Building a Home with Living Seawalls

Background

Almost 40% of the world's population lives near the coast. We share this space with many different plants and animals who live along the shoreline. But the vertical seawalls that protect Boston's coast and buildings aren't a very good place for our marine neighbors.

Scientists have invented 3D tiles to turn flat, boring seawalls into Living Seawalls with lots of habitat for wildlife! These tiles have grooves for little plants and animals to live. Here, you get to build your own living seawall tile and make it a nice home for a seastar or a crab!

Supplies

- Paper plate
- Paper cutouts: crabs and/or seastars
- Sticky pom-poms
- Pipe cleaners
- Foam sheets
- Construction paper
- Glue and/or tape
- Other craft supplies you'd like to use!

Guiding Questions

- What makes a good home for a crab? For a seastar? Do they need different things?
- Are there other types of plants and animals that you think would like your living seawall?
- Why do you think the grooves help animals live on the seawall? Does the texture have any other benefits?

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Instructions

- Grab a paper plate and select your sea creature of choice.
- Grab your craft supplies, like the pom-poms, pipe cleaners, and foam sheets you want to use.
- Build a home for your sea creature of choice! You can stack things, cut them up, stick them to the plate, color them, and more!
- Get creative with the living seawall tile! Try out different designs and see what works best! Think about what the materials you're using could represent.
- Once you've finished, share your design with friends and family! If there's more than one, stick them on a wall together to create your own living seawall!

Resources

- Living Seawalls main website: https://www.livingseawalls.com.au

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Frequently Asked Questions

What are nature-based approaches??

- One of the many ways that we can protect our coastlines is through nature-based solutions. These approaches use both human and natural strategies to protect, enhance, or restore communities to benefit all.

What are some examples of nature-based approaches??

- Nature-based approaches focus on using nature to restore social-ecological systems. One great example is the restoration of salt marshes. Salt marshes are the grassy floodplains of the ocean—they are great at holding sediment together and absorbing water.

Do each of the materials in this activity represent a nature-based approach?

- The Living Seawalls project is an example of a nature-based approach. The straight up-and-down seawalls are not friendly for marine flora and fauna, so in taking inspiration from intertidal areas, the living seawalls aim to restore biodiversity and biomass by recreating a more natiural texture, creating niches and protecting against the waves like the area used to before seawalls were constructed.

- Most of our materials can represent something our marine neighbors need to survive, from using pom poms to be corals or sea urchins, or using felt to make seaweed or some fishy friends! The opportunities to connect your craft supplies to what a crab or seastar needs to survive are limitless!

How can I learn more about nature-based approaches to coastal resilience and restoration?

Scan the QR code to visit our website, and subscribe to our newsletter to stay updated on ways to get involved with our research and programs.

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Use your imagination to create your own Living Seawall tile!

What makes a good home for a crab?
For a sea star?

Why do you think the tiles are shaped like this?

Why do you think 3D tiles work better than flat seawalls?

Where would you put these tiles around Boston?