IF I COULD INVENT SOMETHING NEW

Something that has been bothering me since I was a child is the condition of our roads. Potholes and cracks have caused so many problems for my family and everyone in our neighbourhood. I got in an accident on the school bus; it was a traumatizing experience. The blood, the screaming, and the little girl who broke her leg—all because of bad roads. To be honest, I never really thought about it much until I got the idea for this essay. Then I started noticing the quality of the roads around me. Roads are also essential because they connect us to schools, parks, and stores, but they seem to be in a constant state of disrepair. In fact, in Nigeria alone, more than 5,000 premature deaths happen a year due to poor road conditions. This constant issue made me wonder: What if roads could heal themselves, just like our bodies do when we get a cut? This is where my invention comes in.

I have always been fascinated by how the skin repairs itself, even though I have always wished it was faster. Whenever I got a scrape or cut—which happened a lot when I was a kid—I would watch in amazement as it slowly healed over time. This childhood curiosity stayed with me. As I got older and watched more sci-fi and superhero movies, I started to think about all the possibilities of super-fast regeneration—not in people, but in other things as well. Then it hit me, both figuratively and literally: the accident. I thought, "What if roads could heal by themselves?" This is when I went down a rabbit hole of the possibilities of self-repairing roads.

I started researching materials that could heal themselves. These materials need to be cheap enough to be mass-produced or gathered to make these roads. The material has to withstand heavy traffic and extreme weather conditions. I have read that concrete already has a self-healing factor, but from what I have read, it doesn't heal potholes and large cracks effectively. Potholes begin after rain seeps into the soil below the road surface. The moisture freezes when temperatures drop, causing the ground to expand and push the pavement up. As temperatures rise, the ground returns to normal level, but the pavement often remains raised.

My invention involves a new road material with microcapsules filled with a healing agent. When cracks form, these capsules would break open, releasing the agent to seal the cracks and heal the road. This self-healing material would work in all climates, keeping roads smooth and safe, reducing the need for repairs, and saving lives.

My self-healing road material could revolutionize infrastructure, ensuring safer travel and reducing maintenance costs. Imagine a future where roads repair themselves, making our journeys smoother and safer for everyone. With this invention, we can create a world where road conditions no longer cause accidents and stress and I got the perfect name for it: regenroads.