Handout 3—The Aquatic Food Web

A food chain links an organism to one source of food whereas a food web links organisms to many of its food sources. Draw arrows between the sun, plants, and animals to show the flow of food or energy and the different paths it can take through the food web.

Aquatic Insects

Zooplankton

Phytoplankton

Scavengers

Decomposers

Aquatic Plants

Nitrogen Phosphorus

Nutrients

Sunlight
Aquatic food webs for surface water ecosystems begin with the ______________, the source of light. Certain wavelengths of light are absorbed by ______________________ (also called autotrophs). Through a process called ______________________, primary producers use this light to convert ______________________ and ______________________ into carbohydrates and oxygen. The primary producers will use a portion of the carbohydrates and oxygen during ______________________—the process in which carbohydrates and oxygen are converted into carbon dioxide, water, and energy. Primary producers can grow and reproduce if energy and certain nutrients are available.

Animals must also respire so they can create energy to move, grow, etc. Since animals cannot produce their own ______________________ like the primary producers, they must consume (eat) their food. Animals that eat primary producers are called ______________________ (herbivores, or plant eaters). Animals that eat primary consumers are called ______________________ (carnivores, or meat eaters). The secondary consumer group may contain more than one level of carnivore; therefore, a food web may have ______________________—animals that eat secondary consumers. In addition, a food web may also contain ______________________—animals that eat plants and meat.

Animals that eat dead organic materials are called ______________________ (scavengers). They are an important part of the food web because they help in decomposition by shredding and eating dead organic materials. ______________________ (bacteria and fungi) are the final link in the ______________________; they break down dead material and release ______________________ that can be used by primary producers.