Stories from the Reef

Creative Learning
Teacher Resource

Resource Overview

This learning resource has been developed for Primary students and supports multidisciplinary learning across Science, HSIE, Drama, Visual Arts, English.

This resource includes discussion questions and activities designed for the classroom but can be adapted to suit the needs of your students and teaching context.

Workshop Overview
General capabilities and cross-curriculum priorities

Creative and Critical Thinking

Students use theatre making and play to create their own underwater world using recycled materials in new and unusual ways.

Literacy

Students express themselves by inhabiting characters, creating and performing imagined narratives, and communicating thoughts about their relationship to the world.

Personal and Social Capability

Students collaborate with their classmates to create artworks and storylines for a short play or presentation.

Sustainability

Students explore the Sydney Harbour's underwater ecosystem, sustainability, and plastic waste – developing their understanding about what it means to protect and care for our natural environments.

Workshop Overview

What students can expect – sensory elements

Touch

- Direct handling of found objects and recycled materials
- Drawing with pencils, pens, and other writing tools
- Cutting, glueing, and decorating artworks
- Varied textures: cardboard, fabric, plastic, natural materials

Sight

- Installations simulating the underwater world
- Bright, well-lit workshop space
- Colourful and varied materials displayed
- Visual demonstrations by facilitator before making begins

Sound

- Facilitated group discussions
- Collaborative making activity
- No amplified music or loud sound events during the workshop
- Enclosed indoor space at the Centre for Creativity
- Short performances

Movement

- Mix of seated and standing activities
- Moving between workstations during the making phase
- 90-minute session – no break built in

A (very) brief history of the Sydney Opera House

Tubowgule
Now known as Bennelong Point

The Gadigal people in Warrang/Warrane (Sydney Cove) call the place around the Opera House ‘Tubowgule’ – meaning the knowledge water.

Tubowgule was a point located at the end of a long, wide ridge and surrounded by rocky shoals that mostly covered at high tide.

The Gadigal believe that the coming together of the saltwater (from the Pacific Ocean) and freshwater (from the Parramatta River) creates a surge of energy and nutrients – making the Sydney Harbour an ideal spot for fishing, eating, meeting and sharing stories.

Tubowgule
Now known as Bennelong Point

Being close to the harbour, cove, freshwater creek and mud flats, the area was rich in resources. This included oysters, mussels, fish, possums, wallabies, kangaroos and many edible plants.

Aboriginal people gathered and ate these foods over thousands of years, leaving behind shells and animal bones that formed 'middens' around Sydney Harbour

Whispers, 2023, Megan Cope, Sydney Opera House.
This was an art installation of a midden made of 85,000 repurposed oyster shell waste and other natural and recycled materials.

The Sydney Opera House
A building nobody thought was possible

In 1956, the NSW government held an international competition for a new performing arts centre on Tubowgule, now known as Bennelong Point.

Over 220 entries arrived from 32 countries, and the winner was a Danish architect named Jørn Utzon.

Today, the Opera House is a World Heritage-listed building and the country's number one tourist destination.

It welcomes more than 10.9 million visitors a year and hosts more than 1,800 performances attended by more than 1.4 million people.

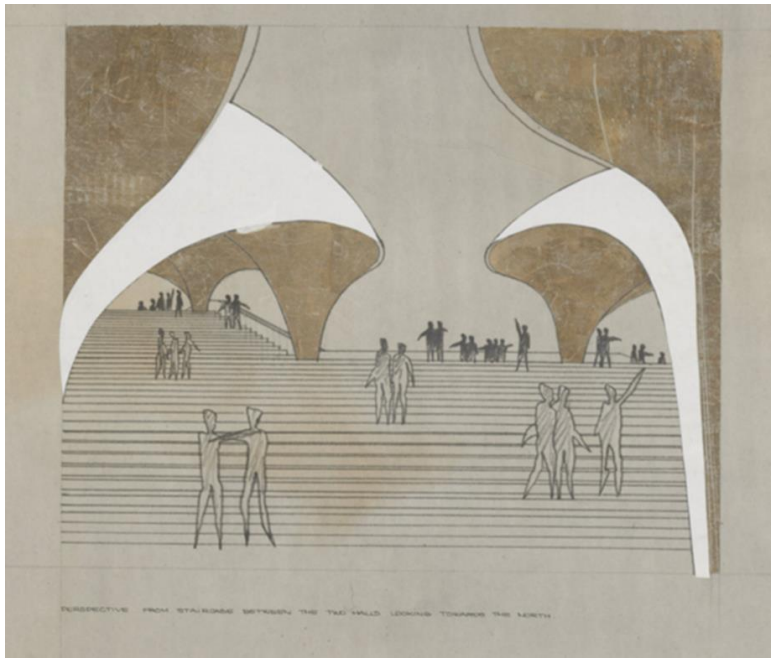
Jørn Utzon

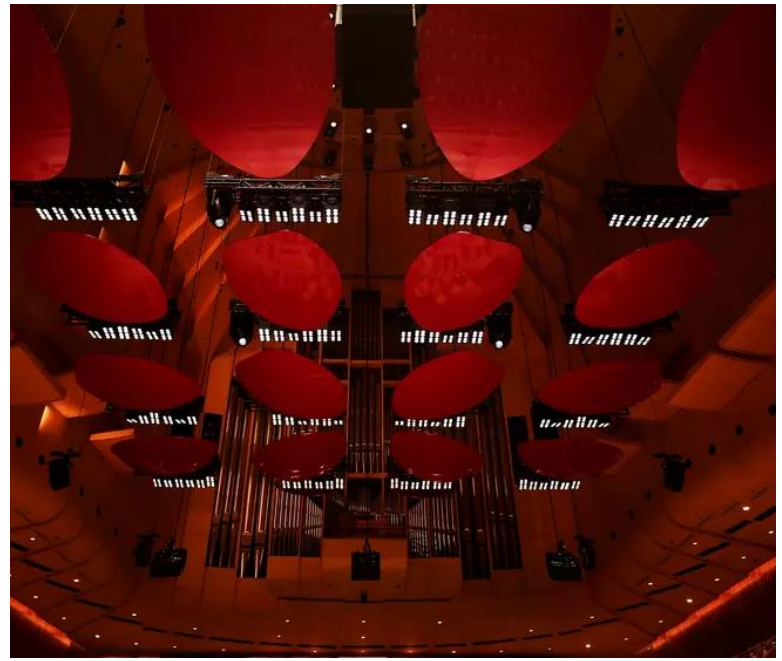
The vision: shells, sails and nature

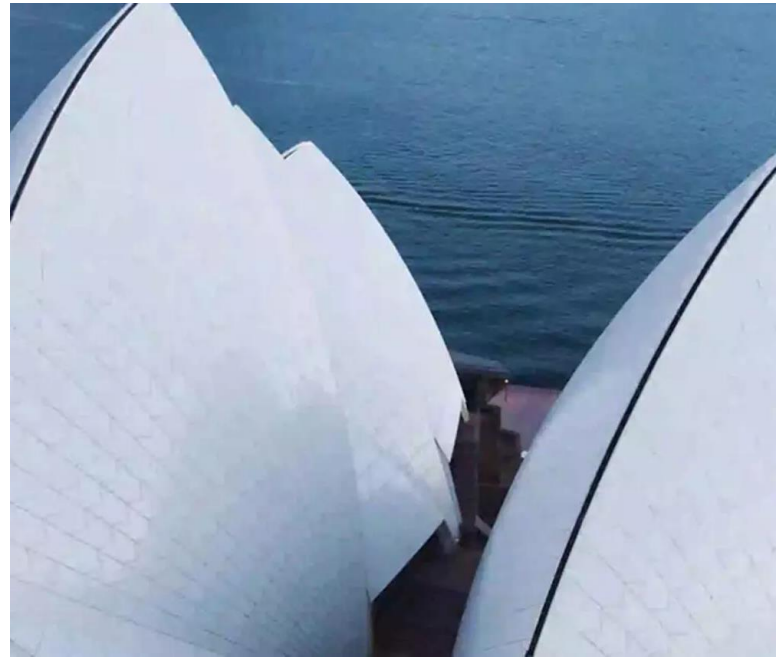
When designing the Opera House, Jørn Utzon was inspired by nature. The way an orange peels apart, the curve of a nautilus shell, the wings of a bird, the colours of the sunrise, and the sunset.

Utzon was also interested in how designs inspired by nature can shape the visitor experience.

He wanted the building to bring joy, transport people to another world, offer a sense of detachment from the city, and create moments of rest.







The Artificial Reef Project

The Artificial Reef Project

What is an artificial reef?

Reefs are natural structures that are comprised of coral, sand or rocks that are just above or below the surface of the sea.

Artificial reefs are human-made structures that are made to model the characteristics of reefs. They are often created to encourage biodiversity in the water.

Artificial reefs can be purpose-built structures that are deliberately installed to encourage and support biodiversity in areas or at times they can be accidental e.g. a sunken ship.

The Artificial Reef Project
The Sydney Opera House's backyard

The Sydney Opera House is surrounded by water; it's kind of like the Harbour is our backyard!

Like all backyards – it is a place that we are responsible for looking after.

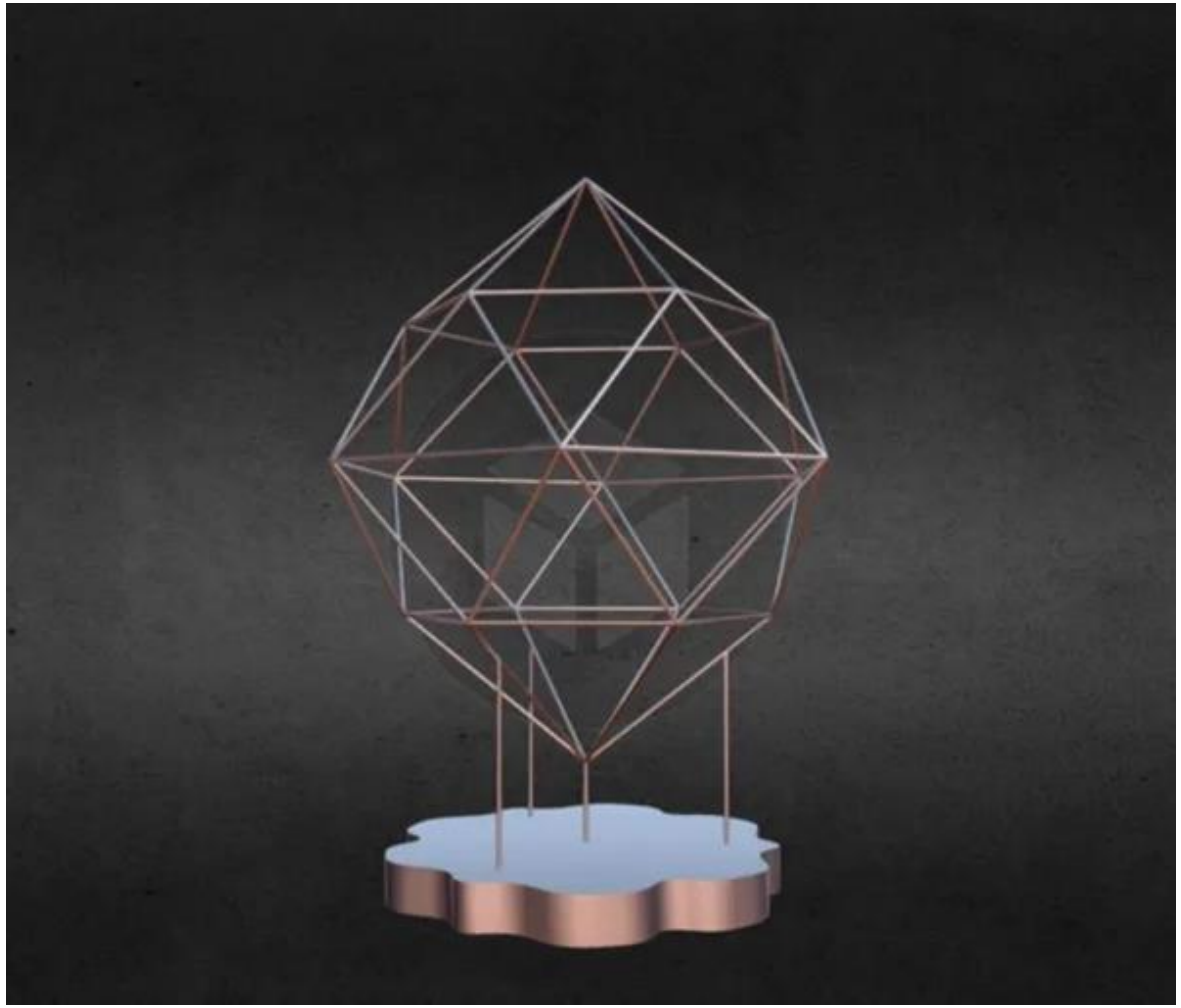
But did you know 60% of the Sydney's harbour shoreline has been replaced by seawalls, resulting in small fish and animals losing their homes?

The Artificial Reef Project
The Sydney Opera House

To help restore the natural beauty of our backyard, the Sydney Opera House embarked on a three-year research project led by University of Technology Sydney Professor of Marine Ecology David Booth.

In May 2019, the modular artificial reef was installed alongside the Opera House sea wall to help bring the fish back and create a new home for them.

The Sydney Opera House's Artificial Reef is made up of hexagonal pods constructed from marine-grade steel and concrete.



The Artificial Reef Project
The Sydney Opera House

Over time, the reefs have become encrusted with seaweed and sea life, providing a home and food source for smaller fish species.

Most recently, species of white seahorses were found swimming in the Artificial Reef.

Activities

Discussion Questions

Primary students

How might you look after the waterways, swimming places, and natural environments near you?

How can humans interact with the environment in a positive way?

What do you think are some of the threats to marine life in Sydney Harbour?

What do you think are the positives and negatives of building an artificial reef.

Activity 1

Imagine your favourite beach or swimming place.

- *What does it look like?*
- *What does it sound like?*
- *Who or what lives there?*
- *What does it smell or taste like?*
- *Who is with you?*
- *What are you doing when you are there?*

Create a drawing, postcard, or poem that describes this special place.

Share your artwork with someone else in the class and learn what their special place is.

Artwork projection by Blak Douglas on the Sydney Opera House Sails for World Oceans Day 2021

Activity 2

In groups, draw or write key words to answer the following questions:

- *What does the environment look like around you?*
- *What are the colours, smells, textures, and shapes?*
- *Who lives in this environment?*

As a class, discuss the ways we care for the environment and why it is important.

In the same groups, create an artwork of the natural world around you using cardboard, coloured paper and any other recycled materials you can find. This might include plastic, packaging, bottle caps, netting from fruit, and so much more.

Exit Questions

What did you learn today?

What is one thing about the Opera House that surprised you today?

What is one job that the Artificial Reef does to help our harbour?

Why is it important to care for our natural environment?

What is one thing you can do at home or school to help keep our environment healthy?

Key Learning Areas Curriculum Map – NSW Syllabus Outcomes

Stories from the Reef Workshop – Stage ES1 – 1

Creative Arts (Visual Arts)
Stage ES1 – 1

CAE-VIS-01

Experiments with and identifies ways materials and techniques are used to represent subject matter and ideas in artworks

CA1-VIS-01

Makes artworks using materials and techniques to represent subject matter and ideas, and describes ways artists convey ideas in artworks

Creative Arts (Music)
Stage ES1 – 1

CAE-MUS-01

Experiments with and identifies ways sound is organised in music through singing, moving, playing instruments and using listening skills

CA1-MUS-01

Performs, uses listening skills and composes to communicate ideas through sound, and describes ways musical ideas are conveyed

Creative Arts (Drama)
Stage ES1 – 1

CAE-DRA-01

Experiments with and identifies ways feelings, ideas, roles and situations are embodied and enacted in drama

CA1-DRA-01

Makes and performs drama to embody and enact characters, ideas and stories, and describes ways that drama communicates ideas

English
Stage ES1 – 1

ENE-OLC-01

Communicates effectively by using interpersonal conventions and language with familiar peers and adults

EN1-OLC-01

Communicates effectively by using interpersonal conventions and language to extend and elaborate ideas for social and learning interactions

Science and Technology
Stage ES1 – 1

STE-SCI-01

Identifies and describes characteristics of living things, properties of materials, and movement

STE-PQU-01

Poses questions based on observations to collect data

ST1-SCI-01

Measures and describes changes in living things, materials, movement, Earth and the sky

ST1-PQU-01

Poses questions based on observations and information to investigate cause and effect

Mathematics
Stage ES 1 – 1

MAE-2DS-01

Sorts, describes, names and makes two-dimensional shapes, including triangles, circles, squares and rectangles

MA1-3DS-01

Recognises, describes and represents familiar three-dimensional objects