

LESSON PLAN

RADIANT REEFS: A CERAMIC STUDY IN FORM AND LIGHT

Suggested Levels: High School-Advanced

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In this project, students will create ceramic fish lanterns inspired by ocean life and global lantern traditions. Using slab-building and piercing techniques, they will construct hollow forms designed to emit light. Students will explore how texture, glaze, and form affect the glow of their sculpture, while also considering personal or symbolic meaning in their design. The finished lanterns will combine artistic expression with functional lighting, celebrating the beauty and mystery of the sea.

OBJECTIVES

I CAN... design and build a ceramic lantern inspired by ocean life that shows how light can be used for both visual effect and symbolic meaning.

I CAN... use clay building techniques like slab construction and piercing to create a hollow form that safely and beautifully holds light.

I CAN... choose glazes and surface textures that enhance how light shines through or reflects off my ceramic lantern.

NATIONAL VISUAL ART STANDARDS

Generate and conceptualize artistic ideas and work.

- Students brainstorm and sketch original fish lantern designs inspired by marine life and lantern-making traditions, considering both symbolic meaning and visual impact.

Organize and develop artistic ideas and work.

- Students plan and construct their ceramic forms using slab-building and piercing techniques, making intentional design choices to enhance how light moves through and interacts with the sculpture.

Refine and complete artistic work.

- Students participate in peer feedback and revise their work, refining details such as texture, glaze, and light openings to improve the visual and symbolic effectiveness of their lantern.

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

- Students explore lantern traditions from various cultures and reflect on the symbolic roles of light in visual storytelling, using this knowledge to inform the meaning behind their final artwork.

SUPPLY LIST

CLAY

- Clay body of choice

BRUSHES & TOOLS

- Soft fan brush
- Script liner
- Detail liner
- Loop tools
- Needle tools
- Ribs

COLORS BY MAYCO

A combination of Mayco Colors glazes will be used on this project, including Stroke & Coat, Jungle Gems, and Stoneware glazes.

Stroke & Coat provides bold, consistent color—even on textured or pierced surfaces.

Jungle Gems add dimension and surprise, mimicking fish scales or sea textures.

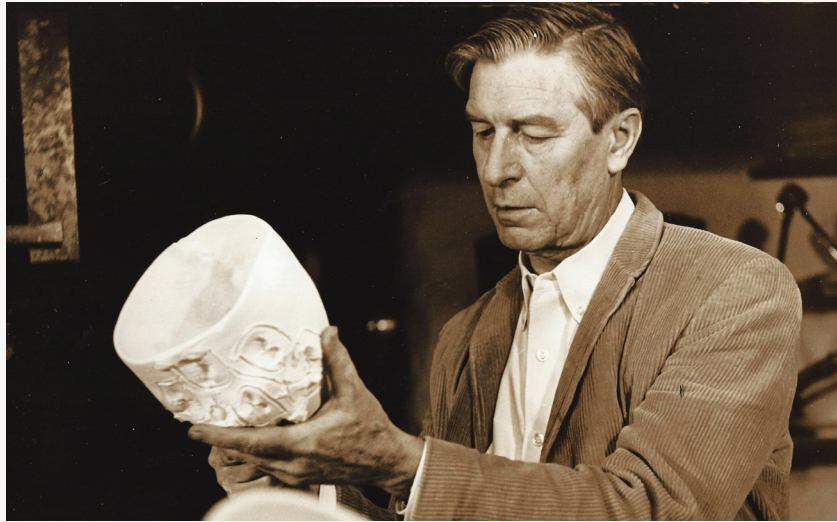
Stoneware Glazes offer unique finishes at mid-range to high fire temperatures.

Used together, these glazes allow students to explore layering, texture, and light interaction, turning each lantern into a glowing, expressive work of art.

MISCELLANEOUS

- Wine bottle
- Paper towel
- Rolling pin
- Plastic card
- Needle tool/toothpick
- Bowl of water
- LED lights for display

MEET THE MASTER



Rudolf Staffel

1911-2002

was an American ceramic artist known for his glowing porcelain vessels called Light Gatherers. Originally trained as a painter, he became fascinated with how porcelain could transmit light. His delicate, often translucent forms explore

the balance of light and shadow, opacity and glow. Staffel described himself as a “painter in clay,” using his vessels to sculpt light itself. He taught for decades at the Tyler School of Art, and his work is featured in major museums including the Smithsonian.

“Even when I was a painter, I was always interested in light. Something about light coming through glass, wax, or snow. I wanted to achieve a passage of light.”

This quote highlights Staffel’s lifelong fascination with capturing and shaping light through his ceramics—exactly what students are exploring through lantern-making.

“You are not aware of push until you see pull, you are not aware of dark until you see light. . . . To be aware of translucency you must have opaqueness.” — Rudolf Staffel



A SHORT HISTORY OF THE LANTERN

“Lantern” comes from the Latin word *Lanterna*, meaning lamp or torch, to protect and carry light. The existence of lanterns traces back to 1500 B.C. in the days of King David and the Iron Age, where Canaanite Oil Lamps were used for nearly a thousand years. Other early lanterns were made from metal, horn, or paper.

In China, lanterns became part of celebrations like the Lantern Festival, symbolizing hope and guidance. In Japan, lanterns lit temples and gardens, representing peace and spirituality. In Europe, they were used daily before electricity, lighting homes and streets.

Today, lanterns are both functional and symbolic—used in art, culture, and festivals to represent light, memory, and transformation.

Things to consider when trying to create a uniquely personal sculpture with your class:

This is a fantastic project for high school ceramics! A project that combines fish, light, and symbolism can allow students to explore both artistic techniques and deeper cultural meaning.

- *The combination of fish and lanterns or light can evoke or call up various meaning, depending on the artist’s interpretation.*

Symbolism in different cultures (e.g., the meaning of the koi fish in Japan, the role of lanterns in the Chinese Lantern Festival, and fish as symbols of prosperity in other parts of Asia)

- *Fish: in many cultures, fish symbolize abundance, fertility, or transformation. Fish can also be seen as connection to water, freedom and the fluidity of life.*
- *Lanterns or Light: Lanterns often symbolize guidance, hope or enlightenment. Light in general can represent clarity, life, or the warmth of human connection.*

When combining fish and lanterns, the symbolism can blend the meaning of transformation, hope, and guidance.

Ideas for customization:

- *Fish themes, cultural connections, or functional vs. decorative*
- *Fish Variations*
- *Non-Fish Aquatic Creatures (seahorse, turtles, jellyfish waterlilies or Lotus Flower)*

Incorporating other Natural Elements:

- *Water*
- *Underwater Plants*
- *Lighting Techniques*
- *Consider making flowing water marks on the fish to imply movement.*

Functional Lantern:

- *Lid or Top*
- *Wall mountable lantern*

Multiple fish or abstract Fish Forms could also be explored.

ACTIVITY

1. Research and Inspiration

- **Symbolism:** Start by discussing the symbolism behind fish and light. Share the cultural meanings behind koi fish (perseverance, transformation) and lanterns (guidance, hope, enlightenment).
- Investigate marine life and lantern making traditions for example how is light used for symbolic meaning.
- **Visual References:** Show examples of fish lanterns from various festivals like Chinese lantern festival or Japanese Obon Festival. You can also present works of ceramics artists like Rudolf Staffel, or others who use organic or fluid forms.

2. Design Sketching

- **Fish Shape and Form:** Have students sketch their fish or aquatic creature sculptures. They can either focus on a realistic fish, like a koi or carp or more abstract, organic interpretations of water creatures.
- Encourage students to think about the flow of the fish's body-curved or angular lines that suggest motion.
- **Lighting considerations:** sketch where the light opening (carved sections) will go.
- Consider adding textures or patterns (scales, fins, waves) to enhance the appearance and depth of the light coming through.

3. Sculpting the Aquatic Shape

- Students begin by shaping their fish or aquatic creations using the coil or slab method depending on their design. They should aim for a hollow interior so that light can be placed inside.
- Use the scoring and slipping technique to add details or body parts to the basic shape.
- Carving the openings for light after the basic form is sculpted, students can begin carving openings in the fish shape. These can be scale patterns, fin or tail and flowing water patterns.

4. Allow the Sculptures to Dry

5. Bisque Fire

6. Glaze

7. Final Fire

8. Final Touches

- Inserting the light.

DIRECTIONS - CLAY BUILDING PROCESS

Method 1 - Low Fire

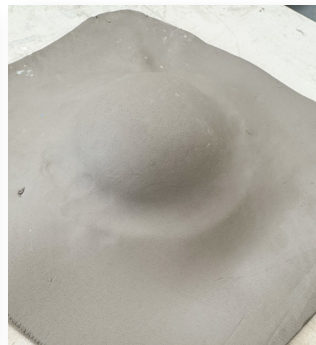


1. Roll out two slabs of clay, about $\frac{1}{4}$ – $\frac{1}{2}$ inch thick. Use a rib to compress and smooth the surface.

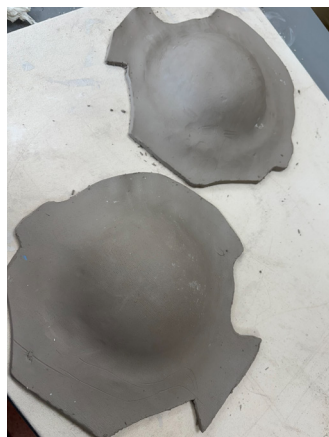
2. Choose a hump mold or bowl to shape the fish body. Drape one slab

over the mold, using plastic wrap or cornstarch to prevent sticking. Repeat for the second side.

3. Gently press the clay onto the mold using fingers or a damp sponge. Leave it on the mold until it's firm enough (leather hard) to hold its shape. Carefully remove and begin aligning both sides.



4. Lightly sketch your fish or sea creature onto each slab. Make sure one side is the reverse of the other. When you're satisfied, cut out both shapes.



5. Score the edges where the two sides will connect. Apply slip to both surfaces, then press them together. Cut a football-shaped opening at the bottom—this will act as the base. Ensure it's wide enough for stability.

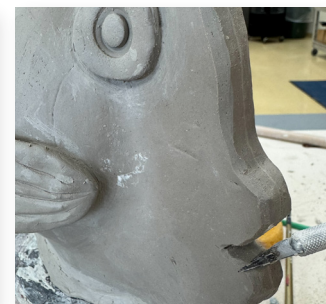
6. Once the fish stands upright, trim and clean up the edges with a tool or sponge.



7. Use hole cutters or a carving tool to create openings in the body for light to shine through.



If your base is fully closed, make one of the openings large enough to insert a light source.



8. Use the score and slip method to attach fins, eyes, gills, or textured elements.

9. Allow form to fully dry and bisque fire to cone 04.



DIRECTIONS - CLAY BUILDING PROCESS

Method 2 - Midrange



1. Begin by rolling out a slab of clay with a rolling pin that is long enough to wrap around a wine bottle. Compress the slab front and back with a plastic card or rib.

2. Loosely wrap an empty wine bottle with a piece of paper towel. Roll the wine bottle up in the slab of clay. Scratch and attach where the edges of the slab meet each other around the bottle. Cut off any excess slab from the base of the bottle and the side where the seams attach. Using the excess of the slab, or a smaller new slab, set the rolled up wine bottle on its end and sketch out a circle of clay from that new slab to scratch and attach as the enclosed base. The new slab "base" should be organic in form to mimic the ocean floor.



3. Roll a new slab and cut out organically shaped "ribbons" of clay that taper at one end to become the seaweed. Layer the seaweed shapes on the side of the bottle, scratching and attaching them with a toothpick and water as you go.



4. Slowly pull the wine bottle out from the rolled-up slab and remove the paper towel.
5. With the needle tool, cut out any of the excess pieces of the side of the luminary that aren't seaweed.
6. Create little fish by rolling and partially smooching a small ball of clay. Pinch one side to a point to form a teardrop shape. Cut two angled slices to form the separation of the top and bottom fins, and one slice straight in the back for the back fin. Pinch to shape the fins and add details with the toothpick. Scratch and attach to the main luminary.

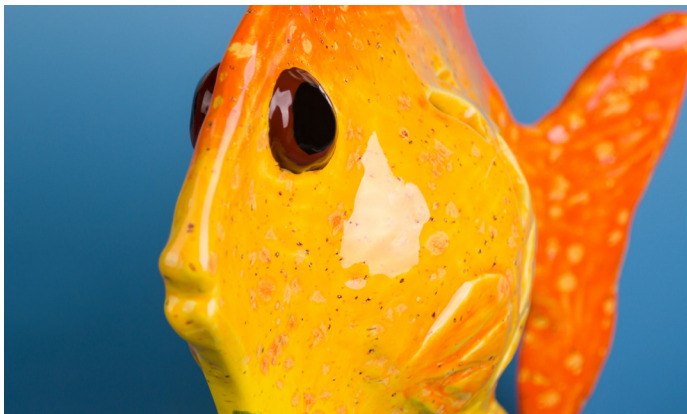


7. Create other various corals to add to the base of the luminary using basic techniques like coils, balls, and slab cutouts. Add texture to the coral with toothpicks, brushes, etc.
8. Allow form to fully dry and bisque fire to cone 04.

DIRECTIONS - DECORATING PROCESS



This project features a combination of Mayco glazes, including Stroke & Coat, Jungle Gems, and Stoneware colors. Stroke & Coat and Jungle Gems can be used from cone 06 to cone 10, while Stoneware colors can only be used at cone 5 and up.



ACCOMMODATIONS

Here are several accommodations to support diverse learners:

1. Modified Materials

- Provide pre-formed clay pieces or larger clay slabs for students who may have difficulty with detailed hand-building techniques. This reduces the amount of sculpting required and allows them to focus more on decoration and design.
- Offer textured tools or stamps to help students add intricate details without requiring fine motor control.

2. Step-by-Step Guidance

- Provide visual aids or a video demonstrating the techniques, especially for students who benefit from visual learning. Break down the hand-building process into clear, manageable steps with demonstrations at each stage.
- Use written or visual instructions alongside verbal explanations to reinforce concepts for students with hearing or language challenges.

3. Extra Time

- Allow additional time for students who need it, whether for sculpting or glazing. This can help reduce stress and give them a chance to experiment and perfect their work.

- Schedule one-on-one check-ins with students who may need additional support during the process.

4. Peer Support

- Pair students who need more assistance with peers who can provide guidance and support during the sculpting and glazing process. Peer tutoring helps reinforce learning and provides social interaction.
- Set up a buddy system for shared materials, where more experienced students can help with glazes or cleanup tools.

5. Simplified Expectations

- For students who may feel overwhelmed by the scale or complexity of the project, offer an option to create a smaller, simplified version of the fish lantern sculpture or focus more on design and painting, rather than sculpting the entire form.
- Provide flexible deadlines or modified grading criteria, ensuring that all students can successfully complete the project at their own pace while still engaging in the creative process.

By offering these accommodations, the lesson becomes more inclusive and accessible for students with different learning needs, helping them all succeed and engage creatively with the project.

TEACHER TIPS:

- Provide assorted size bowls or hump/slump molds that can be draped with clay to create the fish body.
- Use cornstarch to dust bowl to prevent the clay from sticking.
- Have students test a few glaze combinations on sample tiles first, then apply what they learn to enhance texture, symbolism, or glow on their fish lanterns. This adds a mini glaze science experiment to the art-making process!

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

LINGUISTIC (Word Smart)

Students compile a mini-glossary of 10–12 key ceramics and light-theory terms (e.g., “translucency,” “piercing,” “bioluminescence,” “opacity,” “kiln,” “glaze”), writing definitions in their own words and illustrating each with a thumbnail sketch.

In small groups, students gather around a darkened display of glowing lanterns and compose a collaborative free-verse poem inspired by the shapes, shadows, and moods of the sculptures. They perform their poem aloud for the class.

SPATIAL (Picture Smart)

Using flashlights or small LEDs, students test how light interacts with various cutout shapes, textures, and glaze finishes on a sample clay tile. They sketch how light is cast or diffused.

Students draw a “map” of their lantern and color it to show where different glazes will be applied. They consider how glaze flows, color transitions, and contrast will enhance their 3D form.

INTERPERSONAL (People Smart)

Students present their lanterns in small groups and give structured feedback using the “Two Stars and a Wish” format: two positive observations and one suggestion for improvement.

Students display their lanterns and rotate through the classroom gallery in pairs or trios using “conversation cards” (e.g., “What message do you think this artist wanted to share?” or “What catches your eye?”).

BODY KINESTHETIC (Body Smart)

After lanterns are completed, students participate in a simple movement activity where they gently walk or move around a darkened room while holding or placing their glowing lanterns. Observe how shadows shift and interact.

Begin class with a short “movement-to-form” warm-up: students mimic the swimming motion of fish, rippling water, or glowing tentacles with their arms and hands, then transfer those gestures into clay through coiling, carving, or shaping.

NATURALIST (Nature Smart)

Students choose a real ocean creature (e.g., lanternfish, anglerfish, jellyfish) to study, then sketch or adapt its anatomy, textures, and light-emitting traits into their ceramic lantern design.

After completing their lantern, students create a collaborative hanging mobile illustrating the marine food web. Each fish lantern is linked to a role in the ocean ecosystem.

LOGICAL/ MATHEMATICAL (Word Smart)

Students plan symmetrical designs, patterns, or textures on their fish lanterns using grid paper or radial symmetry templates before applying them to clay.

Students create glaze test tiles using measured ratios of different glazes (e.g., 3:1, 2:2, 1:3 Stroke & Coat to Crystal Gems) and observe the visual outcomes after firing.

INTRAPERSONAL (Self Smart)

Students write a short journal entry exploring what light means to them—hope, guidance, transformation, memory—and how they tried to reflect that symbolism in their lantern.

Students write a short positive affirmation or message of encouragement to “light the way” for someone else and tuck it inside or beneath their lantern for display.

MUSIC (Music Smart)

Students listen to underwater or ocean-themed soundscapes, then create their own short audio track (using instruments, body percussion, or digital apps) to accompany their lantern's display.

Using patterns on their lanterns as inspiration, students create rhythmic sequences by translating visual elements into beats (e.g., “dot-dot-line” becomes “ta-ta-ti-ti”). Perform as a group using percussion instruments or clapping.

RUBRIC

	EXCELLENT (4 PTS)	PROFICIENT (3 PTS)	DEVELOPING (2 PTS)	BEGINNING (1 PT)
DESIGN & CREATIVITY	Unique concept with thoughtful use of light and form	Clear design with some originality	Basic concept, lacks originality	Incomplete or copied work
CRAFTSMANSHIP	Well-constructed, no cracks or weak joints	Mostly well-built with minor flaws	Fragile or uneven construction	Poor construction; not functional
USE OF GLAZE	Skillful use of color, pattern, and clean application	Good color choice, some glaze issues	Uneven or muddy glaze use	Poor application or unfinished
FUNCTIONALITY AS LANTERN	Effective light openings, stable structure	Openings present and mostly functional	Some light passes through, but not fully functional	Lantern fails to emit light or is unstable
EFFORT & PARTICIPATION	Exceeds expectations, excellent use of time	Good effort and focus during work time	Inconsistent effort	Minimal effort or off-task behavior

Total Score: _____/20

PERFORMANCE LEVELS
18-20 POINTS (OUTSTANDING): FULLY MEETS OR EXCEEDS EXPECTATIONS
14-17 POINTS (SUCCESSFUL): MEETS MOST EXPECTATIONS WITH MINOR AREAS FOR GROWTH
10-13 POINTS (DEVELOPING): BASIC ACHIEVEMENT, NEEDS IMPROVEMENT
5-9 POINTS (BEGINNING): MAJOR REVISIONS OR RETEACHING RECOMMENDED