Student Worksheet: Coral Bleaching – Causes and Consequences

Name: _____

Date: _____

Class: _____

Aim:

What causes coral bleaching, how does it impact reef ecosystems, and what role does climate change play in driving its frequency and severity?

Do Now Activity:

Corals live in shallow, tropical oceans and rely on sunlight. What do you think happens to corals when ocean conditions change too quickly or become too extreme?

List two possible stressors that could harm coral reefs.

1:
2:

Understanding Coral and Symbiosis

1. What are corals, and what role do they play in marine ecosystems?

2. What are zooxanthellae, and how do they help corals survive?

3. Describe the relationship between coral polyps and zooxanthellae:

What is Coral Bleaching?

4. Define coral bleaching:

5. What are two visual signs that a coral has bleached?

6. What happens to corals if bleaching lasts for too long?

Causes of Coral Bleaching

7. What is the most common cause of coral bleaching?

8. Explain how light stress can contribute to bleaching:

9. What is ocean acidification and how does it affect coral reefs?

10. List two additional causes of coral stress:

Global Trends and Climate Change

11. What happened during the 1998 global bleaching event?

12. How do marine heatwaves relate to climate change and coral bleaching?

13. What does the IPCC predict about the future of coral reefs?

Consequences of Coral Bleaching

14. How does coral bleaching affect biodivers

15. ityWhy are coral reefs important for coastal protection?

16. What are the economic impacts of coral bleaching?

Solutions and Restoration

17. Name one global action that could help protect coral reefs:

18. How do marine protected areas help reduce coral stress?

19. What is coral gardening?

20. How can scientists breed more heat-tolerant corals?

Exit Ticket:

In your own words, why is it important to reduce coral bleaching?