

## Climate Change Lesson 2 - Coral Bleaching

### Objectives

- Students will gain a basic understanding of the chemical and molecular process of coral bleaching
- Students will understand that coral bleaching is an observable consequence of global warming and rise in water temperatures caused by human activities
- Students will learn and how to write an appropriate letter to an official about coral bleaching

### Vocabulary

- Coral
- Global warming
- Great Barrier Reef
- Paris Agreement
- SST (Sea Surface Temperature)
- Symbiosis
- Temperature
- Zooxanthellae

### Materials

Classroom computer with Internet access, student computers and/or pens and paper.

### Warm Up

Write the word “coral” on the board and ask students to name all of the associations they have with coral reefs. Make sure students grasp that: corals are living organisms, they live on the ocean floor, they grow and die, they create habitats for fish

### Lesson

Play videos and interactive games as a group or in pairs:

- Interactive online game: <https://climatekids.nasa.gov/coral-bleaching/>
- Short video: <https://www.youtube.com/watch?v=aEdoizgeNJK>
- Crossword: <http://kids.nceas.ucsb.edu/biomes/games/CoralReefCrosswordKey.pdf>



Regroup and ask the discussion questions:

- *What are the reason coral reefs are in danger?*
- *What areas of the world are most impacted?*
- *What are the ways we can help protect coral reefs?*

## **Assignment**

Have students write an opinion letter regarding a reef related issue to their local newspaper and/or local representative. Make sure students research who their letter could go to before they begin writing.

Steps for Writing an Advocacy Letter:

1. Choose an issue or threat that you already know a little bit about.
2. Identify your audience (Minister of Environment, fisheries Manager, Office of the President or Prime Minister, newspaper editor, etc.).
3. Research their role, correct title and address.
4. Include in your letter:
  1. Main idea – problem and solution - what do you want the person to do?
  2. Reason for writing
  3. Evidence to back it up your argument
5. Format and finish the letter appropriately.
6. Swap letters with another student and write a response to their letter, pretending you are the person the letter is addressed to (you may have to research their position and possibly their opinion on the subject first – look for other projects or ideas they support).
7. After receiving feedback, decide whether you actually want to send the letter you have written (only you can make that choice).

## **Resources**

- [Great Barrier Reef Marine Park Authority coral bleaching information page.](#)
- [ReefBase: a global information system on coral reefs.](#)
- [More details on coral bleaching, causes and effects.](#)
- <https://www.coralwatch.org/web/guest/coralwatch-for-kids>

