The Natural World

Short-answer questions: Great Barrier Reef bleaching | Cambridge IGCSE ESL 0510/0511

1. Lead-in discussion

Talk with a partner before you read.

1. What do you know about coral reefs?
2. Why are oceans important for wildlife and people?
3. How can warmer seas affect marine life?
4. Should tourists visit fragile natural places?

Exercise 1 at a glance

Read one factual text. Answers are in the text. Copy exact words and check the question carefully before choosing your answer.

2. Read for overall understanding

Read the text. Why is coral bleaching a serious problem for the Great Barrier Reef?

Great Barrier Reef Bleaching

The Great Barrier Reef lies off the north-east coast of Australia and is the world's largest coral reef system. It is home to many species of fish, coral and other marine life. The reef is also important to tourism, science and the culture of Aboriginal and Torres Strait Islander peoples.

Coral may look like rock or plants, but it is made by tiny animals. Many corals live with microscopic algae that help provide food through photosynthesis. When seawater becomes too warm for too long, corals can become stressed and push out these algae. This makes the coral look pale or white, a process known as coral bleaching.

Bleaching does not always mean coral is dead. If temperatures fall and conditions improve, some coral can recover. However, severe or repeated bleaching makes recovery harder. Corals may grow more slowly, become more likely to die, or provide less shelter for fish and other reef species.

The reef is not the same everywhere. Some areas are shallow, some are deeper, and some are more exposed to heat or storms. This means bleaching can be patchy: one reef may be badly affected while another nearby area looks healthier. Scientists need detailed surveys to understand which parts are most at risk.

Coral reefs support people as well as wildlife. Tourism businesses, fishing communities and researchers all depend on healthy reef ecosystems. If coral cover declines, fish habitats can change and visitors may see fewer colourful reef areas. This can affect jobs and local economies as well as nature.

In 2024, Australian authorities confirmed another mass bleaching event on the Great Barrier Reef. Scientists linked the event to heat stress in the ocean. The reef had already experienced several mass bleaching events since 2016, which worried researchers because corals need time between events to recover.

The Great Barrier Reef faces more than one threat. Climate change is increasing ocean temperatures, but pollution, coastal development, cyclones and outbreaks of crown-of-thorns starfish can also damage reef ecosystems. These pressures can combine, making it harder for coral communities to stay healthy.

Scientists monitor the reef through aerial surveys, underwater surveys and temperature data. This information helps them see which areas are most affected and where recovery is possible. Protecting the reef also depends on reducing greenhouse gas emissions, improving water quality and supporting local conservation work. The reef's future is uncertain, but careful monitoring and action can still make a difference.

3. Strategy focus

Find cause and effect

Look for what causes a problem and what happens as a result. Do not mix up the cause with the effect.

4. Exam-style short-answer questions

Answer the questions using words from the text.

1. Where does the Great Barrier Reef lie? [1]

_____

2. What process do microscopic algae use to help provide food? [1]

_____

3. What can corals push out when seawater becomes too warm? [1]

_____

4. Why were researchers worried about several mass bleaching events? [1]

_____

5. Which starfish can damage reef ecosystems? [1]

_____

6. According to the text, what are three ways scientists or people can help protect or monitor the reef? [3]

_____

_____

_____

5. Vocabulary notebook

Underline five useful words or phrases. Check their meaning, then record them in your vocabulary notebook.

6. Follow-up tasks

1. Discussion: What should governments do to protect coral reefs?
2. Summary: Summarise coral bleaching in about 50 words.
3. Creative task: Design a tourist notice explaining how to protect a reef.
4. Research: Find one animal that depends on coral reefs.

ANSWER KEY

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4. Exam-style short-answer questions

1. off the north-east coast of Australia
2. photosynthesis
3. these algae / microscopic algae
4. corals need time between events to recover
5. crown-of-thorns starfish
6. Any three from: aerial surveys; underwater surveys; temperature data; reducing greenhouse gas emissions; improving water quality; supporting local conservation work.

Notes for checking

1. Answers should be short and clearly based on the text.
2. Accept bracketed or optional wording if the meaning is clear.
3. For the final question, learners need three separate details.