

**For Teachers:** Please have the students read the sentences one at a time and correct their pronunciation of each sentence then have them repeat after you. Wait until after they read the sentence (use the number in place of the missing word) to have the students choose the correct answer to fill in the blank. When the students finish the article, move on to the further questions.

日本語訳なしタイプ B もございます。スクロールダウンするとございますので好きな方をご利用下さい。

2[B] – **Geoengineering**

eTOC のレッスン以外で使用禁止 AP1E 11-1

- 概念 (がいねん) 地球工学 (ちきゅうこうがく) 人工 (じんこう) の 試 (こころ) み
1. The concept of “geoengineering”, which describes man-made attempts to
- 管理 (かんり) する 気候 (きこう) 存在 (そんざい) する 最近 (さいきん)
2. control the climate, has existed since the 19<sup>th</sup> century. Recently, it has
- 政府 (せいふ) 議論 (ぎろん) している 最良 (さいりょう) の
3. ( 29 ) . National governments have argued for years over the best
- 方法 (ほうほう) 対処 (たいしょ) する 脅威 (きょうい) 地球温暖化 (ちきゅうおんだんか) 増大 (ぞうだい) している
4. way to deal with the threat of global warming , but a growing
- 可能 (かのう) な
5. number of nations are now considering geoengineering as a possible
- 解決策 (かいけつさく)
6. solution .

\*Choose the correct answer to fill in the blank from these choices.

- 不可能 (ふかのう) な 注意 (ちゅうい)
7. (29) 1 proven technically impossible 2 attracted greater attention
- 不足 (ふそく) 投資 (とうし) 世界的 (せかいてき) に
8. 3 suffered from lack of investment 4 been adopted worldwide

**Further Questions&A**

\*Ask student to answer the question on their own at first. If the student can't answer correctly, have him look at the last page and read the "example answer" for the question. Have the student try to memorize the answer, if it's too long or difficult, you should divide the sentence into 2 or 3 parts to make it easier to remember. Once they have memorized the answer, the teacher should ask the question one last time so that the student can practice answering. Also if you find any mistakes, please mark the page and let me know ASAP.

- 9.1) Since when has the idea of geoengineering existed?
10. 地球工学という考えはいつから存在していますか。
11. *It has existed since the 19<sup>th</sup> century.*
- 12.2) What are a number of nations considering as a possible solution to global warming?
- 地球温暖化への可能な解決策として多くの国は何を熟考していますか。
13. *A number of nations are now considering geoengineering as a possible solution to global warming.*

- 地球工学者 (ちきゅうこうがくしゃ) 提案 (ていあん) する 様々 (さまざま) な 考 (かんが) え 冷 (さ) ます
14. Geoengineers have proposed various ideas to cool Earth. One
- 熟考 (じゅっこう) された 導入 (どうにゅう) 二酸化硫黄 (にさんかいおう) 上層 (じょうそう)
15. is the deliberate introduction of sulfur dioxide into the upper layer of
- 大気 (たいき) 現象 (げんしょう)
16. the atmosphere. This would ( 30 ) a natural phenomenon. When Mount
- 噴火 (ふんか) する
17. Pinatubo erupted in the Philippines in 1991, it sent millions of tons of
- 二酸化硫黄 (にさんかいおう) 大気中 (たいきちゅう) 作 (つく) った 雲 (くも) 硫酸 (りゅうさん)
18. sulfur dioxide into the atmosphere. This created clouds of sulfuric acid
- 遮断 (しゃだん) した 日光 (にっこう) それによって 気温 (きおん)
19. that blocked sunlight, thereby reducing temperatures on Earth by about
- 1度 (ど) 華氏 (かし) 科学者 (かがくしゃ) 反対 (はんたい) する
20. one degree Fahrenheit for a year. Many scientists oppose the
- 示 (しめ) す 硫黄 (いおう)
21. sulfur-dioxide method. Computer modeling reveals that while a “sulfur
- 日 (ひ) よけ 温度 (おんど) 恐 (おそ) らく 影響 (えいきょう) する
22. sunshade” would lower temperatures, it would probably also affect

状態 (じょうたい)

23. other weather conditions.

\*Choose the correct answer to fill in the blank from these choices.

24. (30) 1 basically imitate 2 be put into action during  
 25. 3 have little effect on 4 be difficult due to

Further Questions&A

26. 3) What is one idea geoengineers have proposed as an idea to cool Earth?

27. 地球の温度を冷ます為に地球工学者が提案している考えの一つは何ですか。

28. They have proposed deliberate introduction of sulfur dioxide into the upper layer of the atmosphere.

29. 4) What happened when Mount Pinatubo erupted in 1991?

30. 1991年に Pinatubo山が噴火した時に何が起きましたか。

31. The clouds of sulfuric acid blocked the sunlight and reduced temperatures on Earth by about one degree.

32. 5) Why do many scientists oppose the sulfur-dioxide method?

33. なぜ多くの科学者は二酸化硫黄の方法に反対なのですか。

34. Because while a "sulfur sunshade" would lower temperatures, it would probably also affect other weather conditions.

35. Evaporation of water would likely decrease in tropical regions, leading to less rainfall. The fact that water levels dropped sharply in India's

36. Ganges River following the Pinatubo eruption supports this prediction.

37. This ( 31 ) the sulfur-dioxide method. A country experiencing successive

38. heat waves, for example, might insist on using it to benefit its

39. people. If this led to another country experiencing severe weather conditions,

40. the resulting political tension could lead to conflict. Therefore, despite

41. geoengineering's potential benefits, nations should carefully consider

42. its possible consequences.

\*Choose the correct answer to fill in the blank from these choices.

43. (31) 1 raises another problem with 2 confirms the necessity of  
 44. 3 has nothing to do with 4 highlights the goal of

Further Questions&A

45. 6) What is one likely side-effect of using a "sulfur sunshade"?

46. 硫黄の日よけを使うことによる副作用のようなもの一つは何ですか。

47. Evaporation of water would likely decrease in tropical regions, leading to less rainfall.

48. 7) How might geoengineering lead to political tensions and conflict?

49. 地球工学はどのように政治の不安と衝突につながりますか。

50. *A country experiencing successive heat waves might insist on using it causing another country to experience severe weather conditions.*

51. **8)** Do you think geoengineering sounds like a good idea? Why?

52. 地球工学は良い考えだと思いますか。またそれはなぜですか。

53. *I don't think it sounds like a good idea, because it might cause more problems than it helps.*

## Review Questions

54. **1)** Since when has the idea of geoengineering existed?

55. *It has existed since the 19<sup>th</sup> century.*

56. **2)** What are a number of nations considering as a possible solution to global warming?

57. *A number of nations are now considering geoengineering as a possible solution to global warming.*

58. **3)** What is one idea geoengineers have proposed as an idea to cool Earth?

59. *They have proposed deliberate introduction of sulfur dioxide into the upper layer of the atmosphere.*

60. **4)** What happened when Mount Pinatubo erupted in 1991?

61. *The clouds of sulfuric acid blocked the sunlight and reduced temperatures on Earth by about one degree.*

62. **5)** Why do many scientists oppose the sulfur-dioxide method?

63. *Because while a "sulfur sunshade" would lower temperatures, it would probably also affect other weather conditions.*

64. **6)** What is one likely side-effect of using a "sulfur sunshade"?

*Evaporation of water would likely decrease in tropical regions, leading to less rainfall.*

65. **7)** How might geoengineering lead to political tensions and conflict?

66. *A country experiencing successive heat waves might insist on using it causing another country to experience severe weather conditions.*

67. **8)** Do you think geoengineering sounds like a good idea? Why?

68. *I don't think it sounds like a good idea, because it might cause more problems than it helps.*

解答: (29) 2 (30) 1 (31) 1

## Type B 日本語訳なし

### 2[B] – Geoengineering

eTOC のレッスン以外で使用禁止 AP1E 11-1

1. The concept of "geoengineering", which describes man-made attempts to control
2. the climate, has existed since the 19th century. Recently, it has ( 29 ).
3. National governments have argued for years over the best way to deal with the
4. threat of global warming, but a growing number of nations are now considering
5. geoengineering as a possible solution.

\*Choose the correct answer to fill in the blank from these choices.

- 6.(29) 1 proven technically impossible 2 attracted greater attention  
7. 3 suffered from lack of investment 4 been adopted worldwide

### Further Questions&A

- 8.1) Since when has the idea of geoengineering existed?  
9.2) What are a number of nations considering as a possible solution to global warming?

10. Geoengineers have proposed various ideas to cool Earth. One is the deliberate  
11. introduction of sulfur dioxide into the upper layer of the atmosphere. This would  
12. ( 30 ) a natural phenomenon. When Mount Pinatubo erupted in the  
13. Philippines in 1991, it sent millions of tons of sulfur dioxide into the  
14. atmosphere. This created clouds of sulfuric acid that blocked sunlight, thereby  
15. reducing temperatures on Earth by about one degree Fahrenheit for a year.  
16. Many scientists oppose the sulfur-dioxide method. Computer modeling reveals  
17. that while a “sulfur sunshade” would lower temperatures, it would probably also  
18. affect other weather conditions.

\*Choose the correct answer to fill in the blank from these choices.

- 19.(30) 1 basically imitate 2 be put into action during  
20. 3 have little effect on 4 be difficult due to

### Further Questions&A

- 21.3) What is one idea geoengineers have proposed as an idea to cool Earth?  
22.4) What happened when Mount Pinatubo erupted in 1991?  
23.5) Why do many scientists oppose the sulfur-dioxide method?

24. Evaporation of water would likely decrease in tropical regions, leading to less  
25. rainfall. The fact that water levels dropped sharply in India’s Ganges River  
26. following the Pinatubo eruption supports this prediction. This ( 31 ) the  
27. sulfur-dioxide method. A country experiencing successive heat waves, for  
28. example, might insist on using it to benefit its people. If this led to another  
29. country experiencing severe weather conditions, the resulting political tension  
30. could lead to conflict. Therefore, despite geoengineering’s potential benefits,  
31. nations should carefully consider its possible consequences.

\*Choose the correct answer to fill in the blank from these choices.

- 32.(31) 1 raises another problem with 2 confirms the necessity of  
33. 3 has nothing to do with 4 highlights the goal of

### Further Questions&A

- 34.6) What is one likely side-effect of using a “sulfur sunshade”?  
35.7) How might geoengineering lead to political tensions and conflict?  
36.8) Do you think geoengineering sounds like a good idea? Why?

### Review Questions

- 37.1) Since when has the idea of geoengineering existed?

- 38.2) What are a number of nations considering as a possible solution to global warming?
- 39.3) What is one idea geoengineers have proposed as an idea to cool Earth?
- 40.4) What happened when Mount Pinatubo erupted in 1991?
- 41.5) Why do many scientists oppose the sulfur-dioxide method?
- 42.6) What is one likely side-effect of using a “sulfur sunshade”?
- 43.7) How might geoengineering lead to political tensions and conflict?
- 44.8) Do you think geoengineering sounds like a good idea? Why?

解答: (29) 2 (30) 1 (31) 1



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