Class copy – Do Not Take!!!

What Is Biological Accumulation?

When pesticides came into wide use in the 1950s, the long-term effects of the chemicals were not yet known. Around the world, however, fish-eating water birds on lakes and marshes treated with pesticides to control mosquitoes began dying in droves. Autopsies revealed that the dead birds contained pesticides in concentrations many times greater than the density of the chemicals carried in the water.

How those poisons had built up to such high levels was uncovered by examining the food chain of the grebe *(below)*. Toxic chemicals introduced into a body of water are absorbed by phytoplankton, then passed on to the fish and other creatures that feed on it. These herbivores transmit the toxins to the grebe and to carnivorous fish that prey on them. At each link in the food chain, the chemicals are increasingly concentrated; at the top of the chain, the amount of poison may be enough to kill the grebe or large fish or impair their ability to reproduce. This phenomenon—whereby a substance accumulates in ever greater densities as it moves up the food chain—is known as biological accumulation.