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回复【阅读】进群



— 课程安排 —

第1天 鸟类和两栖动物等动物行为类文章

3月16日 19:00-19:45 主讲: 吴迪

第2天 哺乳动物等动物行为类文章讲解

3月17日 19:00-19:45 主讲: 吴迪

第3天 生态之动植物之间关系类文章

3月18日 19:00-19:45 主讲: 吴迪

第4天 生态之动植物与环境关系类文章

3月19日 19:00-19:45 主讲: 吴迪

第5天 古生物学文章相关题型思路讲解

3月20日 19:00-19:45 主讲: 吴迪

★ (直播结束3小时后可回看)

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回复【阅读】进群

3.16-3.20|吴迪老师阅读刷题营①(491)

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群名

3.16-3.20|吴迪老师阅读刷题营①

3.16-3.20|吴迪老师阅读刷题营②(200)

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托福小仙女

这里是吴迪老师独立阅读专项训练营，带你5天搞定生物生态类文章。

开营时间：3月16日-3月20日

直播时间：每晚19:00-19:45（5场哟）

在【4月30日】前，每晚直播结束3小时后可回看，有效期内可反复观看。

每天会有作业练习，为保障学习效果建议按时完成哟！

开课前请确认账号里有课程哟，通过购课账号进入新东方在线官网 / APP查看；

忘记账号请用手机号+验证码尝试登陆！

群内禁止发任何广告！违者直接抱出，有任何问题随时找群主！

群名

3.16-3.20|吴迪老师阅读刷题营②

群公告

[奸笑]这里是吴迪老师独立阅读...

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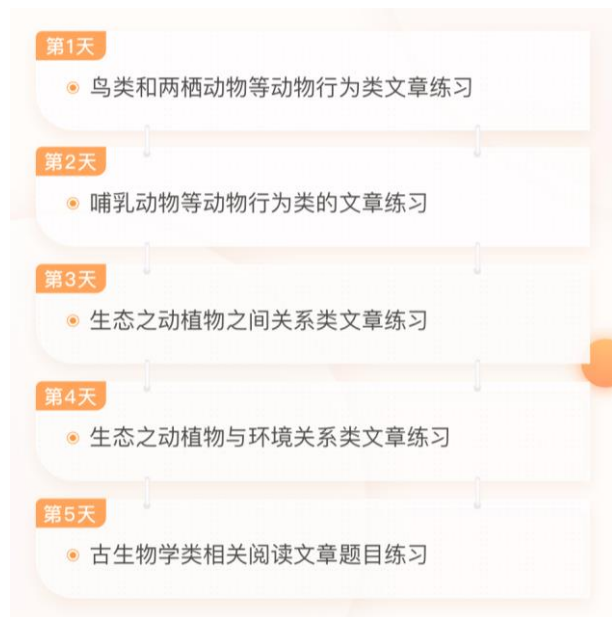
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每日直播结束老师会布置相应习题，在群内发布
完成作业任务 次日上课前老师会抽选1人点评
打卡全勤赠送吴迪老师整理托福阅读高频词汇

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古生物学文章

吴迪

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词句基础+篇章逻辑=阅读满分

课程大纲

- DAY 1: 动物行为学文章1 (鸟类+两栖动物+爬行动物)
- DAY 2: 动物行为学文章2 (哺乳动物)
- DAY 3: 生态学文章1
- DAY 4: 生态学文章2
- **DAY 5: 古生物学文章**

课程大纲

- **DAY 5: 古生物学文章**
 - 背景知识补充
 - 例题讲解
 - 思路总结

背景知识补充

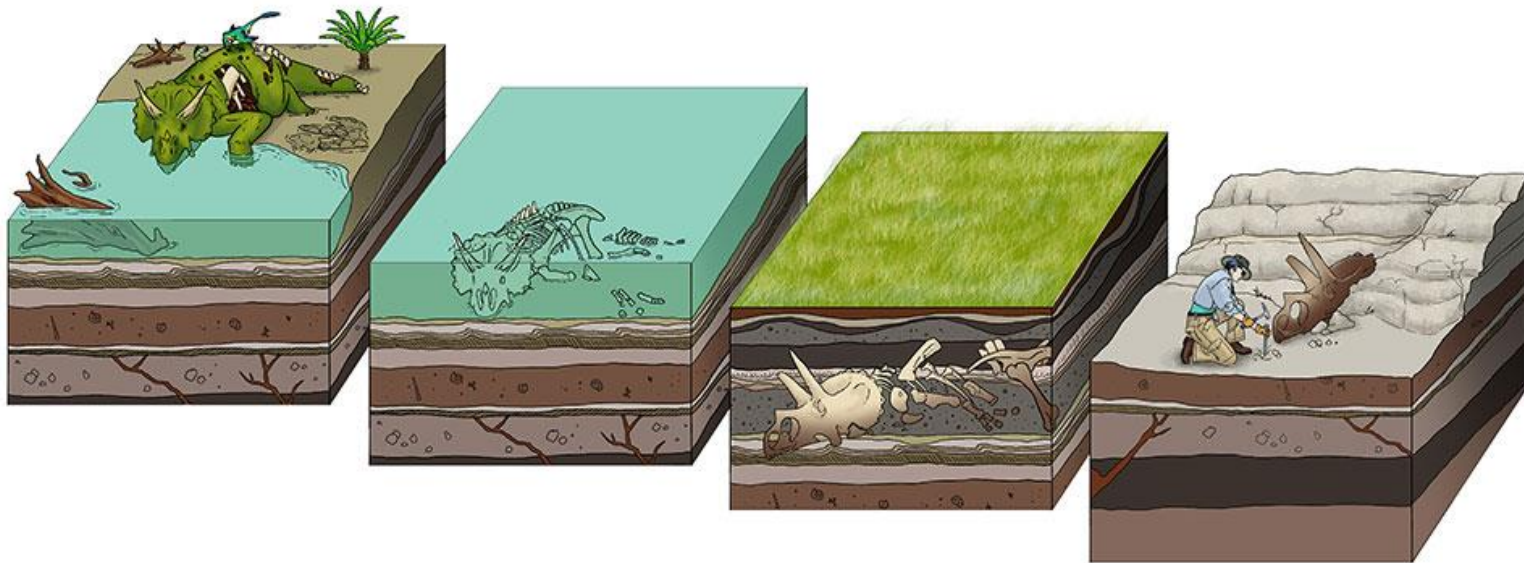
➤ Paleontology:

Paleontology, also spelled palaeontology, scientific study of **life of the geologic past** that involves the analysis of **plant and animal fossils**, including those of microscopic size, preserved in rocks. It is concerned with all aspects of the biology of ancient life forms: their **shape and structure**, **evolutionary patterns**, **taxonomic relationships with each other and with modern living species**, **geographic distribution**, and **interrelationships with the environment**. Paleontology is mutually interdependent with **stratigraphy** and **historical geology** because **fossils** constitute a major means by which **sedimentary strata** are identified and correlated with one another. Its methods of investigation include that of biometry (statistical analysis applied to biology), which is designed to provide a description of the forms of organisms statistically and the expression of taxonomic relationships quantitatively.

背景知识补充

➤ Paleontology:

➤ Life of a Fossil: From Death to Exhibit



背景知识补充

- **Paleontology:**
 - **Mass Extinctions**
 - **Species Explosion--Cambrian explosion**
 - **the Origins of Plants and Animals**
 - **Dinosaur Behavior**

背景知识补充

- Paleontology:
- **Mass Extinctions**
 - The extinction of **a large number of species** within a relatively **short period of time**, as between the Cretaceous 白垩纪的 and Tertiary Periods 第三纪 when three-quarters of all species on earth, including most dinosaurs, became extinct.

背景知识补充

➤ Paleontology:

➤ **Mass Extinctions**

- Throughout the 4.6 billion years of Earth's history, there have been **five major mass extinction events** that each wiped out an overwhelming majority of species living at the time. These five mass extinctions include the Ordovician Mass Extinction, Devonian Mass Extinction, Permian Mass Extinction, Triassic-Jurassic Mass Extinction, and Cretaceous-Tertiary (or the K-T) Mass Extinction.
- Each of these events varied in size and cause, but all of them completely devastated the biodiversity found on Earth at their times.

背景知识补充

- **Paleontology:**
- **Mass Extinctions**
 - There are several causes for mass extinctions, such as **climate change**, **geologic catastrophes** (e.g. numerous volcanic eruptions), or even **meteor strikes onto Earth' s surface**. There is even evidence to suggest that **microbes** may have sped up or contributed to some of the mass extinctions known throughout the Geologic Time Scale.

背景知识补充

- **Paleontology:**
- **Suspected Causes of Mass Extinctions**
 - **The Ordovician Mass Extinction**--Continental drift and subsequent climate change
 - **The Devonian Mass Extinction**--Lack of oxygen in the oceans, quick cooling of air temperatures, volcanic eruptions and/or meteor strikes
 - **The Permian Mass Extinction**-- Unknown—possibly asteroid strikes, volcanic activity, climate change, and microbes
 - **The Triassic-Jurassic Mass Extinction**--Major volcanic activity with basalt flooding, global climate change, and changing pH and sea levels of the oceans

背景知识补充

- **Paleontology:**
- **Suspected Causes of Mass Extinctions**
 - **The K-T Mass Extinction**--Extreme asteroid or meteor impact

The fourth major mass extinction event is perhaps the best-known, despite it not being the biggest. The Cretaceous-Tertiary Mass Extinction (or K-T Extinction) became the dividing line between the final period of the Mesozoic Era—the Cretaceous Period—and the Tertiary Period of the Cenozoic Era. It is also the event that wiped out the dinosaurs. The dinosaurs were not the only species to go extinct, however—up to 75% of all known living species died during this mass extinction event.

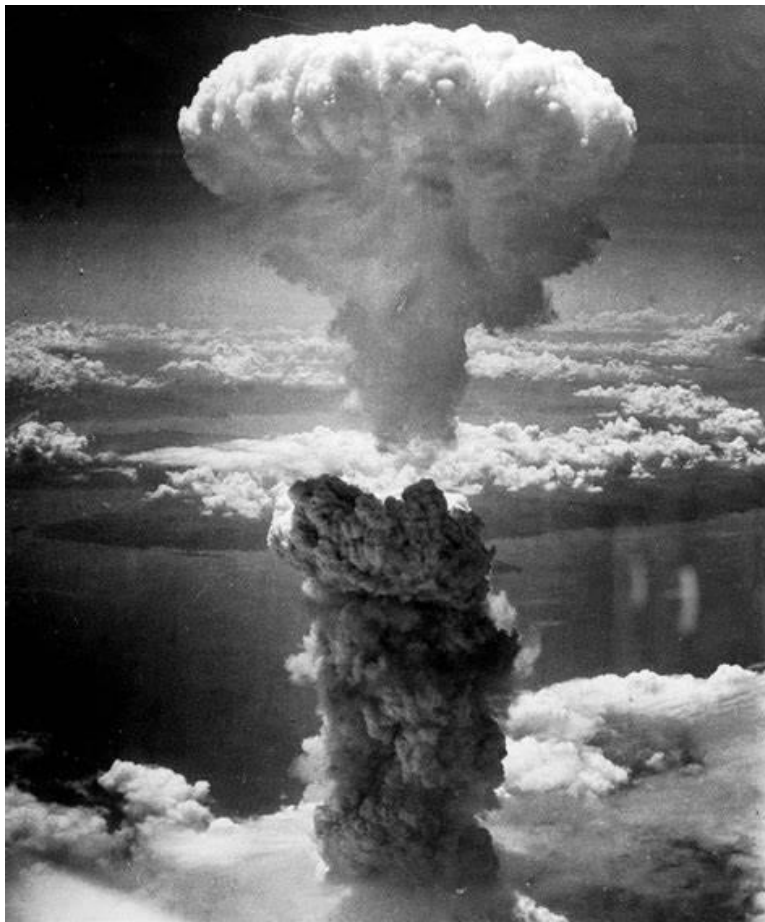
背景知识补充

- Paleontology:
- **Suspected Causes of Mass Extinctions**
 - **The K-T Mass Extinction**--Extreme asteroid or meteor impact

It is well-documented that the cause of this mass extinction was a major **asteroid impact**. The huge space rocks hit Earth and sent debris into the air, effectively producing an “**impact winter**” that drastically changed the climate across the entire planet. Scientists have studied the large craters left by the asteroids and can date them back to this time.

背景知识补充

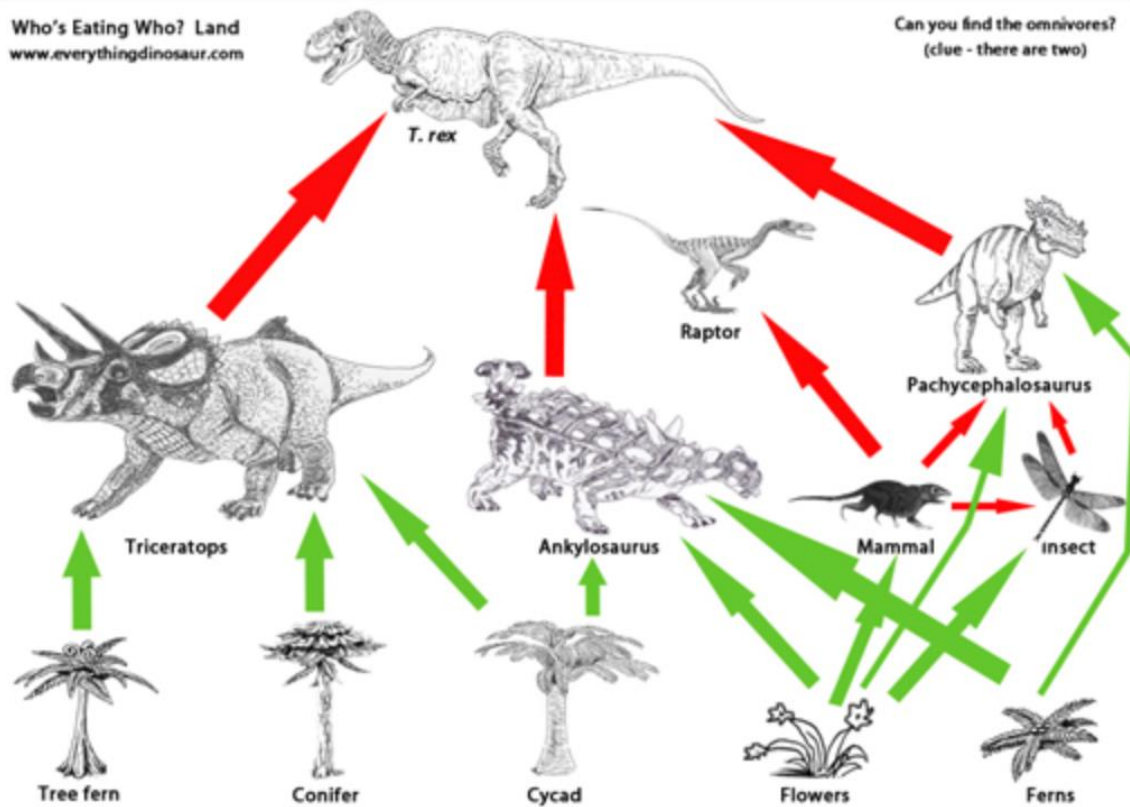
➤ Paleontology:



背景知识补充

➤ Paleontology:

➤ Food Chain



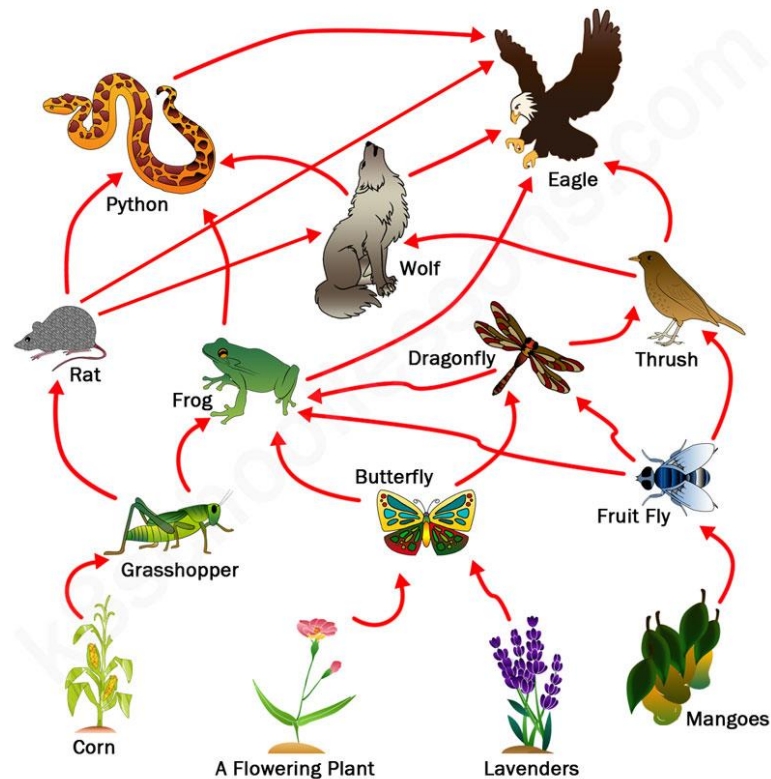
背景知识补充

➤ Paleontology:

➤ Food Chain

➤ Producers and Consumers

A Food Web



背景知识补充

➤ Paleontology:

➤ **Species Explosion--Cambrian explosion**

- The Cambrian Period is the first geological time period of the Paleozoic Era (the “time of ancient life”). This period lasted about 53 million years and marked **a dramatic burst of evolutionary changes in life on Earth**, known as the "Cambrian Explosion." Among the animals that evolved during this period were the chordates — animals with a dorsal nerve cord; hard-bodied brachiopods, which resembled clams; and arthropods — ancestors of spiders, insects and crustaceans.

背景知识补充

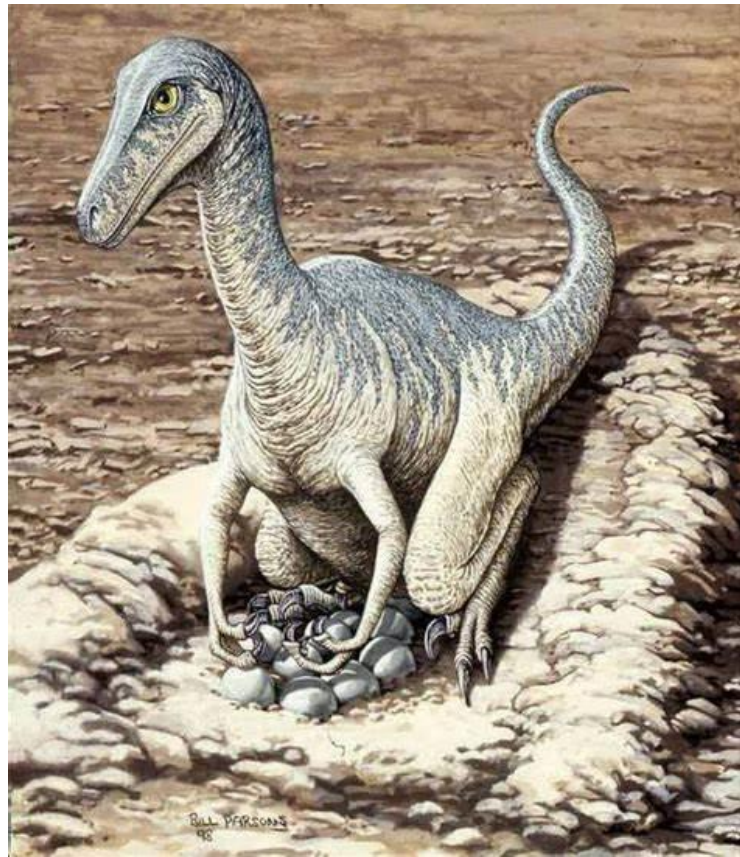
➤ Paleontology:

➤ **Species Explosion--Cambrian explosion**

- The reasons for this are still debated, but a leading theory is that **the amount of oxygen in the atmosphere** had finally reached levels that allowed large, complex animals to exist. Oxygen levels may also have facilitated the metabolic processes that produce collagen, a protein building block that is the basis for hard structures in the body.

背景知识补充

- Paleontology:
- **Dinosaur Behavior--Parental Care:**



背景知识补充

➤ Paleontology:

➤ Dinosaur Behavior

➤ Parental Care:

- The most famous example of behavior that has become known thanks to **fossil** material is parental care in Maiasaura, a hadrosaur from North America. By studying the nests found in Montana, US palaeontologists were able to conclude that these hadrosaurs did take care of their young.

背景知识补充

➤ Paleontology:

➤ Dinosaur Behavior

➤ Parental Care:

- Nests themselves wouldn't be too good evidence, as most reptiles build them and abandon them next. What made the *Maiasaura* different was the fact that many tiny pieces of egg shells were found in the nests. They were most probably crushed to such a state by the young dinosaurs, which therefore must have stayed in the nest after leaving their eggs. This meant that they must have been fed by their parents, who would bring them food straight to the nest, for otherwise staying in it would mean starvation.

背景知识补充

➤ Paleontology:

➤ Dinosaur Behavior

➤ Parental Care:

- Recent osteological studies have also shown that the young *Maiasaura* didn't have fully ossified limbs, which made it difficult for them to walk longer distances. This would explain why they stayed in the nests and it is also very hard evidence for the hypothesis that out of the hadrosaurs at least the *Maiasaura* were likely caring parents, although things are not as evident as has been suggested first, and some interpretations proved to be only moderately well supported.

背景知识补充

- **Paleontology:**

- **Dinosaur Behavior**

- **Parental Care:**

- Evidence for social behavior have also been found in the form of trace fossils - tracks of several sauropods traveling in the same direction have been found and interpreted as evidence for herding behavior. Bonebeds of hundreds of hadrosaurs and ceratopsians also indicate that some dinosaurs traveled in large herds.

例题演练1

Paragraph 6: One interesting test of the Alvarez hypothesis is based on the presence of the rare-earth element iridium (Ir). Earth's crust contains very little of this element, but most asteroids contain a lot more. Debris thrown into the atmosphere by an asteroid collision would presumably contain large amounts of iridium, and atmospheric currents would carry this material all over the globe. A search of sedimentary deposits that span the boundary between the Cretaceous and Tertiary periods shows that there is a dramatic increase in the abundance of iridium briefly and precisely at this boundary. This iridium anomaly offers strong support for the Alvarez hypothesis even though no asteroid itself has ever been recovered. [TPO 15]

According to paragraph 6, what made iridium a useful test of the Alvarez hypothesis?

- A. Its occurrence in a few locations on Earth against several locations on other planets
- B. Its occurrence in limited quantities on Earth against its abundance in asteroids
- C. Its ability to remain solid at extremely high temperatures
- D. Its ease of detection even in very small amounts

例题演练2

Paragraph 3 strongly suggests that if the bolide impact theory is correct, the majority of the extinctions associated with the K-T event resulted from

- A. sunlight being blocked for months by dust and smoke in Earth' s atmosphere
- B. widespread flooding that followed the displacement of huge volumes of seawater
- C. the leveling of the landscape by the shock wave that was generated when the bolide struck earth
- D. the rise in global temperatures caused by the fires that burned much of the landscape

例题演练2

Paragraph3: According to one theory, the Age of Dinosaurs ended suddenly 65 million years ago when a giant rock from space plummeted to Earth. Estimated to be ten to fifteen kilometers in diameter, this bolide (either a comet or an asteroid) was traveling at cosmic speeds of 20-70 kilometers per second, or 45,000-156,000 miles per hour. Such a huge mass traveling at such tremendous speeds carries an enormous amount of energy. When the bolide struck, the energy was released and generated a huge shock wave that leveled everything for thousands of kilometers around the impact and caused most of the landscape to burst into flames. The bolide struck an area of the Yucatan Peninsula of Mexico known as Chicxulub, excavating a crater 15-20 kilometers deep and at least 170 kilometers in diameter. The impact displaced huge volume of seawater, causing much flood damage in the Caribbean. Meanwhile, the bolide itself excavated 100 cubic kilometers of rock and debris from the site, which rose to an altitude of 100 kilometers. Most of it fell back immediately, but some of it remained as dust in the atmosphere for months. This material, along with the smoke from the fire, shrouded Earth, creating a form of nuclear winter. According to computerized climate models, global temperatures fell to near the freezing point, photosynthesis halted, and most plant on land and in the sea died. With the bottom of the food chain destroyed, dinosaurs could not survive. [TPO 42]

例题演练3

Paragraph 4: The evolution of North American horses, which was once presented as a classic textbook example of gradual evolution, is now providing equally compelling evidence for punctuated equilibrium. A convincing 50-million-year sequence of modern horse ancestors—each slightly larger, with more complex teeth, a longer face, and a more prominent central toe—seemed to provide strong support for Darwin’s contention that species evolve gradually. But close examination of those fossil deposits now reveals a somewhat different story. Horses evolved in discrete steps, each of which persisted almost unchanged for millions of years and was eventually replaced by a distinctive newer model. The four-toed Eohippus preceded the three-toed Miohippus, for example, but North American fossil evidence suggests a jerky, uneven transition between the two. If evolution had been a continuous, gradual process, one might expect that almost every fossil specimen would be slightly different from every other.
[TPO 30]

Paragraph 4 mentions that North American horses have changed in all of the following ways EXCEPT in

- A. the number of toes they have
- B. the length of their faces
- C. their overall size
- D. the number of years they live

例题演练3

Paragraph 4: The evolution of North American horses, which was once presented as a classic textbook example of gradual evolution, is now providing equally compelling evidence for punctuated equilibrium. A convincing 50-million-year sequence of modern horse ancestors—each slightly larger, with more complex teeth, a longer face, and a more prominent central toe—seemed to provide strong support for Darwin’s contention that species evolve gradually. But close examination of those fossil deposits now reveals a somewhat different story. Horses evolved in discrete steps, each of which persisted almost unchanged for millions of years and was eventually replaced by a distinctive newer model. The four-toed Eohippus preceded the three-toed Miohippus, for example, but North American fossil evidence suggests a jerky, uneven transition between the two. If evolution had been a continuous, gradual process, one might expect that almost every fossil specimen would be slightly different from every other.
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例题演练4

Paragraph 7: Occasionally, a sequence of fossil-rich layers of rock permits a comprehensive look at one type of organism over a long period of time. For example, Peter Sheldon' s studies of trilobites, a now extinct marine animal with a segmented body, offer a detailed glimpse into three million years of evolution in one marine environment. In that study, each of eight different trilobite species was observed to undergo a gradual change in the number of segments—typically an increase of one or two segments over the whole time interval. No significant discontinuities were observed, leading Sheldon to conclude that environmental conditions were quite stable during the period he examined. [TPO 30]

According to paragraph 7, Peter Sheldon' s studies demonstrated which of the following about trilobites?

- A. They underwent gradual change over a long time period
- B. They experienced a number of discontinuous transitions during their history.
- C. They remained unchanged during a long period of environmental stability
- D. They evolved in ways that cannot be accounted for by either of the two competing theories.

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