

Human impact on the reef



Age 7-11



60 minutes

Curriculum links

- Recognise that humans can have positive and negative impacts on the environment
- Identify different ways that humans can take action to conserve the environment

Resources



Slideshow 7:

Human impact on the reef



Student Sheet 7a:

Coral futures dominos

Student Sheet 7b:

Coral futures poster

Video:

Sailing home



Gallery:

Coral threats



360 Gallery:

Coral bleaching



Subject Update:

Learn more: Coral threats overview

Lesson overview

Students will consider the various impacts humans have had on the coral reef ecosystem, both positive and negative. These impacts range from long-term environmental changes caused by increased atmospheric carbon dioxide, to changes in land use in coastal areas and the impact of fertilisers on the ecosystem balance. Students will be prompted to consider what changes could be made to ensure that there are healthy coral reefs well into the future.

Lesson steps

1. Why should we care? (10 minutes)

Start the lesson by reviewing previous learning about the reef. Ask students why they think the reef is important.

2. What are the different impacts humans can have on the reef? (15 minutes)

Students use the Coral futures dominos activity to consider some of the negative human impacts on the reef and then match them with examples of actions that can mitigate these.

3. Coral futures poster (25 minutes)

Students consolidate their learning creating a coral futures poster that shows what they love about the reef, what harm is being done to the reef, and what actions can be taken to conserve it for the future.

4. Dive log (10 minutes)

Students complete the lesson by identifying the scientific group for different living things they encounter on a virtual dive, before reflecting on their learning using a dive log.

Learning outcomes

- Describe the importance of natural environments, including what they give to humans
- Explore examples of human impact (both positive and negative) on environments
- Suggest actions that can be taken on a global and local scale to reduce the negative human impact on environments
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Step Guidance

Resources

1
10
mins



Step 1 sees students reflect on their learning so far as a prelude to looking at the future of the reef.

- Use the slideshow to set up the lesson, including the learning objectives.
- Show students the Sailing home video, featuring the science team reflecting on their work on the reef.
- Ask students to reflect on their own coral journey and ask them to share what they love most about the coral reef.

Slideshow 7:
Slides 1-3

Video:
Sailing home

2
10
mins



Step 2 develops students understanding of the positive and negative human impacts on the reef.

- Use the slides to develop students' understanding of some of the threats facing the coral reef.
- Hand out Student Sheet 7a to student groups.
- Go through the threats (shaded) and the actions that can be taken.
- Demonstrate how to play, i.e. place one domino on the table. Then find a domino to place next to it. This can't be any domino but one where the action matches that particular threat or vice versa.
- Students will then need to try to make the longest chain they can.
- Debrief the activity with a whole class question and answer.

Slideshow 7:
Slides 4-13

Student Sheet 7a:
Coral futures dominos

360 Gallery:
Coral bleaching



To save time consider cutting out the Coral futures dominos in advance with one set per four students.



Use the Subject Update to develop your knowledge of some of threats facing the coral reef.



The 360 Gallery will give students a more immersive feel for the devastation that coral bleaching can bring. In the 2016 mass bleaching event, an estimated 29 per cent of shallow-water coral was lost across the Great Barrier Reef Marine Park.

Subject Update:
Learn more: Coral threats overview

Subject Update:
How to: Use Encounter 360

3
30
mins



Step 3 sees students apply their knowledge from the unit so far, creating a coral futures poster.

- Show students the slide showing that concerted action needs to be taken to conserve the coral reefs.
- Hand out or show students the poster template on the Student Sheet and confirm they understand the activity
- Provide paper and art materials for students to make their own coral futures poster.

Slideshow 7:
Slide 14

Student Sheet 7b:
Coral futures poster

TEACHER GUIDANCE 7 (page 2 of 2)

Step Guidance

Resources

4

10
mins



Step 5 asks students to make a pledge to protect the coral reef for the future.

- Use the slide to provide a reference for this lesson step.
- Guide a whole class discussion offering the chance for students to come forward and share their poster and their pledge.
- Ask students whether they should be making the pledge or perhaps they should be asking adults to make it instead, as adults have been responsible for much of the destruction of reefs around the world.

Slideshow 7:
Slides 15