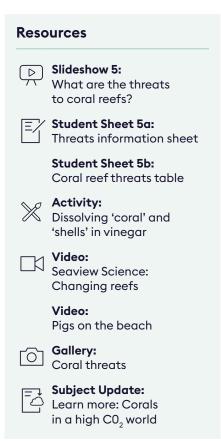
What are the threats to coral reefs?

Age 14-16

60 minutes

Curriculum links

- Bio-diverse ecosystems are under threat from human activity.
- Increasing demand for resources affected our planet.
- Human activities modify processes and interactions within ecosystems.



Home learning

Students to create a list actions that can be taken to reduce the threats to coral reefs.

Lesson overview

Lesson steps

This lesson will look at the threats to the coral reefs, using a variety of resources including videos, a gallery and a information Student Sheet. This lesson will get students to start thinking about the scale of the threats to coral reefs and how we can all play a part, regardless of how far we live from the coral reef.

1. Introduction to the lesson (5 mins) Students to review the learning objectives.

- 2. Nutrient Cycle (10 mins) Students to draw the nutrient cycle seen on coral reefs.
- **3. Threats to coral reefs (25 mins)** Students to come up with ideas of what they think may be threats to coral reefs.

4. Classification of the threats (10 mins)

Students to colour code the different threats to coral reefs. Students to work in pairs to discuss whether they think something is a local threat or a systemic one.

5. Evaluate the threats to coral reefs (10 mins)

Students to start thinking about what the biggest threat to the health of coral reefs is and why it is such a big threat.

- Understand the wider context and learning outcomes
- Assess previous learning

Learning outcomes

- List the threats both natural and human to the coral reef
- Describe the different threats to coral reefs. Look at different scales: local in Timor-Leste (dangerous fishing) and systemic (climate change)
- Evaluate the threats to the coral reefs

TEACHER GUIDANCE 5 (page 1 of 2)

Step	Guidanc	e	Resources	
1 5 mins		 Step 1 introduces the students to the lesson. Select students to read out the lesson objectives. Ask random students questions related to the learning in the previous lesson, such as: Explain one way coral reefs are economically valuable to the people of Timor-Leste. 	Slideshow 5: Slides 1-2	
2 10 mins	Ţ,	 Step 2 involves the students revising learning from lesson 3. Students to draw a nutrient cycle for a coral reef. Ask a student to come up and show the class their cycle or draw one on the board. Choose students to explain the different stages of the nutrient cycle. Go through the nutrient cycle on Slide 4. Ask students to add key information to the drawing in their books. 	Slideshow 5: Slides 3-4	
3 25 mins	<u>C</u>	 Step 3 students to learn information about the different threats to coral reefs. Lead the class discussion about possible threats to coral reefs, consolidating the ideas on the board. Stick the information sheets around the room or ask students to work in pairs or small groups and give them the information. Hand out the blank tables which the students will add notes about the differnt threats. Express the importance to student that they include any named examples or numerical information in their notes. Play the videos, students to add any additional information to their tables. For more information go through the gallery. Choose students at random to tell you one threat they 	Slideshow 5: Slide 9 Student Sheet 5a: Threats information Sheet Student Sheet 5b: Coral reef threats table Gallery: Coral threats Video: Pigs on the beach Activity: Ocean acidification in a cup Video: Seaview Science: Changing reef	

TEACHER GUIDANCE 5 (page 2 of 2)

Step	Guidance		Resources
4 10 mins	<u> </u>	Step 4 classification of threats. Are the threats resulting from local or systemic behaviour.	Slideshow 5: Slide 10
		 Go through the classification categories – local and systemic ensure students understand what systemic means. 	Student Sheet 5b: Coral reef threats table
		 Local threats are those that are caused by actions that happen in the vicinity of the coral reef. 	
		 Systemic threats are those that are caused by the actions taken on a global scale. 	
		 Ensure students use a key so it is clear how they have classified the threats. E.g. shade boxes - blue = local threats, green = systemic threats. 	
5 10 mins	oC	 Step 5 is the evaluation of the threats. Students to write a paragraph evaluating which threat they think poses the biggest threat to coral reefs in Timor-Leste and give reasons to support their decision. 	Slideshow 5: Slide 11
H/L 30 mins		Mitigation strategies • Ask students to complete research which looks at strategies used to manage the threats to coral reefs. Especially to what extent can an individual make a difference to the threats coral reefs face.	Slideshow 5: Slide 12
		 Students are to create a list of actions that can be taken to reduce the threats to coral reefs. 	