Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_\_

What do you know about the plight of coral reefs?

Burning fossil fuel increases CO2 in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and in the \_\_\_\_\_\_\_\_\_\_\_\_. Increased CO2 in the atmosphere increases the \_\_\_\_\_\_\_\_\_\_\_\_ of the ocean. Increased CO2 in the ocean decreases the \_\_\_\_\_\_\_\_\_\_\_ of the ocean. Both of these are damaging coral.

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|  | Chasing Coral Documentary Netflix 2017 (1:29) |

1. Reefs are a source of food and income for over \_\_\_\_\_\_\_\_\_\_\_\_\_ people.
2. What does the ocean control?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What percent of the *Acropora palmate* (elkorn coral) present in 1971 remains today?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What percent of corals have been lost in Florida? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. In the last 30 years, we have lost \_\_\_\_\_\_\_\_\_\_\_ of the world’s corals.
6. A coral individual is made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of polyps. Each polyp is a circular \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ surrounded by \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. Inside coral there are small \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that act as food factories.
8. The coral animal grows over the skeleton and depositing the skeleton underneath it.
9. They \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ during the day and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at night.
10. Coral are foundation species because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. How did Airport Reef in American Samoa change over six months? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. When did this phenomena start? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. What happened to the coral when water temperature was raised by 2 degrees Celsius? \_\_\_\_\_\_\_\_\_\_\_
14. When temperature increased the ability of the algae to photosynthesize and feed the animal host is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
15. The coral get rid of the “plants”/algae and leave behind\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
16. You know the coral has died when you see \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ growing on it.
17. What has been happening to the oceans temperatures compared to the average temperature? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
18. The first global scale bleaching occurred in? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
19. How long until the second global scale bleaching? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
20. How long until the third global scale bleaching? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
21. Don’t you love the Coral Nerd’s passion!!\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
22. The more complex a structure (or environment/habitat) the more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can potentially live there.
23. About \_\_\_\_\_\_\_\_ percent of all marine life relies on coral reefs.
24. Half a billion to a billion people rely on coral reefs for their main \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
25. So far 2 drugs from corals have been used for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
26. What is the largest structure ever made by life on earth? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
27. Coral bleaching is directly attributable to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
28. Cores from coral can show us that what we see now is not a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
29. The bleaching of the coral is caused by climate change which is caused by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
30. Most of the extra heat trapped by greenhouse gases has been transferred to the \_\_\_\_\_\_\_\_\_\_\_\_.
31. When oil, gas and coal are burned \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ goes into the atmosphere.
32. Carbon dioxide has the property that it is able to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
33. Given average estimations of temperature increases what is the prognosis for coral? \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
34. Do we need reefs? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Do we need forests? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Should I even ask this? Be prepared to answer this is specific ways on your AP exam.
35. Should the world care about what for your grandchildren will be a thing of the past?\_\_\_\_\_\_\_\_\_ Why or why not? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
36. Is there any stopping a dystopian future for humanity? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
37. \_\_\_\_\_\_\_\_ of the Great Barrier Reef died in 2016.
38. How does bleaching make our planet seem small and our effects huge? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
39. Have the reefs reached a tipping point?\_\_\_ What evidence is there for this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
40. Based on current trends in how many years will most of the corals be killed? \_\_\_\_\_\_\_\_\_\_\_\_
41. Do you agree “all kids are born scientists”? Did you lose your curiosity? When and how/why did you lose it? Or how did you keep it? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
42. How can we reduce the trajectory of climate change? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ How \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_