

# Our Warming Oceans

## Background

Climate change is making our oceans warmer and warmer. Although this might make swimming more fun for humans, it means big changes for our neighbors who live in the ocean. Some animals can only live in certain water temperatures, while others thrive in a range of temperatures.

How will our marine communities change over the coming years and decades as our oceans warm more and more?

## Supplies

- Trifold display felt board, or three pieces of large paper that can be spread out on a flat surface
  - If making a felt board, you'll also need Velcro strips to attach to the animal cards
- Printed animal cards (three copies of each animal)
- Written or printed labels: 55, 65, and 70

## Guiding Questions

- Which animals will struggle in warming oceans?
- Which animals will thrive in or arrive with warming oceans?
- How will these changes affect humans?

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## Instructions

- Using a trifold display or pieces of paper, label three vertical spaces with 55, 65, and 75.
- These three spaces represent summer ocean temperatures in Boston Harbor as the oceans warm due to climate change.
- Shuffle the printed animal cards and put them in a pile in front of your display.
- Sort the animal cards into the different ocean temperatures that they can live in.
- Discuss with friends and family what you've found. Which animals prefer which temperatures? What might this mean as the oceans continue to warm? How could this affect humans?
- For an even deeper discussion, explore the different predator and prey relationships between these marine animals. How might one animal's changing population affect another's?

## Resources

- Climate Change in the Northeast U.S. Shelf Ecosystem [fisheries.noaa.gov](https://fisheries.noaa.gov)
- Ocean data including water temperature from NOAA Buoy in Massachusetts Bay [ndbc.noaa.gov](https://ndbc.noaa.gov)
- Know Your Ocean: Ocean Warming from Woods Hole Oceanographic Institute [whoi.edu](https://whoi.edu)

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**Explore how local species will respond to warming water!**

Which animals will struggle in warming oceans?

Which animals will thrive in or arrive with warming oceans?

How will these changes affect humans?



