

3[A] – Lights Out Lesson1 G2 Chobun TypeB

10.2(3A)A2E

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

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

7. (26) 1 leisure 2 industry 3 nature 4 culture



Further Questions&sample answers

8. 1)-26 What is pollution?

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

10. 2)-26 What is light pollution?

11. *Any negative effect of artificial light on the environment.*

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

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

22. (27) 1 confused 2 lonely 3 peaceful 4 independent

Further Questions& sample answers

23. 3)-27 What did scientists who study the stars first notice about light pollution?

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

25. 4)-27 How does light pollution harm our health?

26. ① *By interrupting sleep.*

27. ② *Sometimes even interfering with the body's ability to produce the  
chemicals needed to stay healthy.*

28. In response to these problems, an international movement is now trying to  
29. ( 28 ) the effects of artificial light. An organization called International  
30. Dark-Sky Association is leading the way by encouraging the protection of  
31. areas of the sky from light pollution. The organization is also trying to  
32. persuade governments to use public lighting more efficiently.

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

34. (28) 1 exchange 2 reduce 3 ignore 4 preserve

**Further Questions& sample answers**

35. **5)-28** Who's encouraging the protection of areas of the sky from light pollution?  
 36. *An organization called International Dark-Sky Association.*  
 37. **6)-28** How does International Dark-Sky try to protect areas of the sky?  
 38. *By trying to persuade governments to use public lighting more efficiently.*

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

40. **(29)** 1 unofficial      2 temporary      3 ordinary      4 unnecessary

**Further Questions& sample answers**

41. **7)-29** How would be creating less light help?  
 42. ① *We would create less light pollution.*  
 43. ② *Countries would save oil used for the production of light.*  
 44. **8)-29** What are some examples of unneeded light?  
 45. ① *Store signs that are on when the store isn't open.*  
 46. ② *Street lights on rarely used streets.*  
 47. ③ *Traffic lights late at night when there's little traffic.*  
 48. ④ *Apartment or house entry lights that are on all night long.*

49. **(26)** 1 leisure      2 industry      3 nature      4 culture  
 50. **(27)** 1 confused      2 lonely      3 peaceful      4 independent  
 51. **(28)** 1 exchange      2 reduce      3 ignore      4 preserve  
 52. **(29)** 1 unofficial      2 temporary      3 ordinary      4 unnecessary

**Example sentences:**

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53. **(26)**  
 54. **1** Your dry cleaning is ready, so please drop by and pick it up at your leisure.  
 55. **2** The manufacturing **industry** is very important to the economy.  
 56. **3** We like to go camping every now and then to be surrounded by nature.  
 57. **4** Calligraphy and tea ceremonies are part of traditional Japanese **culture**.  
 58. **(27)**  
 59. **1** I am **confused** by the new grammar.  
 60. **2** I often feel **lonely** when I am home alone.  
 61. **3** This neighborhood is not very exciting, but at least it is **peaceful**.  
 62. **4** She likes to walk to school by herself so she can feel more **independent**.  
 63. **(28)**  
 64. **1** I'll **exchange** my Charizard card for your Pikachu card.  
 65. **2** Let's work together to **reduce** the amount of trash we create.  
 66. **3** Cats often **ignore** me when I try to get their attention.  
 67. **4** People used to pickle vegetables to **preserve** them for a long time.

68. (29)
69. 1 The **unofficial** reason the idol retired was to get married.
70. 2 After the representative retired, a **temporary** replacement took his place until the next election.
71. 3 I thought I saw a rare bird, but it turned out to be simply an **ordinary** crow.
72. 4 Restaurants often give me a knife, but rarely need it. It is usually **unnecessary**.

Answers for "Vocabularies".

73. (26) 1 leisure 2 industry 3 nature 4 culture
74. (27) 1 confused 2 lonely 3 peaceful 4 independent
75. (28) 1 exchange 2 reduce 3 ignore 4 preserve
76. (29) 1 unofficial 2 temporary 3 ordinary 4 unnecessary



解答: (26) 3 (27) 1 (28) 2 (29) 4

日本語訳付

3[A] – Lights Out Lesson1 G2 Chobun TypeB eTOC のレッスン以外で使用禁止 10.2(3A)A2E

77. When we hear the word "pollution," we generally think of the damage to the environment caused by chemicals and other substances.
78. 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.

83. (26) 1 leisure 2 industry 3 nature 4 culture

Further Questions& sample answers

84. 1)-26 What's pollution? 汚染とはなんですか。
85. Pollution is something made by humans that does damage to the environment.
86. 2)-26 What's light pollution? 光害とはなんですか。
87. Any negative effect of artificial light on the environment.
88. 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.
89. 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

96. can make it difficult for baby turtles to find the ocean after they are born,  
結果 (けっか) として  
 97. and as a result, many of them die.

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

98. (27) 1 混乱 (こんらん) した confused 2 孤独 (こどく) な lonely 3 平和 (へいわ) な peaceful 4 独立 (どくりつ) した independent

Further Questions&SampleAnswers

- 3)-27 What did scientists who study the stars first 気付 (きづ) く notice about 光害 (こうがい) light pollution?  
星 (ほし) を 研究 (けんきゅう) している 人 (ひと) たち が 最初 (さいしょ) に 気 (き) が 付 (つ) いた 光害 (こうがい) は 何 (なに) で した か。  
 99. *They noticed that it was becoming more and more difficult to see stars at night*  
 100. *because of the light given off by cities.*  
 4)-27 How does light pollution 害 (がい) する harm our health? どの 様 (よう) に 光害 (こうがい) は 私 (わが) たち の 健康 (けんこう) を 害 (がい) する の です か。  
 102. ① *By interrupting sleep.*  
妨 (さまた) げる  
 103. ② *Sometimes even interfering with the body's ability to produce the chemicals needed to stay healthy.*  
~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 化学作用 (かがくさよう) の 必要 (ひつよう) な もの

104. In response to these problems, an international movement is now trying to  
反 応 (はんのう) 影 響 (えいきょう) 動 向 (どうこう) 組 織 (そしき) ~とよばれてい  
 105. ( 28 ) the effects of artificial light. An organization called  
連 合 (れんごう) 指 導 (しどう) して いる  
 106. International Dark-Sky Association is leading the way  
~を 奨 励 (しょうれい) する こと で 保 護 (ほご) する の もの 範 圍 (はんい)  
 107. by encouraging the protection of areas of the sky from light pollution.  
組 織 (そしき) 説 得 (せつとく) する 政 府 (せいふ) 公 共 (こうきょう) の  
 108. The organization is also trying to persuade governments to use public  
照 明 (しょうめい) 効 率 (こうりつ) よく  
 109. lighting more efficiently.

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

110. (28) 1 交 換 (こうかん) する exchange 2 減 (へ) らす reduce 3 無 視 (むし) する ignore 4 維 持 (いじ) する preserve

Further Questions& sample answers

111. 5)-28 Who's encouraging the protection of areas of the sky from light pollution?  
励 (はげ) ま して いる 保 護 (ほご) する 領 域 (りょういき) だ れ 光 害 (こうがい) から そ ら 領 域 (りょういき) の 保 護 (ほご) を する 事 (こと) を 奨 励 (しょうれい) して います か。  
 112. *An organization called International Dark-Sky Association.*  
 113. 6)-28 How does International Dark-Sky try to protect areas of the sky?  
International Dark-Sky は どの よう に して 空 (そら) の 領 域 (りょういき) を 守 (まも) ろ う と して います か。  
 114. *By trying to persuade governments to use public lighting more efficiently.*  
説 得 (せつとく) する 公 共 (こうきょう) の 効 果 的 (こうかてき) に

116. At the present, much of the light we produce is not actually needed.  
今 (いま) の と こ ろ 作 (つく) る 実 際 (じっさい) に  
 117. Creating less light would not only lead to less light  
作 (つく) り 上 (あ) げ る こと 一 層 (いっそう) 少 ない 導 (みちび) く

118. pollution, but it would also help the environment in other ways .  
害 (がい) 他 (ほか) の方法 (ほうほう) で

119. In the United States, for example, it is estimated that 2 million barrels  
推測 (すいそく) された バレル

120. of oil are used every day for the production of ( **29** ) light. Stopping  
製品 (せいひん) やめること

121. this waste of fuel would both save money and lessen the  
無駄 (むだ) 燃料 (ねんりょう) お金 (かね) を蓄 (たくわ) える 少 (すく) なくする

122. amount of greenhouse gases being released into the air.  
量 (りょう) 温室効果 (おんしつこうか) ガス 放出 (ほうしゅつ) させる

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

123. **(29)** 1 unofficial 2 temporary 3 ordinary 4 unnecessary  
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

**Further Questions& sample answers**

124. **7)-29** How would creating less light help ?  
作 (つく) り出 (だ) すこと より少 (すく) ない 援助 (えんじょ) する

125. 光 を 少なく することでどのような 手助け になりますか。  
ひかり すく てだす

126. ① *We would create less light pollution.*

127. ② *Countries would save oil used for the production of light.*  
節約 (せつやく) する 製品 (せいひん)

128. **8)-29** What are some examples of unneeded light?  
必要 (ひつよう) でない

129. 例 としてあげられる 不必要 な 光 は なん ですか。  
れい ふひつよう ひかり

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

131. ② *Street lights on rarely used streets.*  
街灯 (がいとう) まれに

132. ③ *Traffic lights late at night when there's little traffic .*  
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)

133. ④ *Apartment or house entry lights that are on all night long.*  
玄関 (げんかん) の灯 (あかり)

**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.

- 134. **(26)** 1 leisure 2 industry 3 nature 4 culture
- 135. **(27)** 1 confused 2 lonely 3 peaceful 4 independent
- 136. **(28)** 1 exchange 2 reduce 3 ignore 4 preserve
- 137. **(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.

138. **(26)**

139. ① Your dry cleaning is ready, so please drop by and pick it up at your leisure.  
立 (た) ちよって 暇 (ひま) のあるときに 製造業 (せいぞうぎょう) の 産業 (さんぎょう) 経済 (けいざい)

140. ② The manufacturing industry is very important to the economy.

141. ③ We like to go camping every now and then and then to be surrounded by nature.  
しばしば 取 (と) り囲 (かこ) まれている 自然 (しぜん) に 書道 (しょどう) 茶道 (さどう) ~の一部 (いちぶ) 伝統 (でんとう) の

142. ④ Calligraphy and tea ceremonies are part of traditional Japanese  
文化・教養 (きょうよう) culture



144. (27)
145. 1 I am **confused** by the new **grammar** .  
混乱 (こんらん) した 文法学 (ぶんぼうがく)
146. 2 I often feel **lonely** when I am home **alone** .  
ひとりぼっちで
147. 3 This **neighborhood** is not very **exciting**, but at least it is **peaceful**.  
近隣地域 (きんりんちいき) わくわくする 少 (すく) なくとも 平和 (へいわ) な
148. 4 She likes to walk to school by herself so she can feel more **independent**.  
独立 (どくりつ) の

149. (28)
150. 1 I'll **exchange** my Charizard card for your Pikachu card.  
交換 (こうかん) する
151. 2 Let's work together to **reduce** the amount of trash we **create** .  
減 (へ) らす ~の量 (りょう) ゴミ 作 (つく) り出 (だ) す
152. 3 Cats often **ignore** me when I try to **get their attention**.  
無視 (むし) する 注意 (ちゅうい) を引 (ひ) く
153. 4 People used to **pickle** vegetables to **preserve** them for a long time.  
漬 (つ) け汁 (じゅう) につける 保存 (ほぞん) する

154. (29)
155. 1 The **unofficial** reason the idol **retired** was to get married.  
非公式 (ひこうしき) 理由 (りゆう) アイドル 引退 (いんたい) した 結婚 (けっこん) するため
156. 2 After the **representative** **retired** , a **temporary** replacement took his place until the next election.  
代議士 (だいぎし) ・議員 (ぎいん) 退職 (たいしょく) 一時 (いちじ) の 後継者 (こうけいしゃ)
157. 3 I thought I saw a **rare** bird, but it turned out to be simply an **ordinary** crow.  
めずらしい ~であるわかる ただの 普通 (ふつう) の
158. 4 Restaurants often give me a knife, but I **rarely** need it. It is usually **unnecessary**.  
減多 (めった) にない 不必要 (ふひつよう) な

**Answers for "Vocabularies".**

- |      |      |   |                              |   |                           |   |                             |   |                                     |
|------|------|---|------------------------------|---|---------------------------|---|-----------------------------|---|-------------------------------------|
| 159. | (26) | 1 | leisure                      | 2 | industry                  | 3 | nature                      | 4 | culture                             |
|      |      |   | <small>自由時間 (じゆうじかん)</small> |   | <small>産業 (さんぎょう)</small> |   | <small>自然 (しぜん)</small>     |   | <small>文化 (ぶんか) ・教養 (きょうよう)</small> |
| 160. | (27) | 1 | confused                     | 2 | lonely                    | 3 | peaceful                    | 4 | independent                         |
|      |      |   | <small>混乱 (こんらん) した</small>  |   | <small>孤独 (こどく) な</small> |   | <small>平和 (へいわ) な</small>   |   | <small>独立 (どくりつ) した</small>         |
| 161. | (28) | 1 | exchange                     | 2 | reduce                    | 3 | ignore                      | 4 | preserve                            |
|      |      |   | <small>交換 (こうかん) する</small>  |   | <small>減 (へ) らす</small>   |   | <small>無視 (むし) する</small>   |   | <small>維持 (いじ) する</small>           |
| 162. | (29) | 1 | unofficial                   | 2 | temporary                 | 3 | ordinary                    | 4 | unnecessary                         |
|      |      |   | <small>非公式 (ひこうしき) な</small> |   | <small>一時 (いちじ) の</small> |   | <small>通常 (つうじょう) の</small> |   | <small>不必要 (ふひつよう) な</small>        |

**Review Questions**

163. 1)-26 What's pollution?  
 164. *Pollution is something made by humans that does damage to the environment.*
165. 2)-26 What's light pollution?  
マイナスの 影響 (えいきょう)
166. *Any negative effect of artificial light on the environment.*
167. 3)-27 What did scientists who study the stars first notice about light pollution?  
 168. *They noticed that it was becoming more and more difficult to see stars at night*  
 169. *because of the light given off by cities).*
170. 4)-27 How does light pollution harm our health?  
妨 (さまた) げる
171. ① *By interrupting sleep.*

～でさえ 邪魔 (じやま) をすること

能力 (のうりょく)

172. ② *Sometimes even interfering with the body's ability to*

作 (つく) り出 (だ) す 化学作用 (かがくさよう) の 必要 (ひつよう) なもの

*produce the chemicals needed to stay healthy.*

173. 5)-28 Who's encouraging the protection of areas of the sky from light pollution?

174. *An organization called International Dark-Sky Association.*

175. 6)-28 How does International Dark-Sky try to protect areas of the sky?

説得 (せつとく) する

効果的 (こうかてき) に

176. *By trying to persuade governments to use public lighting more efficiently .*

177. 7)-29 How would creating less light help?

178. ① *We would create less light pollution.*

節約 (せつやく) する

製品 (せいひん)

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

180. 8)-29 What are some examples of unneeded light?

181. ① *Store signs that are on when the store isn't open.*182. 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)

183. ③ *Trafficlights late at night when there's little traffic .*

玄関 (げんかん) の灯 (あか) り

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

解答: (26) 3 (27) 1 (28) 2 (29) 4



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