

Tiger Moths

One of the most beautiful of the more than 100,000 known species in the order Lepidoptera are the tiger moths, moths known for the striking appeal of their distinctive coloration. This type of moth is covered with highly conspicuous orange-and-black or yellow-and-black patterns of spots and stripes. Such boldly patterned color combinations are commonplace in the animal world, serving the function of forewarning potential predators of unpleasant tastes and smells. This is unquestionably the function served by the striking coloration of the garden tiger moth, which is quite visually attractive but is also poisonous to predators. Certain glands in the garden tiger moth produce strong toxins that circulate throughout the insect's bloodstream, while other glands secrete bubbles that produce a noxious warning smell. The tiger moth, indeed, is a clear example of a concept that many predators intuitively understand, that creatures with the brightest coloration are often the least suitable to eat.

1. It is implied in the passage about the order Lepidoptera that

A. all members of the order are moths

B. there may be more than 100,000 species in this order

C. all members of the order are brightly colored

D. there are most likely fewer than 100,000 species in this order

2. It can be inferred from the passage that the tiger moth was so named because

- A. its coloration resembles that of a tiger
- B. it is a ferocious predator, like the tiger
- C. its habitat is the same as the tiger's
- D. it is a member of the same scientific classification as the tiger

3. What would most likely happen to a predator that wanted to eat a tiger moth?

- A. The predator would be unable to catch it.
- B. The predator would capture it by poisoning it.
- C. The predator would be unable to find it.
- D. The predator would back away from it.

4. Which of the following would a predator be most likely to attack successfully?

- A. A purple and orange moth
- B. A green and blue moth
- C. a brown and grey moth

The Cambrian Explosion

Many of the major phyla of animals arose during the Cambrian period, in what is called the Cambrian Explosion. Prior to the Cambrian period, simple one-celled organisms had slowly evolved into primitive multicellular creatures. Then, in a relatively rapid explosion during the period from 540 million years ago to 500 million years ago, there was a period of astonishing diversification in which quickly developing organisms became widely distributed and formed complex communities.

One theoretical explanation for the rapid diversification that occurred during the Cambrian period is known as the theory of polar wander. According to this theory, the rapid diversification occurred because of an unusually rapid reorganization of the Earth's crust during the Cambrian period. This rapid change in the Earth's crust initiated evolutionary change inasmuch as change in the environment serves to trigger evolutionary change.

5. It can be inferred from paragraph 1 that

A. some major phyla developed during periods other than the Cambrian period

B. many other phyla of animals became extinct during the Cambrian Explosion

C. descriptions of various animal phyla were created during the Cambrian period



D. the major phyla of animals that came about during the Cambrian period died out in the Cambrian Explosion

6. It can be determined from paragraph 1 that the Cambrian Explosion most likely lasted

A. 40 million years

B. 450 million years

C. 500 million years

D. 540 million years

7. It is implied in paragraph 2 that

A. only one theory to explain the rapid diversification has been proposed

B. the polar wander explanation is accepted by all scientists

C. the theory of polar wander fails to adequately explain the rapid diversification

D. the theory of polar wander is not the only theory to explain the rapid diversification

8. It can be inferred from paragraph 2 that one basis of the theory of polar wander is that

A. relatively little change in the Earth's crust took place during the Cambrian period



B. rapid diversification was unable to take place because of the changes in the Earth's crust

- ☐ C. the Earth's crust changed more slowly in other periods
- ☐ D. evolutionary change is unrelated to changes in the environment

The Golden Age of Comics

The period from the late 1930s to the middle 1940s is known as the Golden Age of comic books. The modern comic book came about in the early 1930s in the United States as a giveaway premium to promote the sales of a whole range of household products such as cereal and cleansers. The comic books, which were printed in bright colors to attract the attention of potential customers, proved so popular that some publishers decided to produce comic books that would come out on a monthly basis and would sell for a dime each. Though comic strips had been reproduced in publications prior to this time, the *Famous Funnies* comic book, which was started in 1934, marked the first occasion that a serialized book of comics was attempted.

Early comic books reprinted already existing comic strips and comics based on known characters; however, publishers soon began introducing original characters developed specifically for comic books. Superman was introduced in *Action Comics* in 1938, and Batman was introduced a year later. The tremendous success of these superhero comic books led to the development of numerous comic books on a variety of topics, though superhero comic books predominated. Astonishingly, by 1945 approximately 160 different comic books were being published in the United States each month, and 90 percent of U.S. children were said to read comic books on a regular basis.

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9. It can be inferred from paragraph 1 that, at the beginning of the 1930s, comic books most likely cost

- A. nothing
- B. 5 cents
- C. 10 cents
- ☐ D. 25 cents

10. Comic books would least likely have been used to promote



A. soap

B. cookies

C. jewellery

D. bread

11. It is implied in the passage that *Famous Funnies*

A. was a promotional item

B. appeared in a magazine

C. had been produced prior to 1934

D. was published on a regular basis

12. From the information in paragraph 2, it appears that Superman most likely

A. was introduced sometime after Batman

B. was a character that first appeared in a comic book

C. first appeared in *Famous Funnies*

D. first appeared in a promotional comic strip

The Filibuster

The term filibuster has been in use since the mid-nineteenth century to describe the tactic of delaying legislative action in order to prevent the passage of a bill. The word comes from the Dutch freebooter, or pirate, and most likely developed from the idea that someone conducting a filibuster is trying to steal away the opportunity that proponents of a bill have to make it successful.

In the earlier history of the U.S. Congress, filibusters were used in both the House of Representatives and in the Senate, but they are now much more a part of the culture of the Senate than of the House. Because the House is a much larger body than is the Senate, the House now has rules which greatly limit the amount of time that each member may speak, which effectively serves to eliminate the filibuster as a mechanism for delaying legislation in the House.

In the Senate, the smaller of the two bodies, there are now rules that can constrain but not totally eliminate filibusters. The Senate adopted its first cloture rule in 1917, a rule which requires a vote of two-thirds of the Senate to limit debate to one hour on each side. The rule was changed in 1975 and now requires a vote of three-fifths of the members to invoke cloture in most situations.

The longest filibuster on record occurred in 1957, when Senator Strom Thurmond of South Carolina wanted to delay voting on civil rights legislation. The filibuster was conducted for twenty-four hours and 18 minutes on August 28 and 29, when Thurmond held the floor of the Senate by lecturing on the law and reading from court decisions and newspaper columns. It was his hope that this filibuster would rally opponents of civil rights legislation; however, two weeks after the filibuster, the Civil Rights Act of 1957 passed.

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14. It can be inferred from the information in paragraph 1 that around 1800

A. the first filibuster took place

B. legislative action was never delayed

C. the term filibuster was not in use in the U.S. Congress

D. the Dutch introduced the term freebooter

15. It can be determined from paragraph 1 that a freebooter was most likely someone who

☐ A. served in the Senate

☐ B. robbed passing ships

C. enacted legislation

D. served in the Dutch government

16. It is implied in paragraph 2 that, in its early years, the House

A. had no rules against filibusters

B. had few filibusters

C. had fewer filibusters than the Senate

D. had the longest filibuster on record

17. Based on the information in paragraph 3, a vote of cloture would most likely be used to

A. initiate filibusters

B. break filibusters

C. extend filibusters

D. encourage filibusters

Dinosaurs

Although dinosaurs roamed virtually the whole earth for 160 million years, dinosaur skeletons are relatively scarce. Many dinosaurs are known only from a single tooth or bone chip. The reason is that it takes very special conditions to make a fossil and a lot of luck to find one.

For many years, information about Tyrannosaurus rex was sketchy at best. However, in the summer of 1990, the first nearly complete Tyrannosaurus rex skeleton ever found was excavated in the Montana badlands. That same year a second, even more complete, skeleton was found in South Dakota. Together these skeletons yielded surprising new insights into the most famous of the dinosaurs, about the anatomy and behavior of T. rex and the world in which it lived.

Among the surprising discoveries were that T. rex was a far sleeker, but more powerful, carnivore than previously thought, perhaps weighing less than $6^{1/2}$ tons, no more than a bull elephant, and that T. Rex's habitat was forest, not swamp or plain as previously believed. Moreover, there appears to have been two forms of T. rex, the male quite different from the female. Scientists hope that future fossil discoveries and increasingly more sophisticated techniques will provide more accurate and complete information about not only T. rex but all the dinosaurs, giving us a window on the world so many millions of years into the past.

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20. It can be inferred from the passage that much of what scientists know about T. rex

- A. Has been known for many years
 - B. Has not come from fossil discoveries
 - C. Has been derived from the most sophisticated techniques
 - D. Has been recently discovered
21. The passage implies that fossils

- A. Are usually found in the Midwest
- B. Are usually found in beds containing complete skeletons



C. Are few in comparison to the number of dinosaurs that roamed the earth

D. Are easy to discover but difficult to excavate

22. Which of the following can be inferred from the passage?

A. Interest in fossils is relatively recent.

B. It takes advanced techniques to find fossils.

C. The search for fossils has been going on for many years.

D. Dinosaurs were continued to a relatively small area.

23. Which of the following can be inferred about T. rex?

A. It was a small but powerful dinosaur.

B. It was a strong, meat-eating dinosaur.

C. It was a fast, plains-dwelling dinosaur.

D. It was a gigantic, forest-dwelling dinosaur.

Electronic mail

A major revolution for the automated office is electronic mail. The customary postal System requires messages written on paper to be transmitted physically from one location to another. With electronic mail, messages are converted into electronic signals, transmitted anywhere in the world, and then changed back into the original written form, all in several seconds or minutes at most.

Through the use of video screens in company offices, a single document can be transmitted to hundreds of people in dozens of branch offices at the same time. Thus, electronic mail, along with databases, can be an important asset in teleconferences.

Furthermore, the use of electronic mail in the form of a “mailbox” attached to a telephone is also of great value. Since in offices many telephone calls go uncompleted on the first attempt, with electronic mail, two-way conversion is not essential, so it reduces telephone use and saves time.

Electronic mail is far more expensive than the postal system, as it must compete for transmission space on satellite, telephone, and cable links. But planned increases in satellite communications should lower the price and assist in the spread of electronic mail.

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25. It can be inferred from the passage that the advantages of electronic mail are

- A. Its low cost and efficiency
- B. Its use of the postal system and telephone “mailboxes”
- C. Its role in satellite communications and teleconferencing
- D. Its speed and utility

26. The passage implies that electronic mail

- A. Will be used more often in the future



- B. Will soon outlive its usefulness

- ☐ C. Is too costly for most offices
- ☐ D. Could never take the place of the current postal System
27. Which of the following can be inferred from the passage?

- A. Electronic mail saves money but not time.
- B. Electronic mail has more than one use in the office setting.
- C. Electronic mail will eventually replace the telephone.
- D. Electronic mail is not a new phenomenon.

Brown bears

Brown bears are found in Alaska and western Canada. They are first cousins of the grizzly, each belonging to the species *Ursus arctos*. The chief difference in them is size, as brown bears on the average are slightly larger. A full-grown male may weigh 1,500 pounds and stand 9 to 10 feet tall. Like bears everywhere they are creatures of habit that tread the same trails year after year. Brown bears have three gaits: an even, deliberate one that takes them over rough or boggy ground at a steady clip, a quick shuffle, and a fast gallop. They are not only surprisingly fast, but also, for such huge beasts, amazingly agile. They can charge up and climb down nearly vertical inclines. Fishing the streams in summer, they pounce on swift-moving salmon and snatch them with almost simultaneous movements of their paws and mouths. Brown bears are excellent swimmers and love to loll and wallow in the water on warm days. They are also curious and playful. Most manifest a fear of humans, but Alaskans prefer not to test these creatures and usually carry noisemakers of some kind to warn the bears of their presence.

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28. It can be inferred from the passage that

- ☐ A. Grizzlies are smaller than brown bears

B. Brown bears do not have the same habits as most bears



C. Grizzlies are not found in western Canada

D. Grizzlies and brown bears are not related

29. It is most probable that if a brown bear came across a human in the wild it would

A. Attack the human

B. Avoid the human

C. Not be the least interested in the human

D. Be friendly toward the human

30. The passage implies that brown bears

A. Are huge, awkward animals

B. Can negotiate almost any terrain

C. Are fierce and bad-tempered

D. Are not afraid of loud noises

Frank Gehry

Frank Gehry was once considered just another Southern California eccentric. It wasn't until the late 1980s that he began receiving international acclaim as one of the world's foremost architects. Outside the mainstream, his random designs have been so unique as to have defied categorization. In the late 1970s he was preoccupied with the notion of things in progress and his belief that buildings are most interesting when still unfinished. To give the impression of a structure in the state of construction, Gehry incorporated exposed studs and joinings, unpainted walls, and transparent skeletal framework in his buildings. In the early 1980s he explored the relation between space, structure, and light.

Like the renderings of artists, Gehry's work is very expressive. His close identity with painters and sculptors has inspired him to infuse his buildings with the qualities of immediacy, spontaneity, and improvisation. His fascination with textures and materials led him to experiment with the effect of combining different building materials, such as plywood, metal, and glass.

While Gehry has achieved international prominence as one of the era's most provocative and creative architects, he continues to experiment with form and structure. With his casual, intuitive approach to design, his buildings continue to demonstrate a high degree of freedom and invention. His work has inspired architects worldwide, who have taken his style and themes to cities around the globe.

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33. It is implied in the passage that

- A. California is known for its conventional artists
 - B. California is internationally known for its architecture
 - C. Many Californians are nonconformists
 - D. Some people think California is a traditional state
34. The passage suggests that Frank Gehry

- A. has been labeled a modernist
- B. had defied definition as a certain type of architect
- C. has not influenced architects outside the United States
- D. has always worked within the confines of traditional architectural design

35. From the passage, it can be interred that Gehry's buildings

- ☐ A. have a very unusual look
- ☐ B. are archaic in form and structure
- C. fit in well with surrounding structures
- D. are simplistic and elegant

North America

From a European perspective, the first explorers were engaged in the settlement and discovery of a “new world.” However, the history of the United States is but a recent episode in comparison with the history of the North American continent and its people. Between 54 million and 2 million years ago, the continent evolved into the form we know today. At least 15,000 to 20,000 years ago, nomadic hunters began to migrate from Asia across the Bering Strait.

By the fifteenth century, when the European nations were “discovering” America, the country was inhabited by a minimum of two million natives. Most of the tribes had developed some kind of agriculture or fishing while remaining as hunters and retaining nomadic characteristics. They roamed the high western plains, hunted mountain valleys, and farmed along the rivers from coast to coast. There was considerable diversity and there were several hundred different languages among the wide-ranging tribes. Several tribes, such as the Iroquois, were very successful in achieving political unity and extending their influence.

The native peoples were well adapted to their environment, and without the aid of the natives, the first European settlers might not have survived. Many native vegetables, such as maize and potatoes, became important Staples. Moreover, native trackers

guided expeditions and taught hunters and explorers the ways of the land. For years, U.S. history began with Columbus, but today the cultures and contributions of the early inhabitants of the Americas are studied and acknowledged. The story of North America begins with the true origin of the continent and its peoples.

37. The passage implies that

- A. The Europeans were well prepared to live in the “new world”
- B. The Europeans erroneously considered themselves the first settlers in North America ●
- C. The Europeans were not influenced by the native Americans
- D. The history of North America begins with its discovery and settlement by the Europeans

38. From the passage it can be inferred that

- A. North America is a relatively new continent
- B. Until approximately 20,000 years ago, there were no humans in North America
- C. When the Europeans arrived, North America was uninhabited
- D. Native Americans had as much trouble surviving in North America as the European settlers

39. Which of the following can be inferred from the passage?

○ |

- A. Most native Americans had established permanent settlements by the time the Europeans arrived.



B. Most native Americans spoke the same language and had similar customs.

C. Many native American tribes had organized societies by the time Europeans arrived.

D. Once native Americans began farming, they no longer moved from place to place.

40. The passage suggests that native Americans

A. Were primitive compared with the European settlers

B. Kept their distance from European settlements

C. Had very little to offer the European settlers

D. Were of benefit to the first settlers

Energy

In the twentieth century, people depend on unlimited energy to power their everyday lives. A wide range of energy-run devices and modern conveniences are taken for granted, and although it may seem that we will never be in danger of living without those conveniences, the fact is that many supplies of energy are dwindling rapidly. Scientists are constantly searching for new sources of power to keep modern society running. Whether future populations will continue to enjoy the benefits of abundant energy will depend on the success of this search.

Coal, oil, and natural gas supply modern civilization with most of its power. However, not only are supplies of these fuels limited, but they are a major source of pollution. If the energy demands of

the future are to be met without seriously harming the environment, existing alternative energy sources must be improved or further explored and developed. These include nuclear, water, solar, wind, and geothermal power, as well as energy from new, nonpolluting types of fuels. Each of these alternatives, however, has advantages and disadvantages.

Nuclear power plants efficiently produce large amounts of electricity without polluting the atmosphere; however, they are costly to build and maintain, and they pose the daunting problem of what to do with nuclear wastes. Hydroelectric power is inexpensive and environmentally safe, but impractical for communities located far from moving water. Harnessing energy from tides and waves has similar drawbacks. Solar power holds great promise for the future but methods of collecting and concentrating sunlight are as yet inefficient, as are methods of harnessing wind power.

Every source of energy has its disadvantages. One way to minimize them is to use less energy. Conservation efforts coupled with renewable energy resources, such as a combination of solar, water, wind, and geothermal energy and alternative fuels, such as alcohol and hydrogen, will ensure supplies of clean, affordable energy for humanity's future.

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41. The passage suggests that

A. People use energy without giving great thought to where it's coming from



B. The search for energy sources is mainly a problem for the future



C. Scientists believe we will never have to go without our modern conveniences

D. Modern society requires a minimum amount of energy to keep it running

42. It can be implied from the passage that

A. Most alternative energy sources have proven to be impractical

B. Many alternative energy sources are environmentally hazardous

C. Nuclear power solves one problem while creating others

D. Solar and wind power are not promising for the future

43. From the passage, it can be inferred that to solve our energy problems

A. We will have to stop using many of our modern conveniences

B. Scientists will have to find one major source of nonpolluting energy

C. Scientists will have to find ways to increase our supplies of coal, oil, and gas

D. A combination of conservation and invention will be needed

44. Which of the following can be inferred from the passage?



- A. The search for alternative energy sources is not over.
- B. Our present energy sources must be eliminated and replaced with alternative sources.
- C. Alternative sources of energy on this planet are very limited.
- D. Demands for energy in the future are likely to decrease

Sirenia

Manatees and dugongs are members of the mammalian order Sirenia. Completely aquatic, sirenians inhabit the tropical Coastal and certain adjacent waters of the West Indies, northern South America, Southern North America (Florida), western Africa, and Southern Asia to northern Australia. Sirenians live in Coastal waters, large rivers, estuaries, lagoons, and connected lakes. Today there exist four species of Sirenia: One dugong and three manatees.

Although similar in appearance to seals and walruses, sirenians are more closely related to elephants. The skin of the sirenian is finely wrinkled and greyish-brown in color. The tail is wide and flat—shaped like a paddle with the exception of the dugong, which has a dolphin-like tail. Sirenians have inspired many a legend about mermaids. The chunky body and homely facial features of a sirenian do not bring to mind the image of a beautiful woman, but the mammal's graceful movements combined with a sailor's faulty Vision might give rise to some unusual stories.

45. It is most probable that Sirenians would NOT be found

- ☐ A. An the Gulf of Mexico
- ☐ B. Off the coast of Ghana
- C. In Alaskan waters
- D. On the Brazilian coast

46. It can be inferred from the passage that

- A. Some sirenians look like dolphins
- B. Physical resemblance among animals does not mean they are related
- C. Sirenians look more like elephants than walruses
- D. Like seals, sirenians can also live on land

47. The passage suggests that

- A. Most sailors were nearsighted
- B. It takes a lot to inspire a legend
- C. Legends sometimes have unlikely sources
- D. Mermaids were as homely as sirenians