



I ♥ STEM Taught®

Dr. Willard Wigan MBE

When little Willard went to school, many people were unkind to him. His brain worked differently from other students, and at the time he was growing up, not many educators knew about the wonderful, varied ways students can learn. Everyone is brilliant, and it's never okay to make anyone feel small.

But small is how Willard felt. When people at his school made fun of him for not learning the same way as they did, he felt very small indeed. And with every mean remark by a looming bully, unsympathetic adult, and every bad day, he curled up tighter into himself and felt just a tiny bit tinier.

And so, Willard escaped into his own microscopic, magical world. Here, in his majestic secret garden shed far away from the others, Willard didn't feel small anymore. Here, he would often marvel at the smallest things — specks of dust gleaming in slanting sunbeams, cobwebs dancing in the wind, or fibers carried across continents by the fluttering of an insect's wings. Just because he couldn't see them, it didn't mean they weren't there.

Photos: Willard Wigan

Once, he noticed his dog had dug up an anthill, and, barely 5 years old at the time, Willard was heartbroken that all the ants were now homeless. To help them, he snapped off a piece of a twig. Carefully, he nimbly bent, twisted, and shaped the single splinters to make perfect, ant-sized apartments, tables, and chairs. He even tried to make the ants some shoes and hats!

For the next 50 years and counting, Willard has enjoyed his microscopic world. Motivated by his mother's words: "If you keep making them smaller, your name will get bigger," he let his imagination roam free to create exquisite worlds and masterpieces...on the head of a pin or matchstick, in a hollowed-out hair, and in the eye of a needle. Letting calm stillness descend around him, he patiently enters this world and uses handmade tools to create his art work.

An eyelash is his paintbrush, or the antennae from a dead aphid fly he found. A speck-like shard of diamond? His chisel. The tiniest needle that doctors use? His drill, which he gently prods and turns 'like peeling a carrot' into materials so fine they are invisible to the naked eye. He even uses the claw of an aphid fly to hold onto his masterpieces as he makes them.

Willard works between his heartbeats, often trying to slow down his breath and using the rhythm of the pulse in his thumb to slowly etch out the shape he wants to create under the microscope. He holds very, very still while he works, almost like a statue.

Sometimes, he uses a single fiber or grain of dust to create his beautiful art! One time, he even accidentally inhaled and breathed in a teeny tiny sculpture he had made of Alice in Wonderland.

But in the fragility of his art—which could be blown away by the gust of wind from a fly's wings—is fierce bravery. Bravery to know that his differences are what makes him so very special and unique. And sometimes, microscopes can help us see the most wondrous things.