

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。

3[A] – Lights Out

eTOC のレッスン以外で使用禁止 10.2(3A)A2E

- When we hear the word “pollution,” we generally think of the damage to the environment caused by chemicals and other substances.
- Recently, however, another type of pollution has begun to attract attention —light pollution. This refers to any negative effect of artificial light on the environment. According to experts, artificial light is doing damage both to (26) and to human beings.

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

- (26) 1 leisure 2 industry 3 nature 4 culture

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.

- 1)-26 What is pollution?
- Pollution is something made by humans that does damage to the environment.
- 2)-26 What is light pollution?
- Any negative effect of artificial light on the environment.
- The first people to become aware of light pollution were scientists who study the stars. They noticed that it was becoming more and more difficult to see stars at night because of all the light given off by cities. Light pollution, though, does not only make it harder for us to see the stars. It also harms our health by interrupting sleep and sometimes even interfering with the body's ability to produce the chemicals needed to stay healthy. It also affects wildlife, causing animals to become (27). For example, artificial lights can make it difficult for baby turtles to find the ocean after they are born, and as a result, many of them die.

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

- (27) 1 confused 2 lonely 3 peaceful 4 independent

Further Questions&A

23. 3)-27 What did scientists who study the stars first notice about light pollution?
 24. 星を研究している人たちが最初に気が付いた光害はなんでしたか。
 25. They noticed that it was becoming more and more difficult to see stars at night (because of the light given off by cities).
 26. 4)-27 How does light pollution harm our health? どのように光害は私たちの健康を害するのですか。
 27. ① By interrupting sleep.
 28. ② Sometimes even interfering with the body's ability to produce the chemicals needed to stay healthy.
 29. In response to these problems, an international movement is now trying to
 30. (28) the effects of artificial light. An organization called
 31. International Dark-Sky Association is leading the way by encouraging
 32. the protection of areas of the sky from light pollution. The organization is
 33. also trying to persuade governments to use public lighting more
 34. efficiently .

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

35. (28) 1 exchange 2 reduce 3 ignore 4 preserve

Further Questions&A

36. 5)-28 Who is encouraging the protection of areas of the sky from light pollution?
 37. 誰が光害から空の領域の保護をする事を奨励していますか。
 38. An organization called International Dark-Sky Association.
 39. 6)-28 How does International Dark-Sky try to protect areas of the sky?
 40. International Dark-Sky はどのようにして空の領域を守ろうとしていますか。
 41. By trying to persuade governments to use public lighting more efficiently .
 42. At the present, much of the light we produce is not actually needed.
 43. Creating less light would not only lead to less light
 44. pollution, but it would also help the environment in other ways .
 45. In the United States, for example, it is estimated that 2 million barrels of oil
 46. are used every day for the production of (29) light.
 47. Stopping this waste of fuel would both save money and
 48. lessen the amount of greenhouse gases being released into the air.

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

49. (29) 1 unofficial 2 temporary 3 ordinary 4 unnecessary

Further Questions&A

50. 7)-29 How would ^{作(つく)り出(だ)すこと} creating ^{より少(すく)ない} less ^{援助(えんじょ)する} light help ?
51. ^{ひかり} 光 ^{すく} を少なくすることでどのような手助けになりますか。
52. ① We would create less light pollution.
53. ② Countries would ^{節約(せつやく)する} save ^{製品(せいひん)} oil used for the production of light.
54. 8)-29 What are some examples of ^{必要(ひつよう)でない} unneeded light?
55. ^{れい} 例としてあげられる ^{ふひつよう} 不必要な ^{ひかり} 光 はなんですか。
56. ① Store signs that are on when the store isn't open.
57. ② ^{街灯(がいとう)} Street lights ^{まれに} on rarely used streets.
58. ③ ^{交通信号灯(こうつうしんごうとう)} Traffic lights ^{少(すく)ない} late at night when there is little ^{通行量(つうこうりょう)} traffic .
59. ④ Apartment or house ^{玄関(げんかん)の灯(あか)り} entry lights that are on all night long.

Vocabularies: Try to memorize these words yourself without looking at the Japanese translations.

For Teachers: Have the student read the word in English, correct their pronunciation then say it together. Then have the student say it in Japanese before saying again in English. After you have done this for each line, go back to the first word and have the student translate it.

60. (26) 1 leisure 2 industry 3 nature 4 culture
61. (27) 1 confused 2 lonely 3 peaceful 4 independent
62. (28) 1 exchange 2 reduce 3 ignore 4 preserve
63. (29) 1 unofficial 2 temporary 3 ordinary 4 unnecessary

Example sentences: *It must take a long time but Try to use these vocabularies one by one in the sentences of your original one. Teacher must show them your for example sentence before ask.

64. (26) 1 Your dry cleaning is ready, so please ^{立(た)ちよって} drop by ^{暇(ひま)のあるときに} and pick it up at your leisure.
65. 2 The manufacturing ^{製造業(せいぞうぎょう)の} industry ^{産業(さんぎょう)} is very important to the ^{経済(けいざい)} economy.
66. 3 We like to go camping ^{しばしば} every now and then to be ^{取(と)り囲(かこ)まれている} surrounded ^{自然(しぜん)に} by nature.
67. 4 Calligraphy and tea ceremonies are ^{書道(しょうどう)} part of ^{茶道(さどう)} traditional Japanese ^{～の一部(いちぶ)} culture ^{伝統(でんとう)の} . ^{文化・教養(きょうよう)}
68. (27) 1 I am ^{混乱(こんらん)した} confused ^{文法学(ぶんぼうがく)} by the new grammar .
69. 2 I often feel ^{ひとりぼっちで} lonely when I am home alone .
70. 3 This ^{近隣地域(きんりんちいき)} neighborhood ^{わくわくする} is not very exciting, but ^{少(すく)なくとも} at least ^{平和(へいわ)な} it is peaceful.
71. 4 She likes to walk to school by herself so she can feel more ^{独立(どくりつ)の} independent.
72. (28) 1 I'll ^{交換(こうかん)する} exchange my Charizard card for your Pikachu card.
73. 2 Let's work together to ^{減(へ)らす} reduce ^{～の量(りょう)} the amount of ^{ゴミ} trash we ^{作(つく)り出(だ)す} create .
74. 3 Cats often ^{無視(むし)する} ignore me when I try to ^{注意(ちゅうい)を引(ひ)く} get their attention.
75. 4 People used to ^{漬(つ)け汁(じゅう)につける} pickle ^{保存(ほぞん)する} vegetables to preserve them for a long time.
76. (29) 1 The ^{非公式(ひこうしき)} unofficial ^{理由(りゆう)} reason ^{アイドル} the idol ^{引退(いんたい)した} retired ^{結婚(けっこん)するため} was to get married.
77. 2 After the ^{代議員(だいぎし)・議員(ぎいん)} representative ^{退職(たいしよく)} retired , a ^{一時(いちじ)の} temporary ^{後継者(こうけいしゃ)} replacement

彼のかわりをした

選挙 (せんきょ)

took his place until the next election.

めずらしい

～であるとわかる

ただの

普通 (ふつう) の カラス

78. 3 I thought I saw a rare bird, but it turned out to be simply an ordinary crow.

滅多 (めった) にない

不必要 (ふひつよう) な

79. 4 Restaurants often give me a knife, but I rarely need it. It is usually unnecessary.

Answers for "Vocabularies".

自由時間 (じゆうじかん)

産業 (さんぎょう)

自然 (しぜん)

文化 (ぶんか) ・教養 (きょうよう)

80. (26) 1 leisure 2 industry 3 nature 4 culture

混乱 (こんらん) した

孤独 (こどく) な

平和 (へいわ) な

独立 (どくりつ) した

81. (27) 1 confused 2 lonely 3 peaceful 4 independent

交換 (こうかん) する

減 (へ) らす

無視 (むし) する

維持 (いじ) する

82. (28) 1 exchange 2 reduce 3 ignore 4 preserve

非公式 (ひこうしき) な

一時 (いちじ) の

通常 (つうじょう) の

不必要 (ふひつよう) な

83. (29) 1 unofficial 2 temporary 3 ordinary 4 unnecessary

Review Questions

84. 1)-26 What is pollution?

85. Pollution is something made by humans that does damage to the environment.

86. 2)-26 What is light pollution?

マイナスの 影響 (えいきょう)

87. Any negative effect of artificial light on the environment.

88. 3)-27 What did scientists who study the stars first notice about light pollution?

89. They noticed that it was becoming more and more difficult to see stars at night (because of the light given off by cities).

90. 4)-27 How does light pollution harm our health?

妨 (さまた) げる

91. ① By interrupting sleep.

～でさえ 邪魔 (じゃま) をすること

能力 (のうりょく)

作 (つく) り出 (だ) す

92. ② Sometimes even interfering with the body's ability to produce

化学作用 (かがくさよう) の 必要 (ひつよう) なもの

the chemicals needed to stay healthy.

93. 5)-28 Who is encouraging the protection of areas of the sky from light pollution?

94. An organization called International Dark-Sky Association.

95. 6)-28 How does International Dark-Sky try to protect areas of the sky?

説得 (せっとく) する

効果的 (こうかてき) に

96. By trying to persuade governments to use public lighting more efficiently.

97. 7)-29 How would creating less light help?

98. ① We would create less light pollution.

節約 (せつやく) する

製品 (せいひん)

99. ② Countries would save oil used for the production of light.

100. 8)-29 What are some examples of unneeded light?

101. ① Store signs that are on when the store isn't open.

102. ② Street lights on rarely used streets.

交通信号灯 (こうつうしんごうとう)

少 (すく) ない 通行量 (つうこうりょう)

103. ③ Traffclights late at night when there is little traffic.

玄関 (げんかん) の灯 (あか) り

104. ④ Apartment or house entry lights that are on all night long.

解答: (26) 3 (27) 1 (28) 2 (29) 4

Type B 日本語訳なし

3[A] – Lights Out

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105. When we hear the word “pollution,” we generally think of the damage to the
 106. environment caused by chemicals and other substances.
 107. Recently, however, another type of pollution has begun to attract
 108. attention—light pollution. This refers to any negative effect of artificial light
 109. on the environment. According to experts, artificial light is doing damage
 both to (26) and to human beings.

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

111. (26) 1 leisure 2 industry 3 nature 4 culture

Further Questions&A

112. 1)-26 What is pollution?

113. 2)-26 What is light pollution?

114. The first people to become aware of light pollution were scientists who study
 115. the stars. They noticed that it was becoming more and more difficult to see
 116. stars at night because of all the light given off by cities. Light pollution,
 117. though, does not only make it harder for us to see the stars. It also harms our
 118. health by interrupting sleep and sometimes even interfering with the body’s
 119. ability to produce the chemicals needed to stay healthy. It also affects wildlife,
 120. causing animals to become (27). For example, artificial lights can
 121. make it difficult for baby turtles to find the ocean after they are born, and
 122. as a result, many of them die.

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

124. (27) 1 confused 2 lonely 3 peaceful 4 independent

Further Questions&A

125. 3)-27 What did scientists who study the stars first notice about light pollution?

126. 4)-27 How does light pollution harm our health?

127. ① By interrupting sleep.

128. ② Sometimes even interfering with the body’s ability to produce the
 chemicals needed to stay healthy.

129. In response to these problems, an international movement is now trying to
 130. (28) the effects of artificial light. An organization called International
 131. Dark-Sky Association is leading the way by encouraging the protection of
 132. areas of the sky from light pollution. The organization is also trying to
 133. persuade governments to use public lighting more efficiently.

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

135. (28) 1 exchange 2 reduce 3 ignore 4 preserve

Further Questions&A

136. 5)-28 Who is encouraging the protection of areas of the sky from light pollution?

137. 6)-28 How does International Dark-Sky try to protect areas of the sky?

138. At the present, much of the light we produce is not actually needed.

139. Creating less light would not only lead to less light pollution, but it would

also help the environment in other ways. In the United States, for example, it is estimated that 2 million barrels of oil are used every day for the production of (29) light. Stopping this waste of fuel would both save money and lessen the amount of greenhouse gases being released into the air.

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

(29) 1 unofficial 2 temporary 3 ordinary 4 unnecessary

Further Questions&A

7)-29 How would creating less light help?

① We would create less light pollution.

② Countries would save oil used for the production of light.

8)-29 What are some examples of unneeded light?

① Store signs that are on when the store isn't open.

② Street lights on rarely used streets.

③ Traffic lights late at night when there is little traffic.

④ Apartment or house entry lights that are on all night long.

(26) 1 leisure 2 industry 3 nature 4 culture

(27) 1 confused 2 lonely 3 peaceful 4 independent

(28) 1 exchange 2 reduce 3 ignore 4 preserve

(29) 1 unofficial 2 temporary 3 ordinary 4 unnecessary

Example sentences:

(26)1 Your dry cleaning is ready, so please drop by and pick it up at your leisure.

2 The manufacturing industry is very important to the economy.

3 We like to go camping every now and then to be surrounded by nature.

4 Calligraphy and tea ceremonies are part of traditional Japanese culture.

(27)1 I am confused by the new grammar.

2 I often feel lonely when I am home alone.

3 This neighborhood is not very exciting, but at least it is peaceful.

4 She likes to walk to school by herself so she can feel more independent.

(28)1 I'll exchange my Charizard card for your Pikachu card.

2 Let's work together to reduce the amount of trash we create.

3 Cats often ignore me when I try to get their attention.

4 People used to pickle vegetables to preserve them for a long time.

(29)1 The unofficial reason the idol retired was to get married.

2 After the representative retired, a temporary replacement took his place until the next election.

3 I thought I saw a rare bird, but it turned out to be simply an ordinary crow.

4 Restaurants often give me a knife, but I rarely need it. It is usually unnecessary.

Answers for "Vocabularies".

(26) 1 leisure 2 industry 3 nature 4 culture

175.	(27)	1	confused	2	lonely	3	peaceful	4	independent
176.	(28)	1	exchange	2	reduce	3	ignore	4	preserve
177.	(29)	1	unofficial	2	temporary	3	ordinary	4	unnecessary

Review Questions

178. 1)-26 What is pollution?
179. 2)-26 What is light pollution?
180. 3)-27 What did scientists who study the stars first notice about light pollution?
181. 4)-27 How does light pollution harm our health?
182. ① *By interrupting sleep.*
183. ② *Sometimes even interfering with the body's ability to produce the chemicals needed to stay healthy.*
184. 5)-28 Who is encouraging the protection of areas of the sky from light pollution?
185. 6)-28 How does International Dark-Sky try to protect areas of the sky?
186. 7)-29 How would creating less light help?
187. ① *We would create less light pollution.*
188. ② *Countries would save oil used for the production of light.*
189. 8)-29 What are some examples of unneeded light?
190. ① *Store signs that are on when the store isn't open.*
191. ② *Street lights on rarely used streets.*
192. ③ *Trafficlights late at night when there is little traffic.*
193. ④ *Apartment or house entry lights that are on all night long.*

解答: (26) 3 (27) 1 (28) 2 (29) 4