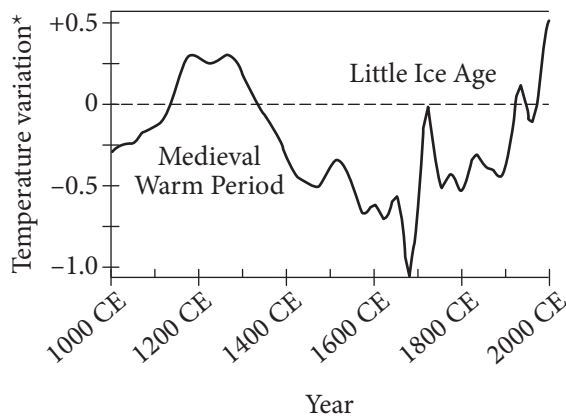


Estimated Temperature in Central England
1000 CE to 2000 CE



*Variation from the 1961-1990 average temperature, in °C, represented at 0.

Adapted from John P. Rafferty, "Little Ice Age." Originally published in 2011. ©2014 by Encyclopedia Britannica, Inc.

42

The main purpose of the passage is to

- A) describe periods in Earth's recent geologic history.
- B) explain the methods scientists use in radiocarbon analysis.
- C) describe evidence linking the volcano Samalas to the Little Ice Age.
- D) explain how volcanic glass forms during volcanic eruptions.

43

Over the course of the passage, the focus shifts from

- A) a criticism of a scientific model to a new theory.
- B) a description of a recorded event to its likely cause.
- C) the use of ice core samples to a new method of measuring sulfates.
- D) the use of radiocarbon dating to an examination of volcanic glass.

44

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 17-25 ("In 2012 . . . 1455 C.E.")
- B) Lines 43-46 ("The researchers . . . atop the volcano")
- C) Lines 46-48 ("They examined . . . material")
- D) Lines 55-60 ("The team . . . 13th century")

45

The author uses the phrase "is written in" (line 6) most likely to

- A) demonstrate the concept of the hands-on nature of the work done by scientists.
- B) highlight the fact that scientists often write about their discoveries.
- C) underscore the sense of importance that scientists have regarding their work.
- D) reinforce the idea that the evidence is there and can be interpreted by scientists.

46

Where does the author indicate the medieval volcanic eruption most probably was located?

- A) Near the equator, in Indonesia
- B) In the Arctic region
- C) In the Antarctic region
- D) Near the equator, in Ecuador

47

Which choice provides the best evidence for the answer to the previous question?

- A) Lines 1-3 ("About 750 . . . Ice Age")
- B) Lines 26-28 ("Such a . . . the cooling")
- C) Lines 49-54 ("The volume . . . the Holocene")
- D) Lines 61-64 ("It's not . . . climate impacts")

48

As used in line 68, the phrase “Another possible candidate” implies that

- A) powerful volcanic eruptions occur frequently.
- B) the effects of volcanic eruptions can last for centuries.
- C) scientists know of other volcanoes that erupted during the Middle Ages.
- D) other volcanoes have calderas that are very large.

49

Which choice best supports the claim that Quilotoa was not responsible for the Little Ice Age?

- A) Lines 3-4 (“Identifying . . . tricky”)
- B) Lines 26-28 (“Such a . . . cooling”)
- C) Lines 43-46 (“The researchers . . . atop the volcano”)
- D) Lines 71-75 (“But . . . closer match”)

50

According to the data in the figure, the greatest below-average temperature variation occurred around what year?

- A) 1200 CE
- B) 1375 CE
- C) 1675 CE
- D) 1750 CE

51

The passage and the figure are in agreement that the onset of the Little Ice Age began

- A) around 1150 CE.
- B) just before 1300 CE.
- C) just before 1500 CE.
- D) around 1650 CE.

52

What statement is best supported by the data presented in the figure?

- A) The greatest cooling during the Little Ice Age occurred hundreds of years after the temperature peaks of the Medieval Warm Period.
- B) The sharp decline in temperature supports the hypothesis of an equatorial volcanic eruption in the Middle Ages.
- C) Pyroclastic flows from volcanic eruptions continued for hundreds of years after the eruptions had ended.
- D) Radiocarbon analysis is the best tool scientists have to determine the temperature variations after volcanic eruptions.

STOP

**If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.**