

## LESSON PLAN

# CORAL REEFS: EXPLORE HIDDEN DEPTHS LIKE ARTIST COURTNEY MATTISON

Suggested Levels: Grades 7th-12th

Designer: Sally Meixner and Bailie Benson



*In this lesson, you will use clay and simple tools to create your own miniature reef in the style of artist Courtney Mattison.*

*Courtney Mattison is a world-renowned artist who uses a unique blend of science and art to explore the beauty of the ocean while raising awareness about the dangers of climate change. Born in 1985, Mattison earned college degrees in both art and environmental science, allowing her artistic expression to be grounded in a deep understanding of the forces of nature.*

*Mattison's work is rich and expertly detailed, featuring diverse forms of marine life and heart-breaking scenes of coral bleaching, a destructive event happening to reef due to climate change. While many people may never see a coral reef in their life, Mattison's exquisite work puts it front and center, bringing an exotic, undersea world into the heart and minds of people everywhere.*

*Her art has been installed in settings around the world, including government buildings and world-famous museums, highlighting the beauty that abounds on our blue planet, if only we have the strength to save it.*

## OBJECTIVES

**I CAN...** recognize a coral reef.

**I CAN...** organize lines and shapes to create textures and patterns in clay.

**I CAN...** follow directions and suggestions to create a coral reef trinket dish.

## NATIONAL VISUAL ART STANDARDS

### Generate and conceptualize artistic ideas and work.

- Brainstorm and evaluate how artists shape society's beliefs, values, and behaviors, considering how their work, like a ceramic coral reef, can inspire change.

### Refine and complete artistic work.

- Guide students in refining their ceramic coral reef sculptures by experimenting with techniques, materials, and details to enhance the accuracy and expression of marine life. Encourage them to reflect on how these refinements can better communicate the message of environmental conservation.

### Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.

- Evaluate how artists or art collectives influence the way people think, what they value, and how they act within a society. For instance, explore how artists raising awareness of environmental issues through their work, such as a ceramic coral reef, can inspire positive change toward ocean conservation and the protection of marine life.

## MEET THE MASTER

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### Courtney Mattison

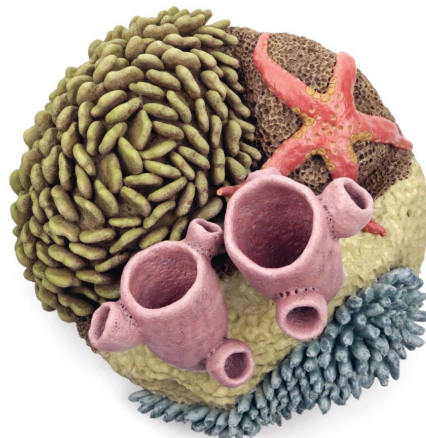
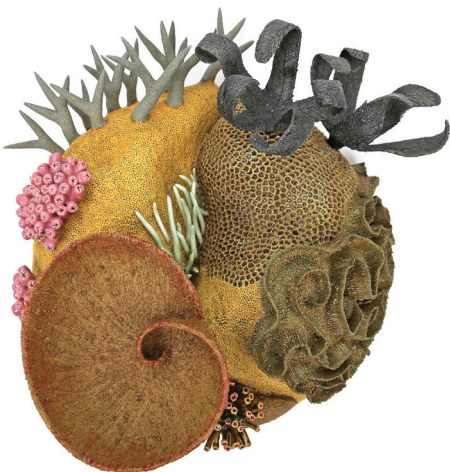
1984

Internationally recognized artist and ocean advocate Courtney Mattison hand-crafts intricate and large-scale ceramic sculptural works that visualize climate change through the fragile beauty of marine life. Her background in ocean conservation science and policy informs her art practice. Mattison's site-specific work has been

commissioned for permanent installation in hospitality, institutional, workplace, retail and residential settings across the U.S., Europe and Asia, including the U.S. Embassy in Indonesia and The Seabird Resort in Oceanside, California. Her exhibition history includes solo shows at the Virginia Museum of Contemporary Art, the New Bedford Whaling Museum, and ICA San Diego/North, where she was Artist in Residence. In 2020, the United Nations Postal Administration published Mattison's work on a stamp to commemorate Earth Day.

[READ MORE](#)

*"I want to bring the beauty of coral reefs above the ocean's surface and make people fall in love." — Courtney Mattison*



# SUPPLY LIST

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## CLAY

- 5 lbs of claybody of choice

## BRUSHES & TOOLS

- [Assorted glaze brushes](#)
- Needle tool
- Wooden modeling tool
- Clay cutter
- Various carving tools
- [AC219 Writer Bottle](#) or squeeze bottle with tip

## COLORS BY MAYCO

This lesson plan features Mayco's [Jungle Gems™ Crystal Glazes](#). Jungle Gems™ glazes transform in the kiln when small pieces of glass frit burst into color and intricate patterns during the firing process. Jungle Gems™ are a great way to add color and depth to pieces. Though a traditionally low-fire glaze, Jungle Gems™ in fact have a wide firing range, spanning from cone 06-10.

[See Jungle Gems™ fired to cone 6.](#)

The pieces showcased in this lesson plan uses Peach Party (CG1003), Purple Reign (CG1006), Blueberry Bubblegum (CG1007), and Cherry Limeade (CG1009), Day Lily (CG1002), Berry Tart (CG1004), Maroon Lagoon (CG1005), and Blue Guppy (CG1008).

## MISCELLANEOUS

- Sponge
- Rib
- Rolling pin
- Toothpick
- Pencil
- Empty bowl to form shell
- Palette



## ACTIVITY

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1. Get inspired! Start by sharing some images of coral reefs to get your imagination going. Point out the details, textures, and vibrant colors in the pictures and brainstorm diverse ways to create that effect in clay.
2. Watch videos starring Courtney Mattison to learn about coral from the artist herself.

**BLUE HABITATS**

**COURTNEY MATTISON'S  
CLASSROOM  
PRESENTATION**

**ARTIST AND OCEAN  
ADVOCATE**

3. Start by working with the clay to create a slab. Then, create a dish from your slab by draping a plate, or just by pinching the edges.
4. Next, it's time to create your own corals. Roll your clay into coils — they can be long and spiky, flat, or rounded. Anything goes! You can have fun with this part and get as creative as possible. Make as many corals as you need to build your reef (there is no limit!).
5. Use clay tools to add texture and create patterns. Think dots, holes, lines, or any shape that stands out.
6. Glazing with Mayco's [Jungle Gems™ Crystal Glazes](#) will bring your coral reef to life. Try using colors opposite on the color wheel for sharp contrast and add areas of [Stroke & Coat®](#) for added texture contrast.

### **FUN FACTS:**

- *While many people think corals are plants, they are actually animals! Unlike plants, corals can't make their own food.*
- *Over 50% of the world's coral reefs have died in the last 30 years. Sadly, very few pristine coral reefs currently remain.*
- *Scientists are racing to save coral reefs by creating heat-tolerant coral that can withstand the higher temperatures of the oceans as the world gets hotter.*

# DIRECTIONS - CLAY BUILDING PROCESS

## Method 1 - Low Fire

1. Roll out a slab of clay for the base and compress both sides with a rib or plastic card.



2. Cut a random shape from the slab to use as the base and create sand texture by poking the bristles of a stiff brush into the clay. Stack and attach offcuts to give the slab base some dimension.



3. Roll out a smaller slab and manipulate into a shell shaped shallow bowl. Roll and flatten two small balls of clay and attach flattened balls of clay to the top of the shell bowl. Roll out five coils about the diameter of a pointer finger and length of 6" and cut in half. Attach halves of coils to the back of the shell shape and smooth. Cut off excess coil length. Drape the shell over the empty bowl to create more depth.



## DIRECTIONS - CLAY BUILDING PROCESS CONTINUED

4. Gently roll up the pieces of cut coil into a ball to mimic the look of brain coral. Use the brain coil corals to help prop up the shell bowl onto the base.



5. Scratch and attach the coral balls, shell, and base all together.
6. Use the back end of a tool to add some rounded detail to the shell edges. Use a fingertip to smooth the inside of the shell bowl.



7. Roll out thick coil bits and attach them to create tall coral pieces. Score and slip the base. Create texture by poking a toothpick end all over the coral.



8. Create small pinch pots in various sizes for the cup coral. Use the back end of a pencil or tool to help create the small cups and texturize the lip of the cups with toothpick cuts and indents on the sides with the back of a brush.



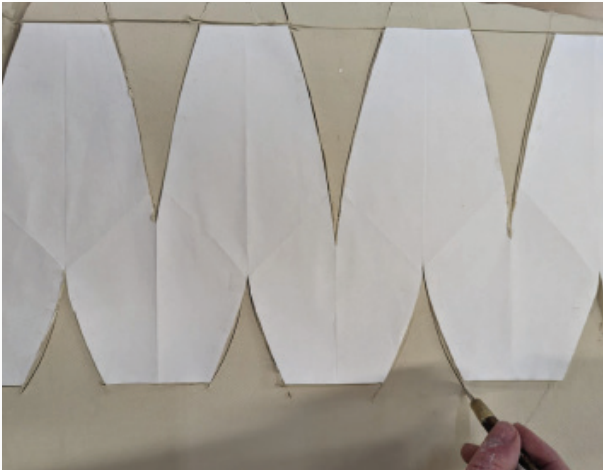
9. Create ball coral by rolling a variety of small balls of clay and use a sharpened pencil tip and poke to create deep divots. Score, slip, and attach to the base of the shell.
10. Allow clay to fully dry and bisque fire to cone 04.



# DIRECTIONS - CLAY BUILDING PROCESS CONTINUED

## Method 2 - Midrange

1. Create a paper "W" template and cut it from a compressed ¼" slab. Assemble the form by slipping and scoring along beveled edges. Weld seams.



2. With a damp sponge, gently push the seams outward. Pinch and manipulate the protruding seams into undulating waves.



3. Roll coils and pinch them against the table surface to create flat edges. Score along flat edges and attach. Weld seams.



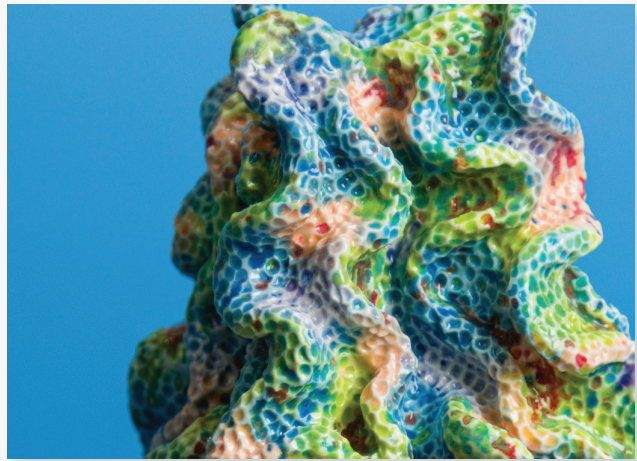
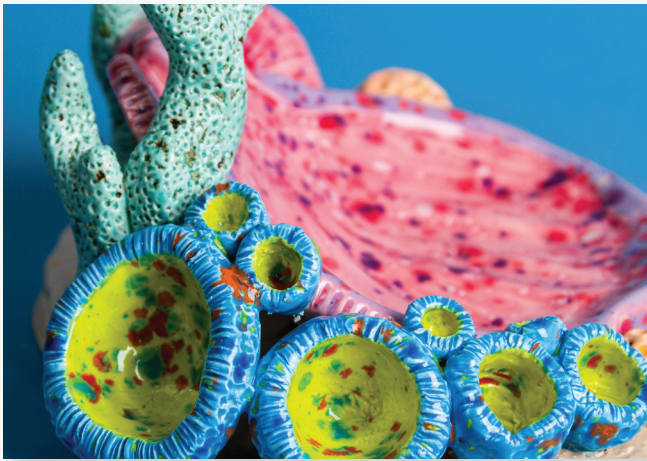
4. Set the piece on top of a slab to mark the floor. Cut the floor shape and attach it using the slip and score method. Compress the underside with a rib to prevent cracking and weld the seam upward.



5. Smooth and compress the surface. In crevasses where a damp sponge won't fit, use a brush. Stipple a dimpled texture into the clay using the back of a brush. When covering a large surface area, it may be more comfortable to tape sponges to the handle for an easier grip.
6. Allow to dry thoroughly and fire to cone 04.



## DIRECTIONS - DECORATING PROCESS



This lesson plan features Mayco's [Jungle Gems™ Crystal Glazes](#). Jungle Gems™ are a great way to add color and depth to pieces. Though a traditionally low-fire glaze, Jungle Gems™ in fact have a wide firing range, spanning from cone 06-10.

### Method 1:



1. Use soft glaze brushes to apply Jungle Gem colors to each area of the clay creation. Jungle Gems contain frit crystals that melt during firing and give bursts of color. In areas where you want solid color like sand, Stroke & Coat is a great option. Many Jungle Gem and Stroke & Coat colors have wide firing ranges from cone 04 to cone 10. Check labels for any color changes at higher temperatures
2. Stilt and fire to cone 06.

#### TIPS:

- For more advanced students, encourage the use of photo references and challenge them to get as close to the realistic textures as possible using found objects.
- For younger students, encourage organic shapes and found object textures. Using Playdough extruders may create easy coral shape options.



## DIRECTIONS - DECORATING PROCESS CONTINUED

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### Method 2:



1. Select a handful of Jungle Gem crystal glazes and loosely apply them in patches until the surface is covered, allowing the patches to overlap. Wipe the underside and bottom ¼" clean, and fire to cone 6 unstilted.

#### TIPS:

- A deep texture is helpful in controlling the flow of glaze.
- Patches of glaze should be more thickly applied towards the top of the piece where there is room to melt and flow. Use lighter application towards the bottom and brush away crystal chunks from the lowest ¾".
- Jungle Gems will produce additional movement at higher temperatures (cone 6), and colors may change slightly compared to low-fire (cone 06).

## EXTEND THE LEARNING *using Gardner's Multiple Intelligences Theory*

### LINGUISTIC (Word Smart)

Organize Debates and Discussions on topics related to coral reefs, such as the ethics of marine conservation, the impact of tourism, or policies to protect reef environments. This helps students articulate their ideas and engage in critical thinking.

Have students create a glossary of terms related to coral reefs, including scientific names, ecological terms, and conservation jargon. They can define these terms in their own words and use them in context.

### SPATIAL (Picture Smart)

Make a sketchbook page or flashcards that will help students learn about amazing sea creatures. Draw and learn about Angelfish, Blue Tang, Crawfish, Starfish, and many more. Add cool facts about coral reefs and what makes these underwater neighborhoods so special.

Create a picture library of healthy coral reef animals.

Sketch a before and after picture of the effects of coral bleaching.

### INTERPERSONAL (People Smart)

Organize group projects where students collaborate to research and present on various aspects of coral reefs, such as conservation strategies or the impact on human activity. This encourages teamwork and communication.

Involve students in creating awareness campaigns or educational materials for local communities about coral reef conservation. They can work together to design posters, flyers, or social media content.

### BODY KINESTHETIC (Body Smart)

Have a Sea Creature Freeze Dance where you will play some music and have students dance like different sea creatures. When the music stops, call out a sea creature name, and kids must freeze in a pose that represents that creature.

Have a Coral Reef Relay Race where each leg of the race represents a different sea creature or reef element. For instance, students could hop like a starfish, crawl like a crab or sprint like a fast fish.

### NATURALIST (Nature Smart)

Get involved in a Coral Reef Conservation Campaign. Have students research and present on the importance of protecting coral reefs and the threats they face. They can create posters, write letters, or develop a simple campaign to raise awareness.

Take a Coral Reef Nature Walk by visiting a local aquarium or pet store to observe coral reefs and saltwater fish or sea creatures. If a visit isn't possible, use virtual tours or videos to explore coral reefs. Encourage students to take notes or draw what they see.

### LOGICAL/ MATHEMATICAL (Word Smart)

Students can create graphs to represent different variables related to coral reefs, such as population sizes of key species, levels of pollutants, or changes in coral cover over time. Analyzing these graphs helps in understanding trends and correlations.

Provide students with datasets related to coral reef health, such as species counts, temperature variations, or pollution levels. Students can analyze these datasets using statistical methods to identify trends and patterns.

### INTRAPERSONAL (Self Smart)

Have students create a Personal Coral Reef Conservation Plan outlining how they will contribute to protecting coral reefs. They can set realistic goals, like reducing plastic use or spreading awareness, and reflect on why these actions are important to them.

Ask students to create a Personal Coral Reef Playlist of songs they feel connect with the coral reef theme or evoke the feelings they have about the ocean. They can share their playlist and explain why they chose each song.

### MUSIC (Music Smart)

Work with the kids to create a simple song or rap about coral reefs and their inhabitants to create Coral Reef Song Creations. Use familiar tunes or create an original melody. Incorporate facts about different sea creatures, their habitats, and conservation efforts into the lyrics.

Play recordings of ocean sounds or create your own Coral Reef Soundscape using instruments and household items. Have the kids listen and then discuss what sea creatures or coral reef elements they imagine based on the sounds.

# RUBRIC

	<b>RIGHT ON!</b>	<b>GETS THE POINT</b>	<b>NEEDS SOME UMPH</b>	<b>BARELY HANGING ON</b>
<b>CRAFTSMANSHIP &amp; CONSISTENCY</b>	The surface is appropriately textured and ready for glaze.	The surface is prepared well but there is a slight lack of neatness in some areas.	There are many areas of poor technique, and the surface is not prepared well for glaze.	Minimal effort or concern with craftsmanship.
<b>CREATIVITY &amp; ORIGINALITY</b>	Demonstrates creative and unique approach to design.	Somewhat creative and some uniqueness to design.	Lacking creativity but trying.	Complete lack of uniqueness, obvious use of others' ideas.
<b>PROJECT REQUIREMENTS</b> (Wall thickness, slip & score, smooth)	All Requirements met and exceeded expectations!	Requirements met.	Few project requirements met.	No evidence of any project requirements being met.
<b>COOPERATION &amp; COLLABORATION</b>	The student worked toward goals. Performed a variety of roles in class.	The student somewhat worked toward goals. Some input in class oriented work.	Student allow others to do most of the work only taking part in some ways.	Student made no effort to be cooperative or collaborative in the classroom
<b>SKILL GROWTH</b>	Obvious growth is taking place.	Student has shown some growth.	Shows no growth from previous projects but trying.	Shows no growth.

<b>FINAL GRADE</b>	<b>COMMENTS</b>
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	_____
	_____
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