

## Food Chain Fable

Once upon a time, there were 16 little bugs living in a vegetable garden next to a river. These bugs were too tiny to eat very much, but the owner of the garden didn't want to share any of his vegetables with insects, so he bought a can of pesticide from the store. This poison was a fine white powder that he sprinkled on his garden.

Each one of these tiny bugs had a very small mouth. They could take only a tiny bite of a vegetable. However, with each tiny bite of vegetable, they also got one small dot of poison. Since these bugs were so tiny, just this one small dot of poison was enough to kill each one, and they all fell over dead onto the ground.

Just then, a group of eight larger insects, who just loved to eat other insects, walked by. Imagine their surprise and glee when they saw 16 of their favorite bugs lying on the ground not moving. These larger insects did some quick math and figured out that they could each eat two of the small insects. What a feast! First, they each ate one bug and it was delicious. Little did they realize though, that not only did they eat a bug but also one dot of poison in each small bug. However, since they were larger bugs, that one dot of poison wasn't enough to kill them. Maybe they felt a little sick but that didn't stop them from eating a second small bug and, of course, another small dot of poison. That did it! Now the larger bugs fell over and died.

Just then a strong gust of wind blew through the garden. It picked up the dead bugs and blew them right into the river.

Swimming just under the surface of the river were four little fish looking for their midday meal. When these eight large bugs landed on the surface of the water, it took only a second for each fish to gobble up two of the large bugs (which don't forget, had two dots of poison each.) This meant that each little fish ended up eating four dots of poison.

Now these dots of poison weren't enough to kill the four fish, but they were enough to give them stomach aches and make them swim a little slower. Because the little fish were swimming slowly, it was easy for two big fish, a male and a female, to quickly overtake them and each swallow two of the small fish: so each large fish got eight dots of poison. This wasn't enough to kill the large fish or even make them feel sick. But it was enough to make the male fish notice, in days to come, that he didn't grow as big as his friends. The female fish began to notice that she wasn't having as many babies as her friends.

One day, the man who owned the vegetable garden decided to go fishing. He threw his line in the river, and being the clever fisherman that he was, he soon caught both of these large fish. "What a fine meal," he thought to himself as he prepared and cooked the fish. And every bite was delicious! But, since each of these fish had eight dots of poison in it, the man ended up eating 16 dots of poison from that which he had put on the garden a long time ago.

Now these 16 dots of poison weren't enough to make the man die, or make him sick, or even make him grow more slowly, but what would happen if the same thing happened again and again and again? Could he end up like the tiny bugs, the larger bugs, or the small fish?