NAME

FISH KNOWLEDGE

Section A
Vocabulary Review

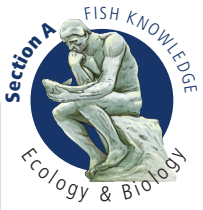
Fill in the blank using the words below.

This review is not found in the student guidebook and may be used as a test. Copies may be made for students.

1. Because a fish's body temperature nearly matches that of its environment, it is called a _____.
2. The lowest level on a _____ pyramid is composed of those who make their own food, or the _____.
3. Layers of warm and cool water are _____ in water-bodies just like the layers of vinegar and olive oil in salad dressing.
4. The weight of all living plants and animals in an ecosystem is its _____.
5. The _____ marks an area of rapid temperature change in a lake.
6. A fish nest is called a _____.
7. The _____ layer of a lake is where most of the heating occurs.
8. Each fish's adaptations help suit the fish to its particular _____ in an ecosystem.
9. Scientists use morphology to classify organisms into _____ groups to build family trees and trace evolutionary history.
10. _____ are wetlands that are usually wet year-round and are hospitable to fish.

Word Choices

stratified	taxonomic	marshes	biomass	redd
consumers	dorsal	niche	bayous	primary producers
ventral	poikilotherm	trophic	epilimnion	thermocline



FISH KNOWLEDGE

Section A Assessment

Return to the scenario given at the beginning of **FISH KNOWLEDGE** to apply the concepts covered in this section in a discussion: "A local fishing group wants the Wisconsin Department of Natural Resources to put walleye and yellow perch in Linnie Lake, near Muskego. As a fish biologist, you are responsible for deciding whether or not to stock walleye and/or yellow perch in the lake. What sort of data do you need to collect in order to determine whether or not to **stock** the fish?"

Students should realize that a fish biologist would need to know the following:

- what the trophic structure of the lake is
- whether there would be enough biomass to support the introduced fish at all stages of its life cycle
- what the average temperatures and dissolved oxygen content of the lake are
- whether the dissolved oxygen and temperatures match the needs of the fish at all stages of its life cycle
- whether the substrate, plants, and shelter found in the lake would be adequate to provide the protection the fish needs both to hide from predators or prey and to camouflage eggs.

Beyond this there would be economic considerations that are discussed briefly in the next section under **Taking Stock**.

Section Assessment Activity

Divide students into groups of two and have each pair design an aquarium or display for a selected species of fish. Please note that a permit from the local DNR fisheries biologist is required to keep game fish in the classroom. Instruct students to consider all of the factors the fish will need to survive and what types of information aquarium visitors should learn about the fish. Displays should include:

- images and descriptions of the fish's native habitat
- how to identify the fish and any unique adaptations the fish has to its environment
- the trophic level, sources, and biomass of food the fish will need
- the appropriate temperature and dissolved oxygen levels for the fish
- the shelter and substrate this species of fish prefers.

Students should note whether they are including spawning habitat in the design or not.

FISH KNOWLEDGE

Vocabulary Review

Answer Key

1. poikilotherm
2. trophic/primary producers
3. stratified
4. biomass
5. thermocline
6. redd
7. epilimnion
8. niche
9. taxonomic
10. marshes