Exercise 8

Complete the sentences below. Choose NO MORE THAN TWO WORDS from the passage for each answer.

Now you know what information you need to find (a specific location on Ross Island, something eaten by Adélie penguins, etc.), you can look for it in the Reading passage.

- Look through the passage for the **type** of information you need to complete the sentences.
- Read that part of the passage in more detail to find the **one piece** of information that you need.
- Write your answers to the questions. Make sure you only use one or two words for each answer.
- Make sure your answers make sense and are grammatically correct.
- Check your spelling very carefully. You should use the same spelling as in the Reading passage.

Elsewhere on Ross Island, in contrast to McMurdo Sound, the situation is more encouraging. At Cape Crozier, Adélie penguins are thriving. The colony is now thought to have an estimated 230,000 breeding pairs, an upturn of 20% over the last three decades. Penguins nesting on this part of Ross Island may actually be benefitting from human activity, scientists suspect. In 1996, a fishing company opened near the area, and started fishing for vast quantities of Chilean sea bass – otherwise known as the Patagonian toothfish. As both the Adélies and the sea bass eat silverfish, competition for this food source has now been dramatically reduced, and this may partly explain why penguin numbers have risen at Cape Crozier.

However, it isn't fish, but krill – tiny, shrimp-like creatures that live just below the pieces of ice that float on the sea – that form the largest part of an Adélie's diet. Unfortunately, krill numbers are also declining rapidly. Dr So Kawaguchi, a biologist working for the Australian government's Antarctic Division, suspects he knows the main reason behind this. He accepts that commercial fishing is partly responsible for huge amounts of krill being removed from the sea, but he points to rising levels of carbon dioxide as the chief cause. It is this which is making the waters of the Antarctic more acidic, in turn preventing the krill eggs from hatching. Diminishing levels of krill not only mean less food for penguins. Digesting up to 40 million of these tiny animals per day, most whales depend on them for survival, too. Also,

LIVEWORKSHEETS

thanks to their more diverse diet, Gentoo penguins, a species which eats squid and small crab-like creatures as well as krill, have hardly been affected by this situation. In fact, their numbers appear to be on the rise. Other species, such as the Chinstrap and Emperor penguins, however, have the same narrow diet as Adélies.

Scientists are now concerned that Adélie penguins will be forced to move further south in search of more suitable breeding and feeding locations. A team made up of researchers from Stanford University, USA, and the British Antarctic Survey have recently used geolocation sensors attached to a number of penguins to track them in order to better understand their patterns of migration. They know that Adélie penguins leave their nesting areas in February to begin the slow march north to avoid the darkest time of the year. Around 480 kilometres from completely open water, they stop on the floating sea ice to spend time feeding and increase their body weight. They then turn around, and march back to the nesting areas – a journey of about 13,000 kilometres in total. Scientists also know that Adélies have never lived further south of Cape Royd, and suspect that this is because they need light in order to navigate and search for food. It also allows them to spot such predators as the skua – a large bird that can easily kill young penguins. So, will the Adélies be able to adapt, move further south, and live in a darker environment? Scientists doubt that this kind of evolutionary change can happen in a short time.

1. The Adélie penguin population has increased in the part of Ross Island known as _____
2. Both Adélie penguins and the Chilean sea bass feed on _____
3. Dr Kawaguchi believes that an increase in _____ is the main reason for declining numbers of krill.
4. Not only penguins, but also _____ will be affected by smaller krill populations.
5. The _____ species of penguins have more variety in their diet than other penguins.
6. British and American scientists have used special equipment to find out more about penguin _____ .
7. The British-American team know that it is in _____ that the penguins begin to walk in a northerly direction.
8. It is now thought by the British-American team that penguins require _____ to help them avoid threats and to find food.

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