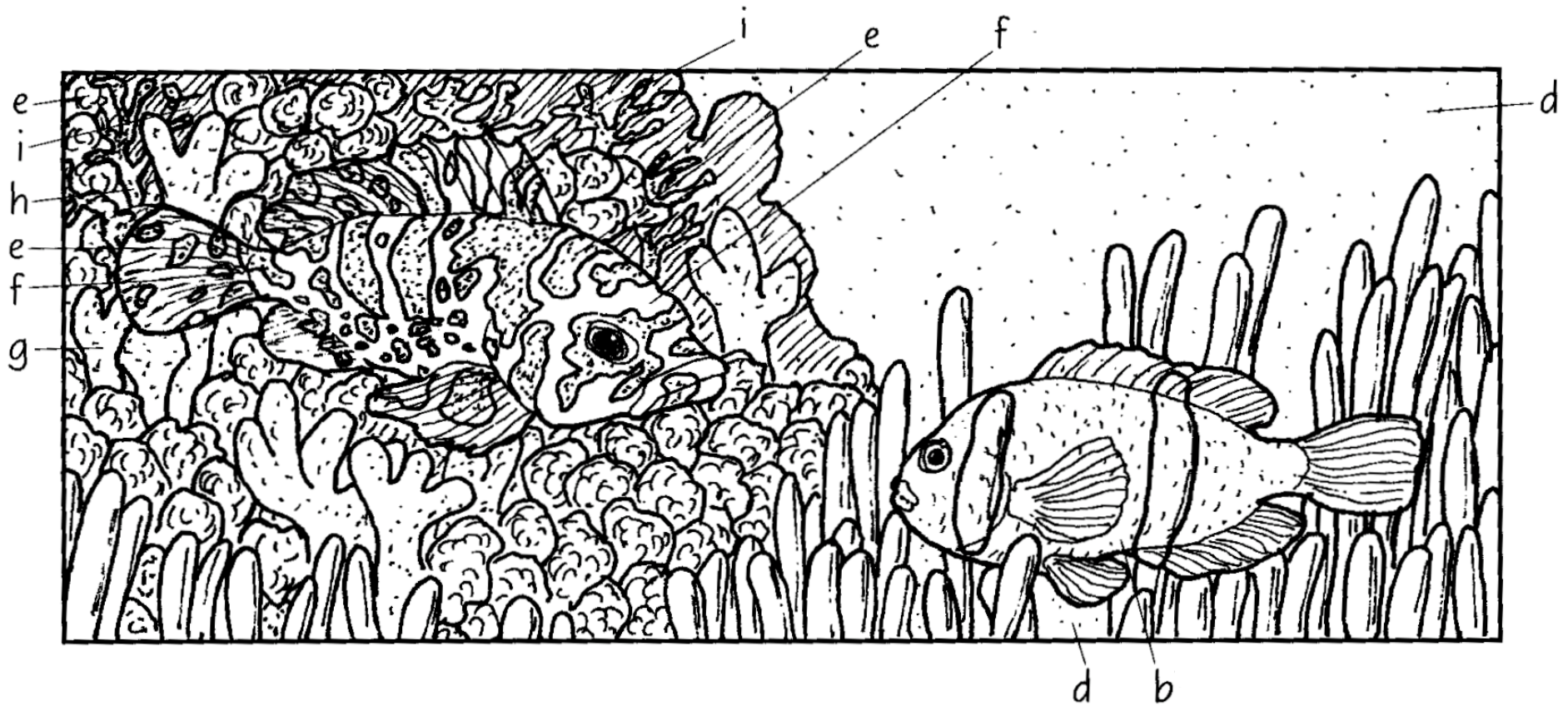


Evolution
Camouflage in Fish

Name:
Period:



Evolution

Camouflage in Fish

Follow the directions below to color-code the diagram and to answer the questions. You can use Chapter 10, Sections 2 and 3 of your textbook to help you. Use colored pencils, and check off each box as you finish that part of the instructions.

For this exercise, you will be analyzing two different fish. One is a grouper, and the other is a clownfish. By carefully coloring the diagram on the next page, you will be able to see how they have evolved coloring that matches their environment. Such coloring, that helps animals to hide, is called *camouflage*. Camouflage is based upon a French word that means “to disguise”, which is exactly what the fishes’ coloring does for them. It makes them much harder to see against the background of their environment.

Start by coloring sections with ocean water (a) blue-green . The clownfish (b) hides in long “fingers” of coral. Notice that it has two vertical stripes on its body. One stripe is between the head and its front fins, and the other stripe is between its front fins and its tail. For the clownfish, you will leave these two stripes white. So, color **EVERYTHING BUT THE TWO STRIPES ON ITS BODY** with an orange color .

How does the coloring of the clownfish help it to be camouflaged in its environment?

The grouper on the left of the diagram has more complicated coloring. Follow the coloring instructions closely, and watch it disappear! The fish itself is only made of two colors, brown and yellow. Look closely at the fish, and you will see that part of the fish drawing has stripes and patches of dots, and other parts of the fish are plain with no shading at all. Color the dotted parts and stripes (e) brown . Color the rest of the body (f) yellow .

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The grouper hides against coral of different shapes and colors. Some coral shapes look like thick trees and examples are marked with (g); color these red . Some coral shapes look like thin trees with lots of branches and examples are marked with (h); color these pink . Some coral shapes look like round wads of gum and examples are marked with (e); color these brown . Some coral towards the center of the picture is in the background, is shaded with diagonal lines, and is marked with an (i); color this dark green .

How does the coloring of the grouper help it to be camouflaged in its environment?

Which fish is easier to spot, and why? _____

What does camouflage have to do with natural selection?
