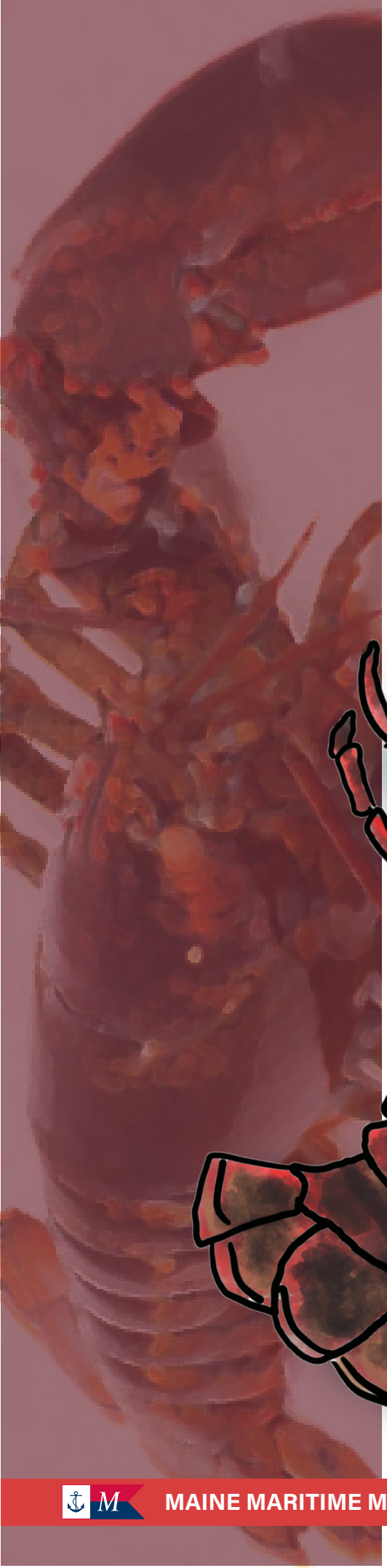
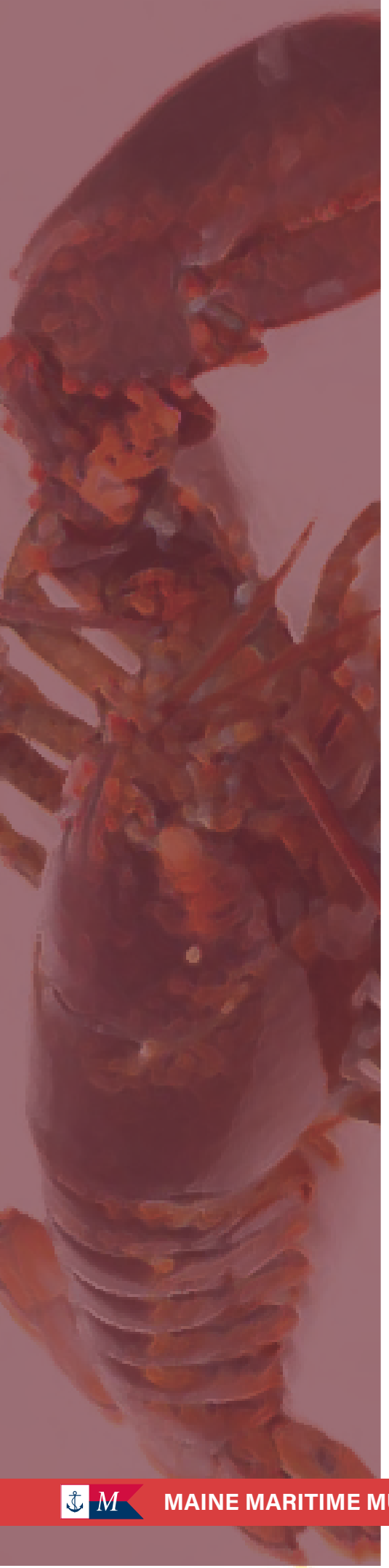
LOBSTERS

ANATOMY & HABITAT

Grades K-5
Science, Writing





CONTENT AREAS & MAINE LEARNING RESULTS

SCIENCE

ECOSYSTEMS
Students examine the relationship between the needs of animals and the places they live

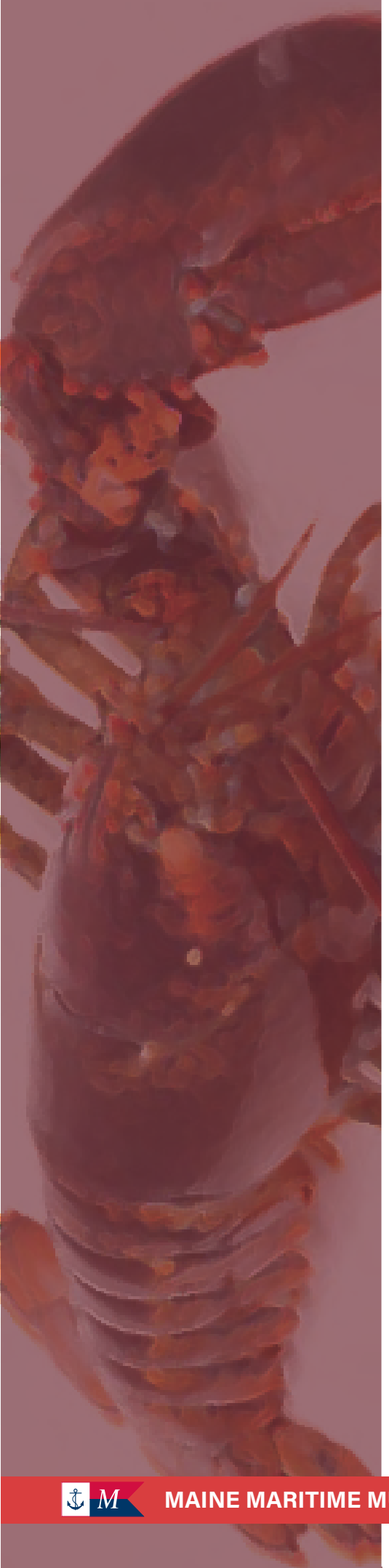
BIOLOGICAL EVOLUTION
Students make observations to compare the diversity of life in different habitats

Students understand how animals use internal and external structures to help them survive, grow, and meet their needs

Students describe how animals receive information through their senses, process the information in their brain, and respond in different ways

ENGLISH LANGUAGE ARTS

WRITING
Students use an inquiry process to gather relevant information, then produce clear and coherent writing to convey this information



OBJECTIVES

What is the overall goal of this lesson?

Students will examine the anatomy of a lobster and will learn to identify its various components

Students will define habitat and will understand how animals are best suited for where certain environments

Students will compare and contrast their own bodies to that of a lobster to discover how animals adapt to support life in their natural habitats

ESSENTIAL QUESTIONS

What questions drive this lesson and guide students' inquiry?

What can we learn by studying an animal's anatomy?

How have lobsters adapted over time to be best suited for the coast of Maine?

VOCABULARY

Habitat: The natural home or environment of an animal or plant

Crustacean: A water animal with a shell, antennae, and jointed limbs

Exoskeleton: A hard covering that supports and protects the bodies of some types of animals

Camouflage: A defense mechanism animals use to disguise their appearance and blend in with their surroundings

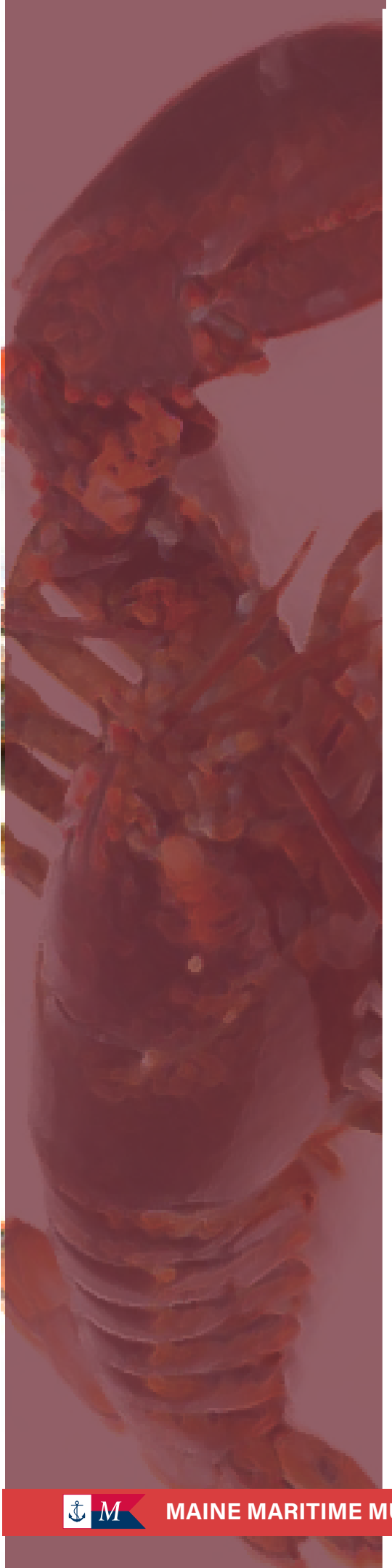
LOOK

Take one minute just to look at this lobster. Look at the whole lobster, then zoom in to look at it closely. Pay attention to all the different details you're seeing.

WONDER

After you've had a chance to look, ask yourself what you know:

What body parts do I recognize?
In what ways is it similar to me? In what ways is it different?
What other animal does it remind me of?
What does it use its different body parts for?
What colors do I see? Why is a lobster colored like this?



LEARN: ANATOMY

Let's start at the lobster's claws and move backwards towards to its tail.

CLAWS

Lobsters have two different sized claws. The big one is for crushing and the little one is for pinching or tearing apart food.

A lobster uses its claws like we use our hands, for grabbing at food. Because lobsters eat other animals with shells, they need strong claws to crush and pinch.

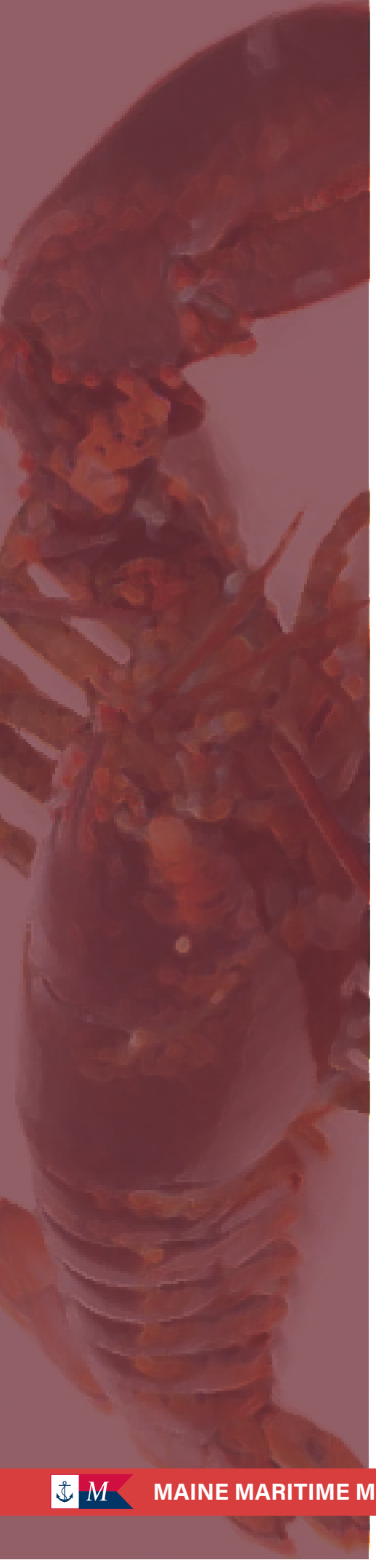
Compare these claws to your own hands. In what ways are your hands more useful for life on land than a lobster's claws? In what ways are claws more useful for life on the ocean bottom?

EYES

Like us, lobsters have eyes. However, if you compare lobster eyes to human eyes, you'll find they look a lot different. They work differently too.

Lobster eyes are used only to detect motion in dim light. If we brought a lobster onto land in the day time, it would be blinded by the brightness. Similarly, if we went to a lobster's home on the ocean bottom, our eyes would be useless in the darkness.

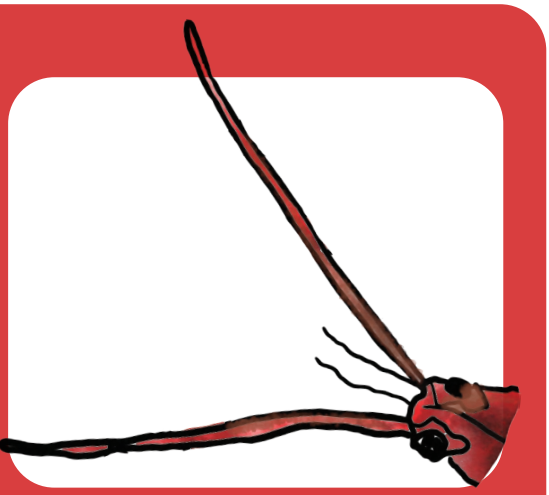
Can you explain why it makes sense for lobster eyes to work in dim light and for human eyes to work in bright light?



ANTENNA

Since their eyes are only used for detecting motion, lobsters have long antenna for searching the ocean floor as they walk around.

Using what you know about human eyes, why do you think we don't have antennas?



CARAPACE SHELL

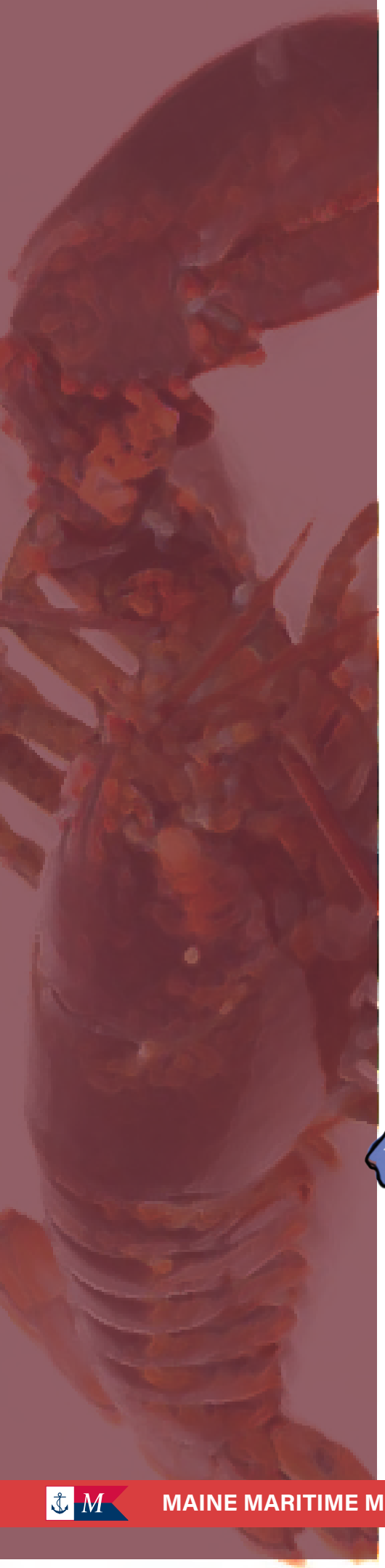
The shell that covers the lobster's body from its eyes to its tail is called a carapace. The important organs that keep the lobster alive are located beneath its carapace.

Lobsters are a type of animal called a crustacean. **Crustaceans** have a tough outer shell, antennas, and jointed limbs. They mostly live in the water.

The shells that cover crustaceans' bodies are called **exoskeletons**. The word exoskeleton actually means "outside skeleton." Just like humans have bones ***inside*** our bodies to provide support, crustaceans have shells that provide both structure to their bodies and protection from rocks and predators.

Can you think of any other crustaceans?

HINT: Start by thinking of water animals with shells and antennas.



WALKING LEGS

The little legs sticking out from the lobster's body are used for walking, just like our legs.

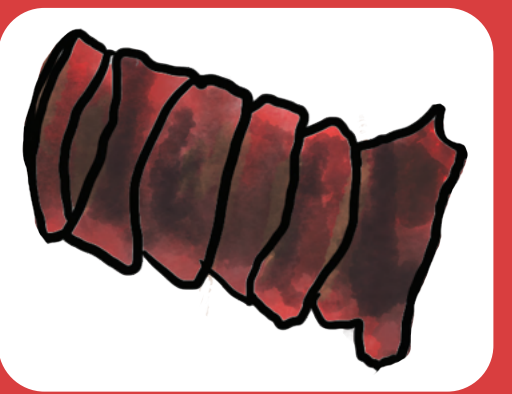
Compare a lobster's legs to your own. In what ways are they similar and different?

How do these differences make lobster legs more suitable to life at the ocean bottom?

ABDOMEN

What is usually called the lobster's tail is actually its abdomen.

Do you have an abdomen? Where is it? How is it similar or different to a lobster's?



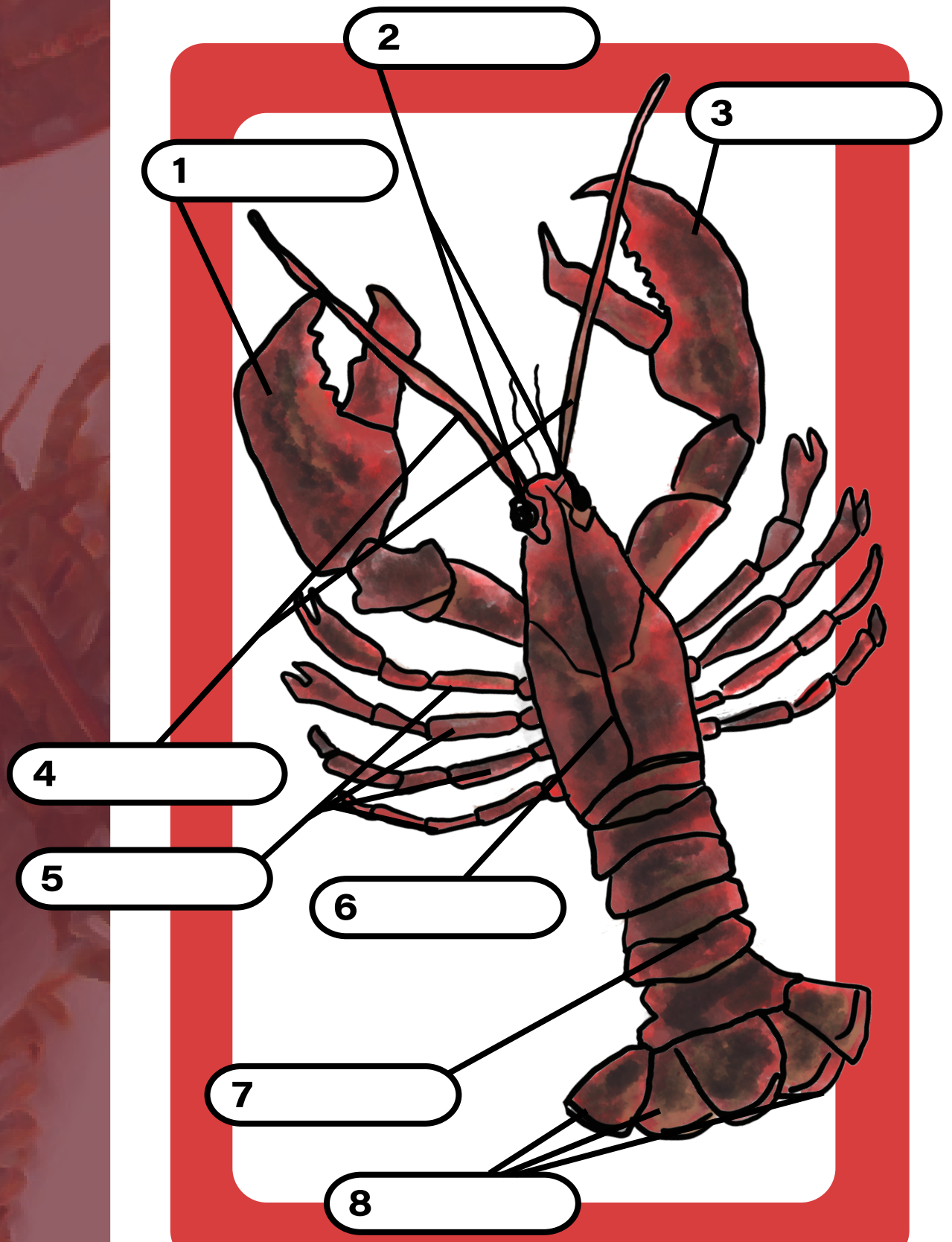
FINS

At the tip of the lobster's tail are its fins. Just like the fins swimmers wear, the lobster can flap its tail and its fins will propel it through the water.

Why do swimmers and SCUBA divers wear fins in the water but not on land?

REVIEW

Can you name all the body parts on this lobster?

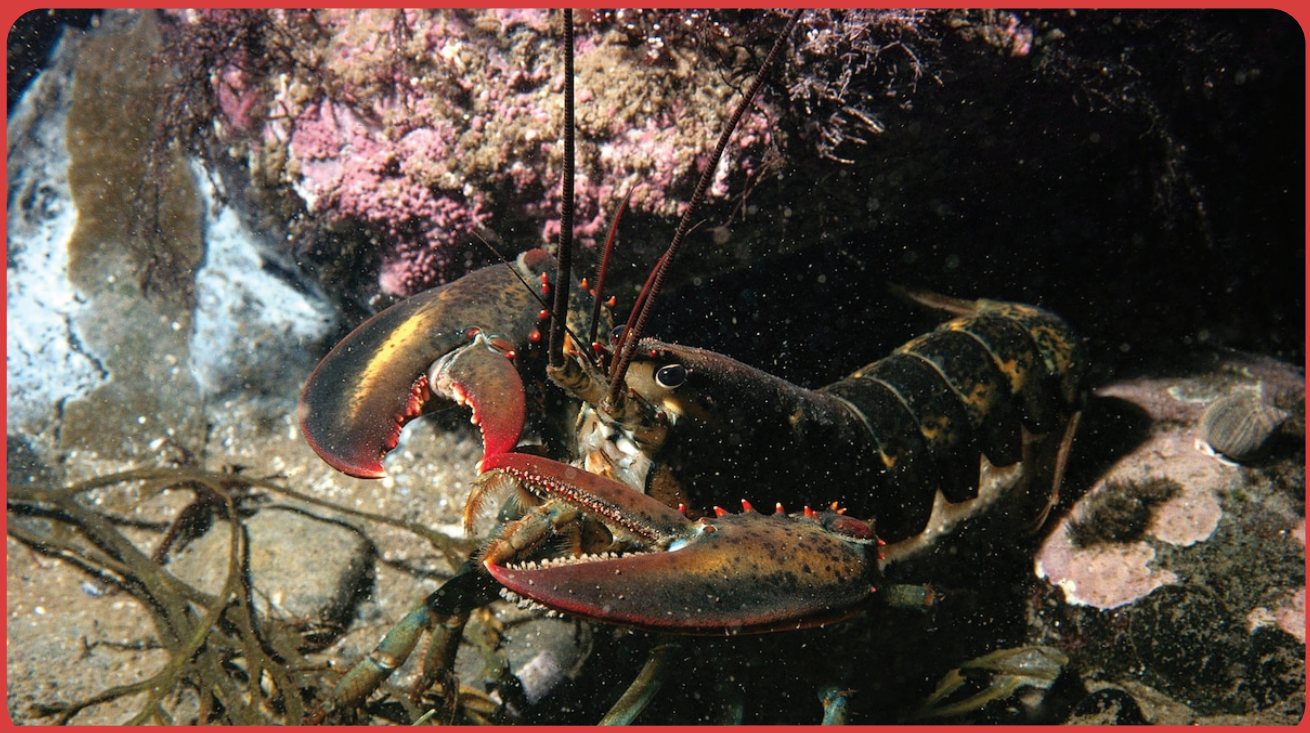


LEARN: HABITAT

Now that we've learned about how a lobster's body parts make it well suited for life under the ocean, we can look more closely at its habitat.

Habitat is the place where an animal lives. Animals adapt over time to help them survive in their habitat. Survival means being able to find food and avoiding becoming food for other animals.

Look closely at this underwater picture of the Maine coast. What colors do you see? Is it dark or bright? Describe some of the things you see and their textures. Does the scene look soft or hard? Would you be comfortable living here?



Fred Bavendam, Minden Pictures/Nat Geo Image Collection

Let's think about a lobster living in this environment. Using what you learned about the different parts of a lobster, answer the following questions aloud.

How is a lobster able to find food in this habitat?

How is a lobster able to avoid becoming food?

CAMOUFLAGE

Just like humans wear camouflage to hide, lobsters have adapted colors that blend into their habitat on the ocean floor, helping them hide from predators. Can you match any of the colors you see on the lobster to colors you see in its natural habitat?

IMAGINE & PLAY

Use your imagination to discover even more about lobsters and their habitat.

FIND A BACKYARD LOBSTER

Lobsters live underwater, but there are plenty of other animals that have exoskeletons, just like lobsters. With an adult, go outside into a natural space and see if you can locate some bugs. Chances are, many of these bugs will have exoskeletons! Look closely to see if they have a shell and ask youself how the shell helps these animals stay alive in their habitat.

Look for the bugs pictured here. Do they have anything else in common with lobsters? How is their habitat similar or different?

Always remember just to observe! Don't disturb the bugs or their habitat.

LOBSTER HIDE & SEEK

Now it's time for you to try being a lobster!

Imagine that your classroom, living room, playground, backyard, or any other available space is an underwater habitat off the coast of Maine. One person will pretend to be a predator seal (seeker), while everyone else pretends to be a lobster, searching for a place to hide. While the seal closes their eyes and counts to ten, all the lobsters find hiding places that match a lobster's real habitat (somewhere dark, rocky, and hard to get). Then the seal has to swim through the habitat to find all the lobsters. Once found, each student has to explain why their hiding place is a sensible spot for a lobster to hide.

REFLECT

Name one thing you learned about lobsters.

Would you like to be a lobster? Why or why not?

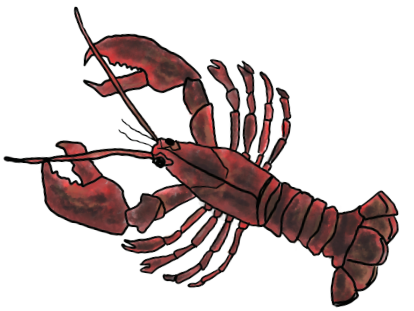
Lobsters are very different from humans, but both are well suited to their own environments and habitats. How are you well suited to live in your own environment on land?

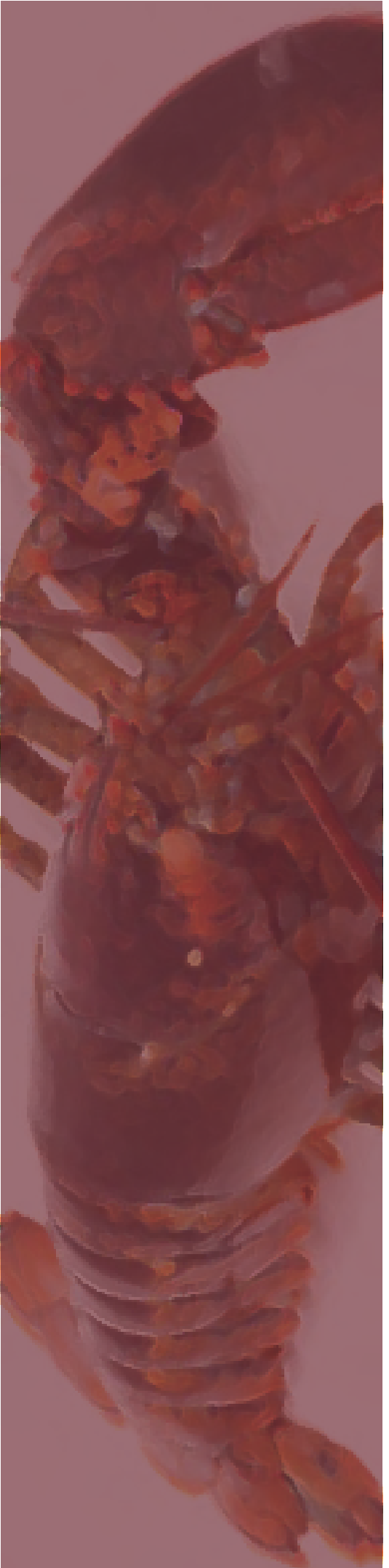
CONTINUE LEARNING

Learn all about lobsters and lobstering in Maine with Maine Maritime Museum's "Lobsetring & the Maine Coast" video series!

Find these videos and more on the Educator Resources page via the Learn page on MaineMaritimeMuseum.org

Then visit Maine Maritime Museum to check out the exhibit: Lobstering and the Maine Coast!





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