

Design a Fish

Objective

The student will create a modeling compound for making fish-shaped refrigerator magnets.

Background

Fish come in many different shapes, each adapted to a particular lifestyle. The shape, size, and placement of fins differ with each kind of fish. If you look at a fish's fins carefully, you can tell something about how it lives. Pectoral fins that are set low on the body and at an angle are the sign of a bottom-dweller, like a sculpin. A narrow, forked tail and slender, sharply pointed pectoral fins indicate fast swimmers, like tuna. Body shape also tells something about where and how a fish lives. Flat fishlike halibut spend much of their time buried in the sandy bottom, while the compressed shape of some reef fishes, and the elongated bodies of eels makes it easy for them to dart into the safety of a coral reef crevice.

Materials

For student groups of four:

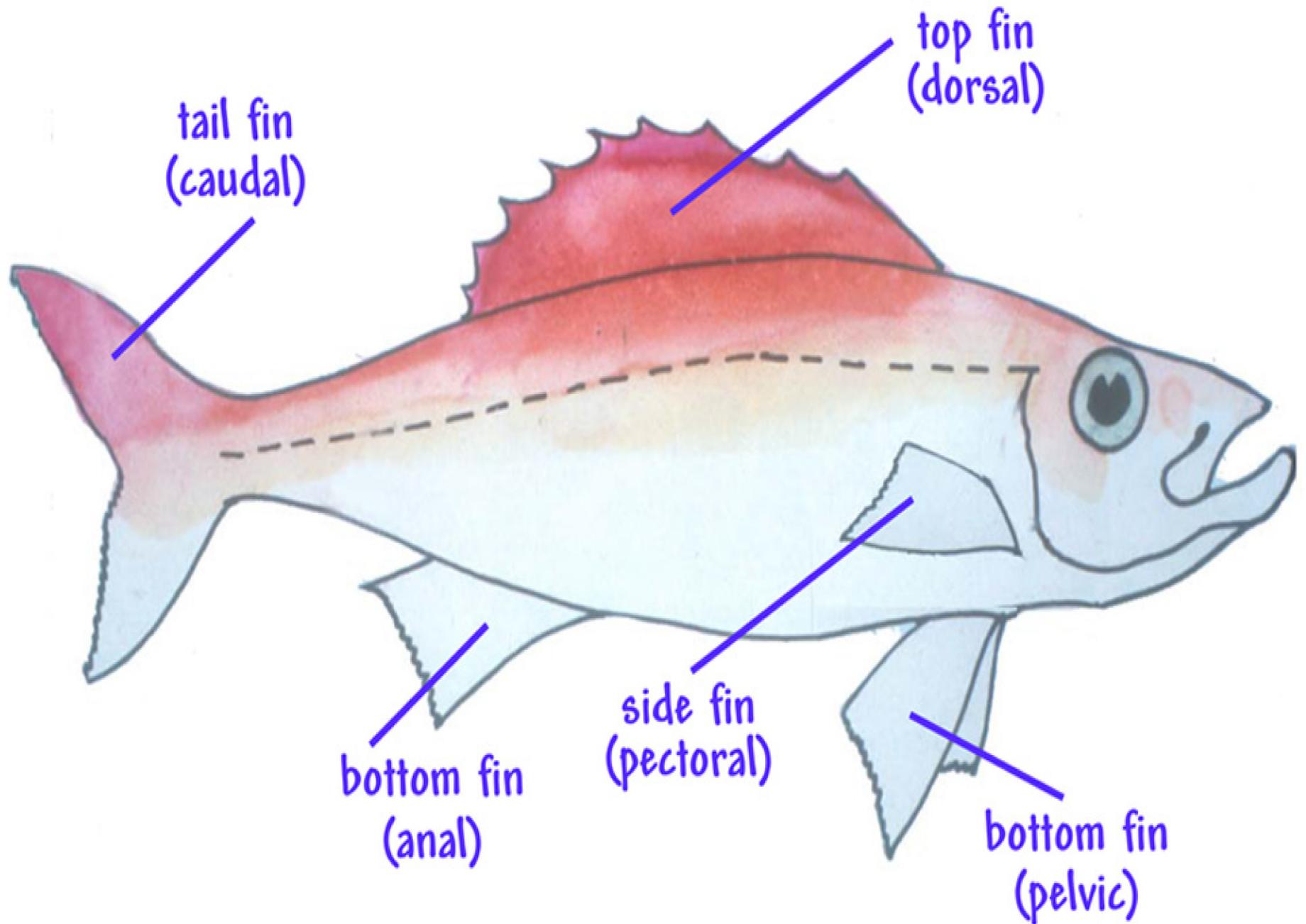
- enough modeling compound to make eight fish (available at craft and school supply stores.)
- large resealable plastic bag
- 8 magnetic craft strips cut into 1/2 inch squares (2 per student)
- glue
- wax paper
- watercolor paints or colored markers
- copy of page 3, cut on dotted line
- enlarged copy of page 2
- one copy of page 4 for teacher

Action

1. Divide the class into groups of four and distribute copies of page 2 and page 3 to each group.
2. Begin activity with a class discussion about fish and fish shapes. Using the Background Information, hold up a sample of each of the five fish body shapes, naming the fish and its habitat and reviewing each fish's physical characteristics. Ask students to find the fish in their cards. Draw a fish on the board, or use an enlarged copy of the fish on page 2, to point out and name a fish's fins.
3. Give each student a sheet of wax paper and modeling compound. Have students divide the modeling dough evenly between the members of their group. Invite them to choose two different fish body shapes. Encourage them to work carefully and pay attention to where the fish's fins are located and what shape and size they are. As the students work, circulate and make comments about the students work that will reinforce the names of the various fins. Be sure to touch each fin as you mention it so that the student understands what you're referring to.
4. Set the fish aside to dry. Discuss the different habitats that these fish live in. Ask students how a fish's physical characteristics help it to survive in its habitat.
5. When the dough is dry, distribute paints or markers so students can color their fish. Give each student a piece of magnet strip to glue onto one side of their fish.
6. Invite students to share their fish with classmates, by telling what kind of fish they made; pointing out its dorsal, pelvic, pectoral, and anal fins, and describing the environment in which the fish lives.
7. Have students take their fish and habitats home to share with their families. The magnet on the fish will allow students to display creations on their refrigerator.

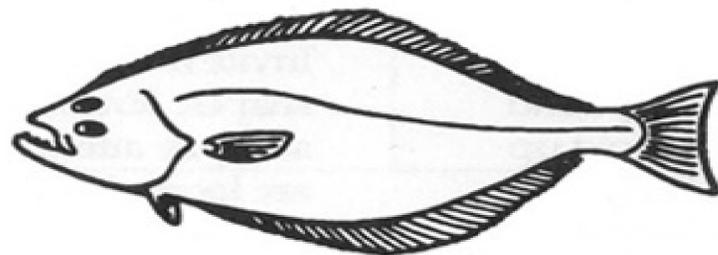
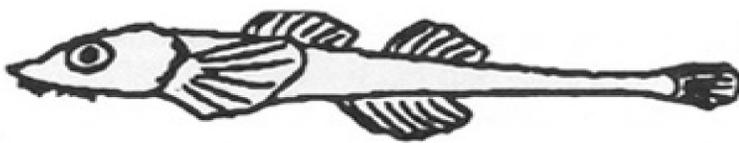
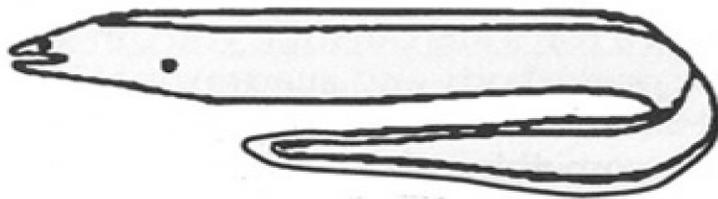


fins of a fish





different fish shapes





different fish shapes teacher's page



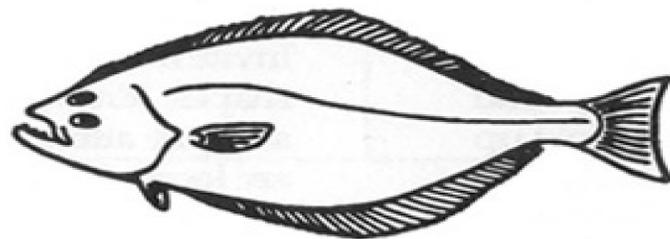
eel—elongated body
habitat—coral reef



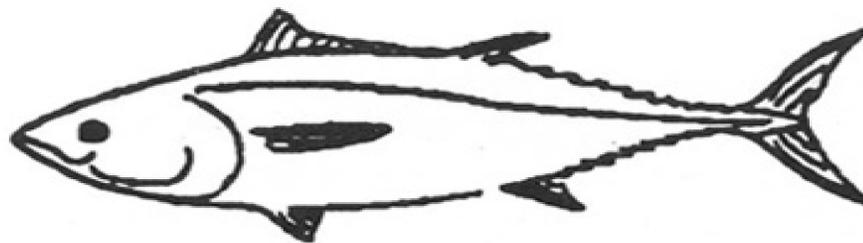
butterfly—compressed body
habitat—coral reef



sculpin—depressed body
habitat—sandy and rocky bottoms



halibut—flat body
habitat—sandy bottoms and mud



tuna—fusiform body
habitat—open ocean