

1. In 1993, director Steven Spielberg had a big hit with his movie *Jurassic Park*.
2. The movie was about a theme park where people could see cloned dinosaurs, but
3. it was criticized by some scientists as unrealistic.
4. Dinosaurs, they say, could never be brought back to life by cloning.
5. What those scientists did not know, though, was how much progress cloning
6. would make after the movie was produced.
7. In particular, a new method known as “interspecies cloning” has brought the
8. world of Spielberg’s movie much closer to reality.
9. Interspecies cloning means using the egg of one species of animal to produce a
10. clone of another species.
11. First, an egg is taken out of a female animal and the DNA is removed.
12. Then the DNA of another animal is put into the egg.
13. Electricity is passed through the egg, causing it to start growing.
14. The egg is then put back into the mother’s body, where it develops into a normal
15. baby.
16. Scientists have so far managed to create a number of animal clones in this way.

Further Questions& Sample Answers

17. 1) Why do you think scientists said it was impossible to clone dinosaurs like in the movie *Jurassic Park*?
18. *The process used in the movie would not work in real life.*
19. 2) What’s interspecies cloning?
20. *A clone of one species is created using the embryo of a different species.*
21. 3) How does interspecies cloning work?
22. *The DNA of one species is put into the embryo of a different species.*
23. One scientist who has been working on interspecies cloning is Betsy Dresser of
24. the Audubon Nature Institute in New Orleans.
25. Dresser’s goal, however, has not been to bring extinct animals back to life.
26. Rather, she hopes to prevent animals from becoming extinct in the future.
27. So far, she has produced clones of African wildcats by putting their DNA into the
28. eggs of ordinary pet cats.
29. The clones she has produced have not only been healthy, but have also given
30. birth to kittens themselves.
31. She believes that this kind of cloning will allow scientists to increase animal
32. populations when it is necessary.

Further Questions& Sample Answers

33. 4) What’s Betty Dresser’s goal?
34. *To catalogue all the DNA of endangered species so that they might be recreated in the future if they go extinct.*
35. 5) Have the clones she has made been healthy?
36. *Yes, and some have even had children.*

37. With this goal in mind, Dresser has been creating a “frozen zoo” of endangered
38. animals.
39. She has collected tiny pieces of skin containing the DNA of hundreds of different
40. species from around the world.
41. She keeps these frozen in small containers so that if it becomes necessary in the
42. future, clones can be created.
43. Not all experts agree with the idea of creating clones.
44. Some of them say that it is more important to prevent damage to the
45. environment.
46. In this way, animals could continue to live where they are.
47. Dresser agrees but argues that if it is a choice between extinction and cloning, it
48. is better to choose cloning.

Further Questions & Sample Answers

49. **6)** Why do some people disagree with Betty Dresser’s method?
50. *They feel it would be better to focus energy on preserving the environment rather than rely on cloning to fix it after it is too late.*
51. **7)** Do you think it would be possible to bring extinct species back using Betty Dresser’s methods?
52. *We can create individuals if we have the DNA, but not whole species.*
53. **8)** What is an extinct animal you would bring back if you could?
54. *Seeing the flying dinosaurs might be nice.*
-
55. **(41)** Why did some scientists criticize *Jurassic Park*?
56. **1** They disliked using dinosaurs for entertainment.
57. **2** They opposed the idea of creating fake dinosaurs.
58. **3** They doubted that dinosaurs could ever be cloned.
59. **4** They thought the dinosaurs in it were the wrong size.
60. **(42)** What is one way that scientists have been able to create animal clones?
61. **1** By replacing the DNA in an animal’s egg with the DNA of another animal.
62. **2** By raisings many different kind animals to be used collecting DNA.
63. **3** By gradually changing DNA to create a new animal.
64. **4** By using electricity to create DNA in a laboratory.
65. **(43)** What is Better Dresser trying to do?
66. **1** Increase the variety of pets that people keep.
67. **2** Create new species that can avoid extinction.
68. **3** Show that cloned animals are not healthy.
69. **4** Make it possible stop species from dying out.
70. **(44)** Why are some experts against cloning?
71. **1** They are concerned about the effect of clones on other animals.
72. **2** They worry that cloning will only be able to help a few species.
73. **3** They think that it would be better to protect the places where animals live.
74. **4** They believe that storing animal DNA for the future will be too expensive.

75. (45) Which of the following statements is true?

- 76. 1 *Jurassic Park* seems much more realistic now than when it was first shown.
- 77. 2 Dresser has collected clones of many different species from all over the world.
- 78. 3 There is a possibility that even ordinary pets like cats will become endangered.
- 79. 4 It is still impossible to create clones that are able to produce babies of their own.

80. 1) Why do you think scientists said it was impossible to clone dinosaurs like in the movie *Jurassic Park*?

82. *The process used in the movie would not work in real life.*

83. 2) What is interspecies cloning?

84. *A clone of one species is created using the embryo of a different species.*

85. 3) How does interspecies cloning work?

86. *The DNA of one species is put into the embryo of a different species.*

87. 4) What is Betty Dresser's goal?

88. *To catalogue all the DNA of endangered species so that they might be recreated in the future if they go extinct.*

90. 5) Have the clones she has made been healthy?

91. *Yes, and some have even had children.*

92. 6) Why do some people disagree with Betty Dresser's method?

93. *They feel it would be better to focus energy on preserving the environment rather than rely on cloning to fix it after it is too late.*

95. 7) Do you think it would be possible to bring extinct species back using Betty Dresser's methods?

97. *We can create individuals if we have the DNA, but not whole species.*

98. 8) What is an extinct animal you would bring back if you could?

99. *Seeing the flying dinosaurs might be nice.*

解答: (41) 3 (42) 1 (43) 4 (44) 3 (45) 1



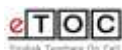
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日本語訳付

4[C] – Saving a Copy



Lesson15 G2 Chobun dokkai 11.1(4C)A2E

100. In 1993, director Steven Spielberg had a big hit with his movie

Jurassic Park. The movie was about a theme park where people could see

cloned dinosaurs, but it was criticized by some scientists as unrealistic.

監督 (かんとく)

成功 (せいこう) した

テーマパーク

そっくりの

批判 (ひはん) された

科学者 (かがくしゃ)

非現実的 (ひげんじつてき) な

101. Dinosaurs, they say, could never be brought back to life by cloning. What those scientists did not know, though, was how much progress cloning would make after the movie was produced.

102. In particular, a new method known as “interspecies cloning” has brought the world of Spielberg’s movie much closer to reality.

103. Interspecies cloning means using the egg of one species of animal to produce a clone of another species.

104. First, an egg is taken out of a female animal and the DNA is removed. Then the DNA of another animal is put into the egg.

105. Electricity is passed through the egg, causing it to start growing.

106. The egg is then put back into the mother’s body, where it develops into a normal baby. Scientists have so far managed to create a number of animal clones in this way.



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Further Questions&& Sample Answers

107. 1) Why do you think scientists said it was impossible to clone dinosaurs like in the movie *Jurassic Park*?

108. あなたはなぜ科学者たちが映画“Jurassic Park”のように恐竜のクローンを作ることとは不可能だと言ったと思いますか。

109. The process used in the movie would not work in real life.

110. 2) What is interspecies cloning? 異種間クローニングとはなんですか。

111. A clone of one species is created using the embryo of a different species.

112. 3) How does interspecies cloning work? 異種間クローニングはどのように作用しますか。

113. The DNA of one species is put into the embryo of a different species.

114. _____

115. One scientist who has been working on interspecies cloning is Betsy Dresser of the Audubon Nature Institute in New Orleans. Dresser’s goal, however, has not been to bring extinct animals back to life.

116. Rather, she hopes to prevent animals from becoming extinct in the future.

So far, she has produced clones of African wildcats by putting their DNA into the eggs of ordinary pet cats.

The clones she has produced

have not only been healthy, but have also given birth to kittens themselves.

117. She believes that this kind of cloning will allow scientists to increase animal populations when it is necessary.

118. _____



119. **Further Questions& Sample Answers** 

120. **4) What is Betty Dresser's goal?** Betty Dresser の ^{もくひょう}目標 は ^{なんですか。} 何ですか。
ひとつひとつ列挙 (れっきょ) する 絶滅 (ぜつめつ) しそうな
121. *To catalogue all the DNA of endangered species so that they might be recreated in the future if they go extinct.*
再創造 (さいそうぞう) させられる
122. **5) Have the clones she has made been healthy?** ^{かのじょ}彼女が ^{つく}作り上げた ^あクローンたちは ^{けんこう}健康 ですか。
 123. *Yes, and some have even had children.*

124. **With this goal in mind**, Dresser has been creating a "frozen zoo" of endangered animals. She has collected tiny pieces of skin containing the DNA of hundreds of different species from around the world.
よく憶 (おぼ) えておく 冷凍 (れいとう) の 絶滅 (ぜつめつ) に瀕 (ひん) した ちっちゃな かけら ~を含 (ふく) む 種 (しゅ)
125. She keeps these frozen in small containers so that if it becomes necessary in the future, clones can be created. Not all experts agree with the idea of creating clones.
入 (い) れ物 (もの) 専門家 (せんもんか) 賛成 (さんせい) する
126. Some of them say that it is more important to prevent damage to the environment.
防 (ふせ) ぐ 損害 (そんがい) 環境 (かんきょう)
127. In this way, animals could continue to live where they are. Dresser agrees but argues that if it is a choice between extinction and cloning, it is better to choose cloning.
このように 続 (つづ) ける 彼 (かれ) らがどこにいても 反論 (はんろん) する 選択 (せんたく) 絶滅 (ぜつめつ) ~を選 (えら) ぶ

Further Questions& Sample Answers 

128. **6) Why do some people disagree with Betty Dresser's method?**
反対 (はんたい) する
129. *なぜ一部の人々は Betty Dresser の方法に反対しているのですか。*
いちぶ ひとびと ほうほう はんたい
130. *They feel it would be better to focus energy on preserving the environment rather than rely on cloning to fix it after it is too late.*
保存 (ほぞん) する 頼 (たよ) る 決定 (けつてい) する
131. **7) Do you think it would be possible to bring extinct species back using Betty Dresser's methods?** あなたは ^{ぜつめつしゅ}絶滅種 を Betty Dresser の ^{ほうほう}方法 で ^よ呼び戻す ことができると ^{おも}思いますか。
個体 (こたい)
132. *We can create individuals if we have the DNA, but not whole species.*
呼 (よ) び戻 (もど) す
133. **8) What is an extinct animal you would bring back if you could?**
ぜつめつしゅ よ もど
134. *もし絶滅種を1つ呼び戻すことができるならあなたは何を呼び戻したいですか。*
なに よ もど
135. *Seeing the flying dinosaurs might be nice.*

136. **(41) Why did some scientists criticize Jurassic Park?**
批評 (ひひょう) する
137. *なぜ科学者は Jurassic Park を非難しましたか。*
かがくしゃ ひなん
138. **1 They disliked using dinosaurs for entertainment.**
嫌 (きら) った 作り物の
139. **2 They opposed the idea of creating fake dinosaurs.**
反対 (はんたい) した
140. **3 They doubted that dinosaurs could ever be cloned.**
疑 (うたが) った
141. **4 They thought the dinosaurs in it were the wrong size.**

142. (42) What is one way that scientists have been able to create animal clones?
産(う)み出(だ)す
 科学者が動物のクローンを生み出すことができている一つの方法は何ですか。
かがくしゃ どうぶつ う だ ひと ほうほう なん
～と取(と)り替(か)える

- 143. 1 By replacing the DNA in an animal's egg with the DNA of another animal.
育(そだ)てることによつて ～に使用(しよう)される 集(あつ)めること
- 144. 2 By raisings many different kind animals to be used collecting DNA.
除々(じょじょ)に
- 145. 3 By gradually changing DNA to create a new animal.
- 146. 4 By using electricity to create DNA in a laboratory.
実験室(じっけんしつ)

147. (43) What is Better Dresser trying to do? Better Dresserは何をしようとしていますか。
なに

- 148. 1 Increase the variety of pets that people keep.
様々(さまざま)な ～を避(さ)ける
- 149. 2 Create new species that can avoid extinction.
- 150. 3 Show that cloned animals are not healthy.
- 151. 4 Make it possible stop species from dying out.



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152. (44) Why are some experts against cloning?
専門家(せんもんか) ～に反対(はんたい)する
せんもんか か はんたい
 ある専門家たちがクローン化に反対しているのはなぜですか。
心配(しんぱい)している

- 154. 1 They are concerned about the effect of clones on other animals.
- 155. 2 They worry that cloning will only be able to help a few species.
- 156. 3 They think that it would be better to protect the places where animals live.
～を守(まも)る
- 157. 4 They believe that storing animal DNA for the future will be too expensive.
～だと思(おも)う 貯蔵(ちよぞう)すること 未来

158. (45) Which of the following statements is true? 次の陳述のうち、正しいものを選びなさい。
後(あと)につづく つぎ ちんじゅつ ただ えら

- 159. 1 Jurassic Park seems much more realistic now than when it was first shown.
現実的(げんじつてき)な それが初(はじ)めて現(あら)れたとき
- 160. 2 Dresser has collected clones of many different species from all over the world.
- 161. 3 There is a possibility that even ordinary pets like cats will become endangered.
可能性(かのうせい) 普通(ふつう)の 絶滅(ぜつめつ)しそうな
- 162. 4 It is still impossible to create clones that are able to produce babies of their own.
不可能(ふかのう)な 産(う)む

Review Questions



- 163. 1) Why do you think scientists said it was impossible to clone dinosaurs like in the movie Jurassic Park?
過程(かてい)
- 164. The process used in the movie would not work in real life.
- 165. 2) What is interspecies cloning?
クローン 種(しゅ) 胚(はい)
- 166. A clone of one species is created using the embryo of a different species.
- 167. 3) How does interspecies cloning work?
- 168. The DNA of one species is put into the embryo of a different species.
胚(はい)

169. 4) What is Betty Dresser's goal?

ひとつひとつ列挙 (れっきょ) する

絶滅 (ぜつめつ) しそうな

170. To catalogue all the DNA of endangered species so that they might be recreated in the future if they go extinct.

再創造 (さいそうぞう) させられる

171. 5) Have the clones she has made been healthy?

172. Yes, and some have even had children.

173. 6) Why do some people disagree with Betty Dresser's method?

反対 (はんたい) する

保存 (ほぞん) する

174. They feel it would be better to focus energy on preserving the environment rather than rely on cloning to fix it after it is too late.

頼 (たよ) る

決定 (けつてい) する

175. 7) Do you think it would be possible to bring extinct species back using Betty Dresser's methods?

個体 (こたい)

176. We can create individuals if we have the DNA, but not whole species.

177. 8) What is an extinct animal you would bring back if you could?

呼 (よ) び戻 (もど) す

178. Seeing the flying dinosaurs might be nice.

解答: (41) 3 (42) 1 (43) 4 (44) 3 (45) 1



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