

Age Range:	6th-8th Grades (Ages 11-12)				
Subject:	Art	Lessons: 1	#3 United in Biodiversity - Climate Change		
Topic:	Protecting Coral Reefs through Upcycled Coral Sculptures				
Lessons focus and goals:	 Focus: Environmental Awareness and Climate Change Understanding through the medium of sculpture Goals: To cultivate environmental awareness among pupils, particularly regarding the impact of climate change on coral reefs. The focus is on fostering an understanding of the fragility of coral ecosystems and the urgent need for conservation efforts. To encourage creative expression through art while promoting sustainable practices. The focus is on using upcycled materials to create coral sculptures, emphasising the importance of repurposing materials and reducing environmental impact. 				
Learning objectives:	 Students will be enabled to: gain a comprehensive understanding of coral reef ecosystems, including their biodiversity, the importance of coral health, and the threats posed by climate change. develop awareness of the impact of climate change on coral reefs, recognising the factors contributing to coral bleaching, degradation, and the overall decline of coral ecosystems. create upcycled coral sculptures, utilising discarded or repurposed materials to visually represent the beauty and importance of coral reefs. 				
Materials	 Empty plastic bottles (various sizes) Markers Recyclable materials (old newspapers, magazines, cardboard) Scissors Acrylic paints and brushes Craft glue Informational resources on climate change and coral protection 				
Differentiation	-Students are put into mixed ability groups -Questioning -Instructions are kept simple and repeated where necessary				

Structure and activities	Introduction (10 minutes): <u>Discussion:</u> Explore the importance of coral reefs and their vulnerability to climate change.
--------------------------	--



UNITED_{IN} BI@DIVERSITY

<u>Visuals:</u> Show images and videos of vibrant coral reefs and explain the threats they face, such as coral bleaching. Discuss the key ways human activity is affecting coral reefs. Draw connections with pollution and climate change.

Visuals of the Great Barrier Reef, demonstrating bleaching and decline:



Online resources:

Coral reefs and climate change Human Threats to Coral Reefs Plastic, a danger to coral reefs

Video resources:

Why are coral reefs so important?
What Is Coral Bleaching? | TIME

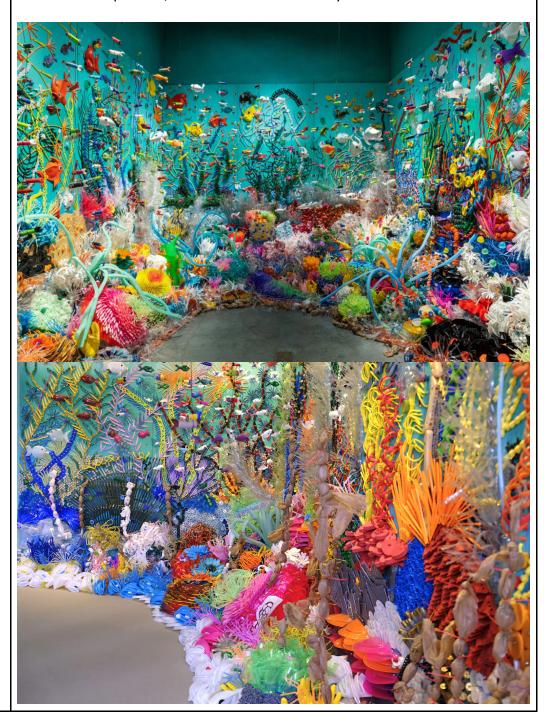
Concept of Upcycling (10 minutes):

Define upcycling and discuss its benefits in reducing environmental impact. Emphasise the connection between upcycling and coral protection (plastic pollution ending in the sea and oceans). This can be achieved through the use of images.



UNITED_{IN} BI@DIVERSITY

Show them inspiration, such as the Plastic Reef by Federico Uribe:



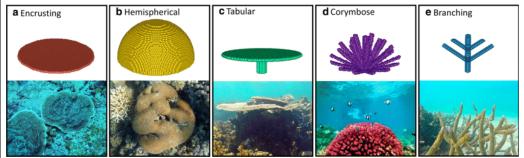
UNITED_{IN} BI@DIVERSITY



Sculpting Activity (60 minutes):

Divide students into pairs, or small groups. Provide pupils with recyclable materials and instruct them to transform them into coral sculptures using the materials provided.

Encourage creativity in representing different coral species, and have images of different types of coral on display, for example:



Once the basic structure is formed, allow pupils to paint and personalise their coral sculptures using acrylic paints and markers.

Discuss the significance of colour and pattern choices in representing healthy coral ecosystems.

Follow Up

At the teacher's discretion students display their work around the school. Students can be given the opportunity to present their work to others. This could be at the start of the day over the course of a week, during the school assembly, or during form time. Students are given time to ask the group questions and respond to their work.





	Consider posting their work on the school website or social media to raise awareness about the importance of recycling.		
Digital tools	 Our Reef Stories - an interactive map displaying how Aboriginal people undertake conservation projects for the Great Barrier Reef Great Barrier Reef Map - an interactive map of the Great Barrier Reef Coral Identification Quiz / Ecosystems for Kids Quiz - to get students familiar with types of coral and reefs across our oceans Virtual Tour of the Great Barrier Reef 		

Assessment based on the presentation of their work.						
	Initiating	Developing	Excelling			
Description of performance	LO 1: The student has a basic understanding of coral reef ecosystems, recognising their biodiversity and the general importance of coral health. They know that climate change poses threats but may struggle with detail. Their knowledge of coral ecosystems might lack depth. LO 2: The child understands that climate change affects coral reefs but might struggle to identify specific factors. They know that coral bleaching and degradation occur, but their	LO 1: The child has a clear understanding of coral reef ecosystems, describing their rich biodiversity and explaining why coral health is critical. They can list common threats like ocean warming and acidification due to climate change. The student can discuss how these threats affect coral reefs and their ecosystems, using specific examples or data. LO 2: The child recognises the primary factors contributing to coral bleaching and degradation, such as rising sea temperatures and ocean acidification. They can explain how climate change leads to the overall decline of coral ecosystems, discussing some specific consequences like reduced biodiversity or disrupted fish habitats. LO 3: The child constructs upcycled coral sculptures that visually represent coral reefs with more detail and	LO 1: The child has a comprehensive understanding of coral reef ecosystems, exploring their complex biodiversity and detailing the significance of coral health. They provide an in-depth analysis of the threats posed by climate change, explaining mechanisms like coral bleaching and its cascading effects on reef ecosystems. This student connects these concepts to broader issues, such as global conservation efforts and sustainability. LO 2: The child demonstrates a deep awareness of the impact of climate change on coral reefs, detailing the factors contributing to coral bleaching and degradation. They understand the broader implications for coral ecosystems, connecting the decline to global climate patterns and			
	explanations are	creativity. They use a variety	human activity. This student			



UNITED_{IN} BI©DIVERSITY

vague. Their understanding of the overall decline in coral ecosystems is limited, focusing mainly on visible damage.

LO 3: The child creates basic upcycled coral sculptures using discarded or repurposed materials but with limited creativity. The sculptures may lack intricate details or unique design elements, focusing more on basic shapes without fully capturing the beauty of coral

reefs.

of discarded materials, achieving a level of complexity in structure and design, demonstrating a basic understanding of the aesthetic appeal of coral reefs.

explores potential conservation measures and recognises the urgency for sustainable solutions.

LO 3: The child produces intricate upcycled coral sculptures with a high level of creativity and craftsmanship. They expertly utilise a range of discarded or repurposed materials to create visually stunning representations of coral reefs, reflecting not only their beauty but also their ecological significance and diversity.