



**CHILDREN'S PLACE**  
WOOD COUNTY DISTRICT PUBLIC LIBRARY

Summer Reading Program 2022 – Oceans of Possibility

# Water and Ocean Conservation

# STEM Activities

Ages 3-5

## **Conservation Conversation!**

- Make a list of all the ways we use water every day
- Talk about how we don't have unlimited water in the world
- Brainstorm ways we can do little things to save water
  - Turn off the faucet when we brush our teeth
  - Only push the water fountain button while we're drinking
  - Take fewer baths and shorter showers

# STEM Activities

Ages 3-5

## **Can You Undo Water Pollution?**

- Add trash, dirt, and oil to a container of water
- Give the kids tongs and strainers and ask them to clean the water
- The kids will quickly find that you can remove trash and take out some of the dirt, but they can never get it perfectly clean again

# STEM Activities

Ages 6-10

## How Much Water in the World?

- Use an apple to demonstrate how much of the Earth is land, saltwater, and freshwater
  - The world's freshwater is equal to  $\frac{1}{64}$  of an apple
- Use a liter of water and five glass bowls to break down how much of the world's water is available for us to drink and use in our day to day lives
  - 75 mL is saltwater
  - 17 mL is "Icecaps and Glaciers"
  - 7 mL is "Underground Freshwater"
  - .33 mL is "Rivers, Lakes, and Ponds"
  - .66 mL is "Other"

# STEM Activities

Ages 6-10

## Oil Spill Clean Up

- Mix vegetable oil and cocoa powder and add to a tub of water.
- Provide a variety of materials (cotton balls, paper towels, sponges, cups, strainers, spoons, etc) to the students and ask them to clean the oil from the water
- Test one material at a time and record observations on how well it works
- Discuss if any of these solutions would work on a larger scale such as an oil spill in the ocean

# STEM Activities

Ages 11-14

## Ocean Clean-Up Device

- Prepare an “ocean” by adding plastic fish and plants to a container of water. Then contaminate your ocean with trash. Be sure to include trash items that both sink and float.
- Provide your students with a variety of up-cyclables and ask them to design and build a device to clean the ocean that removes the trash but leaves the indigenous species
- Encourage them to test, reassess, redesign, and test again

# STEM Activities

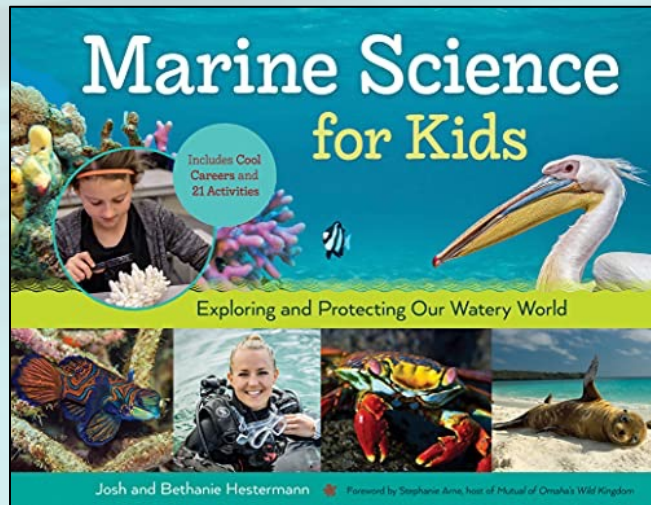
Ages 11-14

## Ocean Acidification

- Prepare five containers of vinegar solutions at different strengths
  - Pure water
  - 3 parts water; 1 part vinegar
  - 2 parts water; 2 parts vinegar
  - 1 part water; 3 parts vinegar
  - Pure vinegar
- Add eggshells to the solutions and observe their condition after 2 hours, 4 hours, and 24 hours

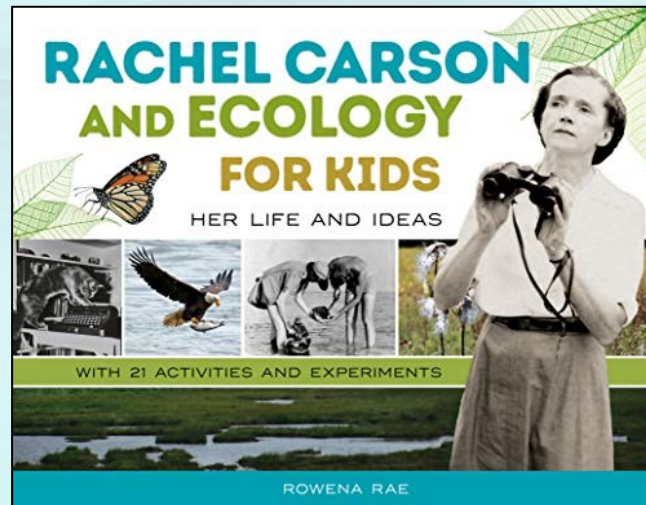
# STEM Activities

Find more Conservation STEM Activities in these books:



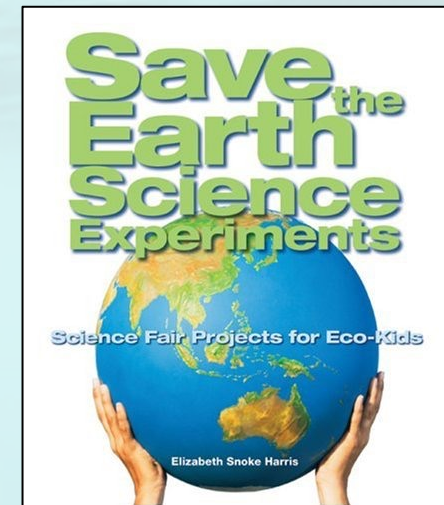
*Marine Science for Kids:  
Exploring and Protecting  
Our Watery World*

By Josh and Bethanie Hestermann



*Rachel Carson and Ecology  
for Kids: Her Life and Ideas*

By Rowena Rae



*Save the Earth Science  
Experiments: Science Fair  
Projects for Eco-Kids*

By Elizabeth Snoke Harris



# STEM Community Partnerships

- Water Treatment or Management Plant
- Marine Science Departments or Organizations
- City Sanitation/Recycling
- Local Parks Department
- Aquarium/Zoo
- Science Institutes (COSI, Great Lakes Science Center, etc)

# Sea Creature Recyclable Crafts

Supply a craft station OR make up take-home craft kits this summer using recyclables!

Ask for donations from your community, and supplement with all those tail ends of things you keep storing in your back rooms.

How can you use up:

- Bottle caps
- Newspaper
- Water bottles
- Plastic food containers

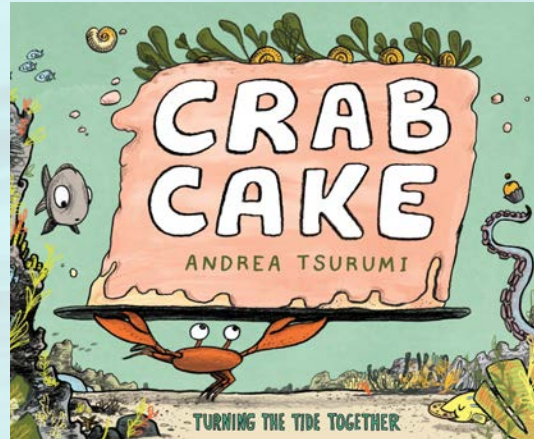
- Cereal box and yarn shark/fish
- Bubble wrap octopus
- CD Turtle
- Egg carton and yarn jellyfish



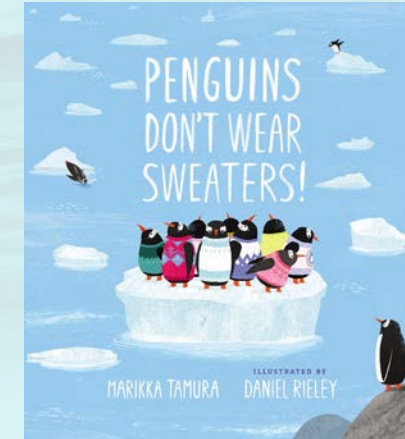
# Storytime Titles



*We Are Water Protectors*  
Carole Lindstrom  
Illus. Michaela Goade



*Crab Cake*  
Andrea Tsurumi



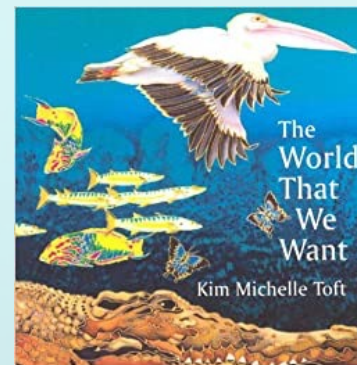
*Penguins Don't Wear Sweaters*  
Marikka Tamura  
Illus. Daniel Rieley



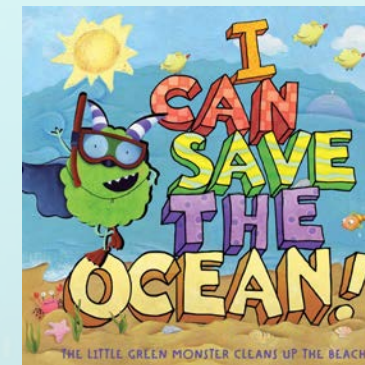
*The Brilliant Deep*  
Kate Messner  
Illus. Matthew Forsythe



*Little Turtle and the Changing Sea*  
Becky Davies  
Illus. Jennie Poh



*The World That We Want*  
Kim Michelle Toft



*I Can Save the Ocean!*  
Alison Inches  
Illus. Viviana Garofoli