

**SECTION**  
**1**

**Enrichment**

**Poisonous Fish**

Fish of all sizes, shapes, and colors gracefully swim in a peaceful, underwater habitat—this is a scene that might come to mind when reading or learning about different types of this group of vertebrates. However, don't be fooled by this gentle scene. Many species of fish can deliver powerful toxins that can harm or even kill their predators, including people. Some fish deliver the poison by stinging with pointy spines. Others contain the poison in their flesh, making eating them quite a risky activity.

**Lions and Zebras and Turkeys . . . Oh My!**

Most poisonous fish live in saltwater habitats. In fact, they make up nearly 5 percent of the different types of tropical marine fish species. In the tropical Indo-Pacific region, over 300 species of fish have been identified as being poisonous at different times of year. One such fish is the lionfish. This fish is in the scorpion fish family, which has venomous fin spines that cause puncture wounds that are usually not fatal.

**Mild Reaction**

The toxins of the different poisonous fish are alike but vary in strength. Some cause mild reactions that create discomfort similar to a bee sting. Such is the case with certain types of freshwater catfish.

**Pufferfish Poison**

Among the most powerful toxins is that found in the pufferfish from the waters of the Far East. Eating this fish can cause death within five or six hours. The substance delivered by poisonous fish is a nerve toxin called tetrodotoxin. In the case of pufferfish poisoning, tetrodotoxin causes weakness, tingling in the mouth that spreads throughout the body, paralysis, and the reversal of the sense of touch so that cold feels hot and hot feels cold. More than 60 percent of cases of pufferfish poisoning end in death, although those who survive 24 hours have a good chance of survival.

**Regional Differences**

In the Caribbean, eating sea bass and snapper can cause poisoning while in other parts of the world, these fish are eaten with no problem. The reasons these fish are poisonous in that particular region are still unknown.

**Looks Can Be Deceiving**

These fish are just one of the hundreds of examples showing that harmful venom sometimes lurks beneath the surface of peaceful-looking tropical ocean settings.

1. What are two ways some fish can deliver their harmful toxins?

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2. Which two types of fish can cause poisoning in the Caribbean but not in other parts of the world?

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3. What is the nerve toxin of the Pufferfish called?

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4. What are two types of poisonous saltwater fish?

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