

1. *For Teachers: When you use Dual method, please have the students do the shadowing after you. Then have them read by them self. And correct their pronunciation, **through all of this material.***
2. イートックのレッスン以外で使用禁止 Ban to use this without eTOC lesson.

3.  Part2 Lesson8.Pre1-3.1-2018.3chobundokai **スマホの方は横にご覧下さい**

4. Stranded Whales

5. In January and February 2016, more than two dozen male sperm whales
6. found washed up on European beaches around the North. These whales
7. had entered shallow waters with sand or mud on the bottom, which
8. prevented them from using sonar clicks to navigate.
9. They became trapped in these shallow areas, and without enough water to
10. support their tremendous weight, their lungs collapsed, and the whales
11. died of respiratory failure.
12. It was initially thought the whales had entered the areas in pursuit of
13. squid, a favorite prey food, or that they might have swallowed fatal
14. quantities of plastic. However, these theories were quickly disproved.

Further Questions & Sample Answers *For Teachers: Please use the direct method like CALLAN for this part. 1. Ask student to answer the question on their own at first. 2. Then read the "sample answer". 3. Tell student to close their eyes. 4. Let them repeat after you again. Because student can't see the answer. 5. Have the student try to memorize the answer. 6. Once they have memorized the answer, ask the question one last time.*

1) Why did two dozen male sperm whales wash up on European beaches?

1) *They had entered shallow waters with sand or mud on the bottom, which prevented them from using sonar clicks to navigate.*

2) What theories did people have about why the whales entered the areas?

2) *It was thought the whales entered the areas in pursuit of squid or that they might have swallowed fatal quantities of plastic.*

16. After further research, an alternative explanation emerged. Whales use
17. both sonar and Earth's magnetic field to navigate.
18. In December 2015, when sperm whales were migrating south from the
19. Norwegian Sea, the aurora borealis was visible.
20. These bright lights in the northern sky are caused by storms that occur on
21. the sun, and they are a sign that these storms are strongly interfering with
22. Earth's magnetic field.
23. Such storms can confuse migratory animals such as birds, and probably
24. also caused whales relying on the magnetic field to become disoriented and
25. enter shallow waters.

Further Questions & Sample Answers



26. **3) What happened in December 2015?**

27. **3)** *As the whales were migrating south from the Norwegian sea, the arura borealis was visible.*

28. **4) What do storms that occur on the sun do?**

29. **4)** *They interfere with the Earth's magnetic field and can confused migratory animals such as birds and probably whales.*

30.

31. All the stranded whales were young males. In general, female sperm whales and their babies remain in waters around the equator.
32. Males, on the other hand, migrate in what are known as “bachelor groups”
33. once they become independent between the ages of 10 and 15.
34. Older, experienced males are more solitary and travel alone, leaving the
35. inexperienced males to fend for themselves. Scientists believe the young
36. males were relying on magnetic sensing and did not realize they had
37. strayed from their migration route. In contrast, more experienced whales
38. would have known to use other navigation methods, such as sonar clicks,
39. to reorient themselves before it was too late.

40. Further Questions & Sample Answers

41. 5) What do male whales do between the ages of 10 and 15?
42. 5) *They migrate in what are known as “bachelor groups”.*
43. 6) Why weren't experienced male whales confused by the magnetic sense?
44. 6) *They would have known to use other navigation methods, such as sonar clicks, to reorient themselves before it was too late.*

*Choose the correct answer from these choices.

46. (32) *What happened to the whales that were found on North Sea beaches?*
47. 1. The large amounts of sand and mud in the waters they swam into entered their lungs and affected their breathing.
48. 2. The squid they were hunting led them to unfamiliar territory, where they consumed harmful plastic waste.
49. 3. They swam into shallow areas where their heavy weight resulted in their being unable to breathe.
50. 4. They consumed a type of animal that happened to be toxic, making them too ill to swim to deeper waters.
- 51.
52. (33) *What is true of the aurora borealis in the context of the passage?*
53. 1. It was so much brighter than usual that many sea animals became distracted by the lights and were unable to orient themselves.
54. 2. It was a result of the same phenomenon that had likely caused the whales to become confused and navigate incorrectly.
55. 3. Its presence over the Norwegian Sea caused many birds to fly toward the North Sea, which led the whales to follow.
56. 4. Its appearance farther south than usual weakened the whales' ability to use sonar clicks to confirm the depth of the waters.
- 57.
58. (34) *If the whales had been older, they would have*
59. 1. realized that they had traveled off course and tried to find their way again using a different method.
60. 2. been less independent and therefore swam back toward the equator to

return to the females.

61. 3. known to follow the lead of the females, which generally travel more and have better navigation skills.
 62. 4. been unable to use sonar clicks to request help from other whales that were nearby.
-

63. Answer: (32) 4 (33) 3 (34) 1



USE & PRINTING outside of eTOC are strictly PROHIBITED.

4. イートツクのレッスン以外で使用禁止 Ban to use this without eTOC lesson.