

EXTENDED INFORMATIONAL READING COMPREHENSION

Weird, Wild Weather: Lightning

Answer the questions about “Weird, Wild Weather: Lightning.”

1. Read this sentence from paragraph 2.

“And as wild as this lightning is, it’s a pretty common phenomenon.”

Which of the following words is a synonym for “phenomenon” as it is used in the sentence above?

- A. object B. task **C. occurrence** D. experiment

2. Read the following excerpt from paragraph 2.

“The lightning we experience during thunderstorms may seem jarring, but it’s really a great equalizer.”

What does the underlined phrase mean?

- A. Lightning strikes everywhere around the world equally.
 B. Fires caused by lightning strikes help maintain a healthy balance in forest ecosystems.
C. Lightning is nature’s way of correcting an imbalance of positively and negatively charged particles.
 D. There is always a balance of positive and negative lightning in the atmosphere.

3. How does the author introduce the topic of ball lightning?

- A. by presenting a visual description**
 B. by defining unfamiliar terms
 C. by providing scientific facts
 D. by relating a personal experience

4. Red sprites can be visible from the ground, but they are difficult to spot. Why? Choose all that apply.

- A. Red sprites are extremely rare phenomena that happen in only a few places.
B. Red sprites disappear in a fraction of a second.
 C. Red sprites are usually hidden by the tall storm clouds below them.
D. Red sprites appear very small because they are very high up.
 E. Red sprites strike upward from storm clouds.

5. Why does the author include a section about Catatumbo lightning, a “regular” type of lightning, in a passage about “weird and wild” weather? Use evidence from the text to support your answer.

Catatumbo lightning is “weird and wild” because of how often lightning strikes in one place, averaging 28 strikes per minute, 9-10 hours a day, for 150-300 days a year.

6. According to the diagram on page 2, where does most regular lightning occur?

- A. the stratosphere **C. the troposphere**
 B. Lake Maracaibo D. the mesosphere

7. Based on information in the passage, describe two differences between negative and positive lightning.

1. Negative lightning is the most common type of “regular” lightning, but positive lightning is usually much more powerful.

2. Negative lightning occurs when negatively charged particles flow toward positively charged particles, while positive lightning occurs when positively charged particles flow toward negatively charged particles.

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8. **A. According to the text, what are some possible negative effects of blue jet lightning, and why?**

Blue jets “can interfere with satellite and radio communications to and from Earth” because they occur in the stratosphere, which is higher than the more common negative lightning that happens in the troposphere.

- B. Based on the information in the text and the diagram on page 2, what other type(s) of lightning might have similar negative effects as blue jets? Cite evidence from the article to support your answer.**

Red sprites and elves might cause problems with communication technology because of how high in the atmosphere they occur. In paragraph 6, the author states that “lightning events high up in the atmosphere can interfere with satellite and radio communications to and from Earth.” Red sprites and elves both occur in the mesosphere, which is even higher than the blue jets in the stratosphere.

9. **What do all the main types of “weird and wild” lightning addressed in detail in the passage have in common?**

A. Many scientists are still not sure of their existence.

C. Although they are not easily visible, they are quite common.

B. They occur during specific times of the year.

D. Scientists do not fully understand how they occur.

10. **In your own words, summarize the passage, including the main idea and key details.**

While “regular” lightning is quite a weird and wild phenomenon itself, there are even weirder and wilder types of lightning. Ball lightning is one example; these orbs of lightning have been reported for centuries but have only recently been observed by scientists, who still don’t know what causes them. Similarly, blue jets are a little-understood type of lightning that shoots upwards from the tops of storms into the stratosphere. Red sprites occur even higher up, in the mesosphere, and scientists think these types of lightning might be associated with powerful positive lightning strikes on the ground. Finally, Catatumbo lightning is unique because of how frequently lightning strikes at one particular place in Venezuela, probably because of a perfect combination of landforms and wind patterns. These types of lightning and others are all examples of weird and wild weather events.