

# Lobsters

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## Background

To true seafood lovers there is only one genuine lobster, the American lobster, *Homarus americanus*. It lives from the Canadian Maritimes down to North Carolina 1,300 miles to the south, but it is most abundant in the cold northern waters. More than half the U.S. catch of lobsters comes from the state of Maine. The lobster is so identified with the coast of Maine that Canadian lobsters being transported by truck through the state are frequently rechristened “Maine” lobsters by the time they’ve crossed the border into New Hampshire. Now there is an effort to brand “genuine” Maine lobsters so consumers will know where they were caught (even though lobsters can wander quite far).

## Learning Objective

Students learn what habitats are important to lobsters at different times of their lives.

**Challenge:** Find out: *Where do lobsters live? What, besides lobster harvesters, threaten lobsters in the Gulf of Maine?*

## Materials

Lobster Trivial Pursuit Game (provided)

Paper, drawing materials

Video: *A Climate Calamity in the Gulf of Maine: The Lobster Pot Heats Up* by O’Chang

Studios: <https://www.youtube.com/watch?v=MF-Mmk30cOE>

Lobster references (see Resources below, Section 5 Readings/Marine life, and on the web)

## Procedure

1. Discuss the fact that lobsters take several years to become large enough to reach a size at which lobstermen may harvest them. Legal sized lobsters are called “keepers.” Discuss how to measure a lobster: Using a double-sided lobster gauge, a harvester measures from the eye socket to the beginning of the tail. That solid part of the shell is the carapace. The size is recorded as Carapace Length (CL). In Maine, the minimum size or CL must be at least 3 1/4 inches long (82.5 mm.); maximum is 5 inches (127 mm.).
2. Have students draw the life cycle of a lobster from its planktonic stage to maturity, using this scenario and other resources (see below): For their first month after hatching, baby lobsters float in the ocean as *zooplankton*. Then, after shedding their shells several times (molting), they settle to the ocean floor. Juvenile lobsters spend most of their time in hiding, or else they become easy prey to many different animals. The smallest bottom-dwelling lobsters have been found in sheltered habitats such as cobble

bottom, eelgrass beds, kelp beds, mud burrows, and rocky tidepools. An adult lobster hides in a burrow by day and prowls the ocean floor under the cover of darkness.

3. Discuss why it is important to maintain a healthy ecosystem, since lobsters use so many different habitats throughout their lives, the ocean surface to tidepools, burrows in mud, kelp beds, and well offshore.
4. Discuss potential threats to lobsters: pesticides washing off the land, dredging the ocean floor to deepen channels for large vessels, dragging by fishing nets, overfishing, loss of habitats, such as kelp beds and eelgrass, ocean acidification, and more.
5. Show *A Climate Calamity in the Gulf of Maine: The Lobster Pot Heats Up*
6. Discuss ways to avoid these problems: banning pesticides, relocating lobsters from path of dredge, prohibiting dredging in lobstering areas, reducing stormwater and pollution it carries.
7. Divide the class into two sections and challenge them to a game of Lobster Trivial Pursuit. If they come up with different answers, ask them why that might be so. Discuss how science is always changing and that scientists don't always agree with one another about the facts.
8. Suggest they brainstorm a list of question about lobsters or about other sea animals that they might want to try to answer themselves if they become scientists.

### **Resources**

Gulf of Maine Research Institute website: <http://gma.org/lobsters/index.html>

Click on Educate, All About Lobsters

The Lobster Conservancy (TLC) homepage: <http://www.lobsters.org/>

See especially "Biology"

### **Extension**

#### **Food species**

Students will research harvests of various kinds of seafood (i.e., green sea urchins, lobsters, cod, herring (sardines), winter flounders, Northern shrimp, soft-shell clams, etc.) harvested in Maine waters by visiting the Maine Dept. of Marine Resources

website, [www.maine.gov/dmr/commercial-fishing/index.html](http://www.maine.gov/dmr/commercial-fishing/index.html)