Perch in Motion

Connect bony fish structures to the jobs they perform.

ZOO.7.5 "Label and describe functions of the anatomical features of bony fish, including internal organs, lateral line system, operculum, swim bladder, and external fins."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each named fish structure whose job is explained. Write 1 above it if it is on the outside of the fish or 2 if it is inside, then circle the words that explain its job.

A Perch Among the Reeds

1. A yellow perch slips between reeds as a heron waits above. Its caudal fin, or tail fin, pushes water backward to drive the fish forward. The dorsal fin on its back and the anal fin underneath help prevent rolling. Paired pectoral fins near the head help it steer and brake, while paired pelvic fins below the body add balance and help with turns. A bony flap called the operculum covers and protects the gills on each side of the head. The fish can move each operculum to help draw water across its gills.

2. Even in cloudy water, the perch can notice a nearby fish without seeing it. Its lateral line is a row of tiny sensory openings along each side of its body. Sensory cells connected to those openings detect movement and pressure changes in surrounding water. Under the operculum, gills take oxygen from water and release carbon dioxide. The heart pumps oxygen-poor blood to the gills. After the blood gains oxygen there, it flows to body tissues. Deeper inside, a gas-filled swim bladder helps the perch control buoyancy, so it can stay at a depth without constant swimming.

3. When the perch catches an insect, its mouth takes in the prey and its esophagus carries it to the stomach. The stomach begins breaking down the food, and the intestine absorbs nutrients as digestion continues. The liver makes bile, which helps break up fats in the intestine. The kidneys filter wastes from the blood and help regulate water and salts inside the body. These hidden organs support the fish during every turn and dive. A fast burst from the tail may catch dinner, but sensing a ripple, breathing, and maintaining buoyancy also shape what happens next.

2 ANSWER WITH EVIDENCE

Use the passage

1. Name the two fins that help prevent rolling. Where is each located?

2. Name the structure that detects nearby movement and the flap that protects the gills. Describe one job of each.

3. Name the organs that pump blood toward the gills and take oxygen from water. Where does the blood flow after gaining oxygen?

4. Identify the internal structure that helps the perch stay at a depth and the organ that absorbs nutrients. State each function.

3 YOUR TURN

Your own words

Invent a short scene in which a bony fish finds food near rocks and escapes a predator. In one paragraph, name and explain the roles of two external fins, its lateral line, operculum, swim bladder, and one digestive or waste-removal organ; also show how its gills and heart support it.

ANSWER KEY

Perch in Motion

PART 1 · READ AND MARK

Underline each named fish structure whose job is explained. Write 1 above it if it is on the outside of the fish or 2 if it is inside, then circle the words that explain its job. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Name the two fins that help prevent rolling. Where is each located?	**The dorsal fin is on the back, and the anal fin is underneath the fish. Both help prevent rolling.**
2	Name the structure that detects nearby movement and the flap that protects the gills. Describe one job of each.	**The lateral line detects movement or pressure changes in water. The operculum protects the gills and helps draw water across them.**
3	Name the organs that pump blood toward the gills and take oxygen from water. Where does the blood flow after gaining oxygen?	**The heart pumps oxygen-poor blood to the gills, which take oxygen from water. Oxygenated blood then flows from the gills to body tissues.**
4	Identify the internal structure that helps the perch stay at a depth and the organ that absorbs nutrients. State each function.	**The swim bladder controls buoyancy, helping the perch stay at a depth. The intestine absorbs nutrients during digestion.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

A perch glides near a rock when its lateral line senses water moving around a crayfish. Its pectoral fins help it brake so it can catch the prey. Its stomach begins breaking down the food. A heron strikes, and the perch's caudal fin pushes water backward for a quick escape. Its swim bladder helps it stay at a safer depth without constant swimming. The operculum protects the gills and helps move water across them. The gills take oxygen from that water. The heart pumps oxygen-poor blood to the gills, and after gaining oxygen, the blood flows to body tissues.

Accept other accurate fin choices and digestive or waste-removal organs in the scene if their functions match the passage. Blood must gain oxygen at the gills before flowing to body tissues.