



Khaled bin Sultan
Living Oceans
Foundation

STANDARDS

- **CCSS:** RST.9-10.2, 4, 5, 7, 8, 9, 10; RST.11-12.2, 4, 8, 10; SL.9-10.4; SL.11-12.4
- **NGSS:** HS-LS1-1
- **OLP:** 5.C.22

ONLINE CONTENTS

- [Coral Anatomy Quiz](#)
- [Coral Anatomy Interactive](#) (at bottom of *Coral Anatomy* section) Use the interactive program to learn and explore more about the anatomy of a stony coral polyp.
- [What Are Corals? Video](#) Corals are animals. An individual coral's body, called a polyp, is mostly stomach, with a mouth on top. Its mouth is ringed with tentacles - but these just aren't any tentacles, they're lined with stinging cells, some filled with venom (neurotoxins) that paralyze their prey.
- [Form Fits Function Video](#) Ever heard the phrase form fits function? It's when the shape of something is designed for the job it is supposed to do. When applied to sea creatures it means their body parts are a good match for their role in the animal's survival.

CORAL ANATOMY

This lesson is a part of the *Coral Anatomy* unit, which explains some of the characteristics and structures of corals, and how they function. Below is a summary of what is included in the entire unit.

UNIT CONTENTS

A. [Background Information](#)

- Coral Anatomy
- Form Fits Function

B. Lessons

[Watch it! What Are Corals?](#)

- A worksheet to accompany the [What Are Corals?](#) video

[Watch it! Form Fits Function](#)

- A worksheet to accompany the [Form Fits Function](#) video

[Interactive Coral Polyp](#)

- A worksheet to label the structures of a coral polyp and describe their function

[Fitting the Function](#)

- A crossword puzzle to match the coral structures to their function

[Coral Anatomy Quiz](#)

- A matching quiz to match the coral structures to their function

[Coral Polyp Eco-Art](#)

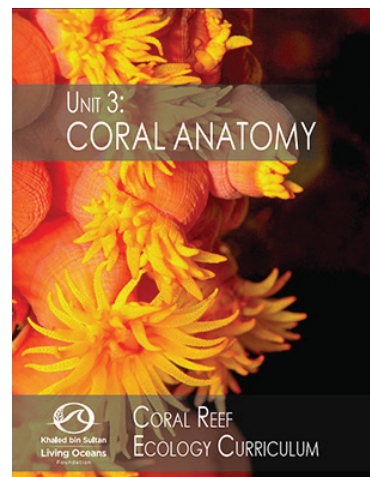
- An art project to design and build a coral polyp using recycled materials

[Form Fits Function](#)

- A lesson to design a poster of any plant or animal, labeling the parts and their functions

[Read it! Swimming Among Soft Corals](#)

- A worksheet to accompany the [Swimming Among Soft Corals of the Great Barrier Reef](#) field blog



LESSON 2

TEACHER'S NOTES

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LEARNING OBJECTIVES

- In your own words describe eco-art.
- Demonstrate understanding of coral polyp anatomy.
- Design and build a coral polyp using recyclable materials.

KEYWORDS

- Anatomy
- Basal Plate
- Corallite
- Eco-art
- Ectodermis
- Mouth
- Nematocyst
- Oral Disk
- Polyp
- Tentacles

MATERIALS

- Recyclable materials
- Scissors
- Glue, tape, and/or clay
- Sticky notes
- Watch It! What are Corals?** student worksheet
- Lesson 2: Coral Polyp Eco-art** student worksheet

INTEGRATING SUBJECTS

- Art

EXTENSION

- Complete *Unit 4: Coral Feeding Lesson 2: Round and Round*.

EVALUATION

- See *Grading Worksheet* for activity evaluation.

STANDARDS

- CCSS:** RST.9-10.4, 5, 7, 10; RST.11-12.4
- NGSS:** HS-LS1-1
- OLP:** 5.C.22

PROCEDURE

- Watch *What are Corals?* YouTube video (<https://youtu.be/Bn2xklJhte4>) and answer questions on **Watch It! What are Corals?** student worksheet.
- Teach *Background Information* section A) *Coral Anatomy*.
- Provide students with **Lesson 2: Coral Polyp Eco-art** worksheet and grading rubric.
- Review *Additional Background Information* on the student worksheet.
- Discuss the importance of recycling.
- Discuss different types of eco-art. Give examples.
- Go over the procedure located on the student worksheet.
- Review the *Grading Worksheet* with students.
- After completing the activity, you may want to have students recycle their art work. Students can learn how to sort different types of recyclables.

LESSON 2

CORAL POLYP ECO-ART

OBJECTIVES:

- In your own words describe eco-art.
- Demonstrate understanding of coral polyp anatomy.
- Design and build a coral polyp using recyclable materials.

MATERIALS:

- Recyclable materials
- Scissors
- Sticky notes

ADDITIONAL BACKGROUND INFORMATION:

What is eco-art? **Eco-art** stands for ecological art. There is no one definition for eco-art. Generally, it's artwork that expresses conservation and education about the environment and helps propose new ways of people co-existing with nature. It can also reveal the environmental problems that we face. Artists use a large range of materials such as found, discarded, recycled, and natural materials.

INSTRUCTIONS:

You just learned about the structures and functions of a coral polyp. This activity will allow you to design and build your own coral polyp out of recyclable materials. Here are the rules:

- You may only construct your coral polyp out of recycled materials. Recyclable materials can include: metal, plastic, glass, paper, cardboard, and Styrofoam.
- You may use glue, tape, clay, or other non-recyclable materials to hold the structures of the coral polyp together.
- You must use a different type of material for each structure.
- Lastly, label the different structures of your coral polyp using sticky notes.

Before you get started, see *Grading Worksheet* for specifications.

Here are the structures that you need to include in your eco-art project:

- Basal plate
- Corallite
- Ectodermis
- Mouth
- Nematocysts
- Oral disk
- Tentacles

Now it's time to get creative and build a coral polyp!

GRADING WORKSHEET:

Name: _____ Date: _____ Score: _____

1. Student included each of the following structures (1 point each):

- Basal Plate _____
- Corallite _____
- Ectodermis _____
- Mouth _____
- Nematocysts _____
- Oral Disk _____
- Tentacles _____

2. Student correctly labeled each of the following structures (1 point each):

- Basal Plate _____
- Corallite _____
- Ectodermis _____
- Mouth _____
- Nematocysts _____
- Oral Disk _____
- Tentacles _____

CATEGORY	4	3	2	1	SCORE
Use of materials	Uses different materials for each structure.	Uses 5-6 different materials for structures.	Uses 3-4 different materials for structures.	Uses 1-2 different materials for structures.	

TOTAL _____/18