose of this writing?
- (A) To inform the person in charge.
 - (B) To persuade the customer to ban this restaurant.
 - (C) To complain about its terrible service and food.
 - (D) To give an explanation why they don't enjoy the meal.

Passage B:

Meromictic lakes

1 In temperate climates, most lakes undergo a normal process where surface waters cyclically mix with waters from the lower layers. This process occurs in spring and fall, when water temperatures are uniformly the same from the surface of the lake to its bottom. A lake can be categorized according to the degree to which the upper and lower strata of its waters turn over and mix. This turnover of surface and bottom layers of water is closely related to seasonal temperatures as well as depth, elevation, and geographical latitude. In waters that are deep in proportion to their diameter, the water at the bottom of the lake does not mix with the surface waters, creating two distinct *strata*. Other factors that affect mixing include the chemical and mineral composition of the lake, as well as wind.

2 In the 1950s, Hutchinson and Löffler classified lakes into six categories. However, experts now agree that there are eight types of lakes. In addition to deep-water lakes, this new classification system also includes shallow-water lakes. Thus, lakes are categorized by depth, temperature, and the pattern by which their waters mix. The two main types are *holomictic* and *meromictic*. These types are further sub-categorized based on the water's temperature and the pattern of mixing that occurs in the lake during the year. For example, some lakes are *animictic*, meaning that they remain ice-covered for the entire year. The distinction of *mixis* (mixing) ranges from lakes with temperatures that rise above 4 degrees Celsius/39 degrees Fahrenheit, and mix once annually, to lakes in tropical climates where the waters may mix several times during the year.

3 In a holomictic lake, the water goes through a cycling whereby the surface waters mix completely at least once per year from top to bottom. This mixing process occurs in spring when normal temperatures rise above 4°C/39°F.

4 In a meromictic lake, stratification of the water exist permanently, whereby surface and bottom waters never mix completely. The upper to surface water, known as the *mixolimnion*, is most

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affected by wind. Water in the top layers may mix when the temperatures rise above 4°C and the water warms. Mild to moderate winds may cause the waters to mix. A *transitional* layer, called the *chemocline*, separates the top layer from the sedimentary bottom layer, known as the monimolimnion. Because the sedimentary layers do not physically mix with the other layers, the deepest layers of water remain *unoxygenated*. Because of this, few plants or animals are able to survive in the deeper strata.

5 In most cases, meromictic lakes are extremely deep, with static, undisturbed layers throughout the bottom. This creates an actual historical stratification system, in which scientists are able to take samplings of layers of water from particular points in time.

6. Examples of this type of lake are Round Lake and Green Lake, in New York's Green Lakes State Park. Round Lake's depth is estimated at roughly 55 meters or 180 feet, while its length and width are each almost 700 feet, hence the name, "Round Lake." Similarly, its neighbor, Green Lake, has a depth of 195 feet. Scientists have discovered that certain types of purple bacteria and other single-celled organisms have survived from ancient times in the undisturbed bottom strata of these lakes. Calcium carbonate, a bluish salt solution found in limestone, is prevalent in the lake waters. However, about a third of the way down is a layer of reddish bacteria, which cause that layer of water to appear pink in color. Because its waters are so dense and deep, a meromictic lake generally has a mirror-like surface.

7 Meromictic lakes are rare but can be found all over the world. A large number are in North America in the states of New York, Michigan, and Washington, as well as provinces of Canada such as Ontario and Quebec in the east, and British Columbia in the west. Elsewhere in the world, meromictic lakes are located in Lake Tanganyika in Burundi, Lac Du Bourget, France (its deepest lake), and Lake Fidler, in Tasmania, Australia. Analysis of meromictic lakes is important to the field of *limnology*-the study of inland waters - since the deep strata provide significant information about the formation of the lakes and their geographical record.

1. According to paragraph 1, cyclical mixing of lake water occurs when _____
 - (A) the weather and the water are warm.
 - (B) water temperatures vary from top to bottom.
 - (C) water temperatures at different levels are about the same.
 - (D) the water at the bottom does not mix with the surface water.

2. The word **strata** in paragraph 1 is closest in meaning to _____.
 - (A) parts
 - (B) layers
 - (C) states
 - (D) conditions

3. According to paragraph 1, which of the following is NOT true about lake water?
 - (A) Wind may affect the mixing of the surface waters.
 - (B) Geographical location can have an effect on cyclical mixing.
 - (C) When a lake's waters are deeper than its diameter, the water has two layers.
 - (D) Chemicals and minerals in the lake are usually only found at the bottom.

4. In paragraph 2, what does the author say about shallow lakes?
 - (A) Scientists did not include them in previous classifications of lakes.
 - (B) Most shallow lakes are ice covered.
 - (C) They are neither holomictic nor meromictic.
 - (D) Shallow lakes have different mixing patterns.

5. In paragraph 2, the water in which of the following lake types exist in temperatures that are always below 4°C/39°F?
 - (A) holomictic
 - (B) meromictic
 - (C) shallow
 - (D) animictic

6. The word *transitional* in paragraph 4 is closest in meaning to _____.
- (A) extreme
 - (B) middle
 - (C) changing
 - (D) shadowy
7. The word *unoxygenated* in paragraph 4 is closest in meaning to _____.
- (A) suffocating
 - (B) without air
 - (C) lacking oxygen
 - (D) having too much oxygen
8. What does the author imply about meromictic lakes in paragraph 5?
- (A) The water strata have historical significance.
 - (B) It takes a long time for the sediment to settle.
 - (C) It is difficult for scientists to find the bottom of a lake
 - (D) The layers of water indicate different historical periods.
9. In paragraph 6, what is true about organisms found in Green Lake?
- (A) Some of the organisms have been there for centuries.
 - (B) Organisms do not survive the water mixing.
 - (C) Most of the bacteria are red in color.
 - (D) They contaminate the water.