mystery science

Grades K-5
Mini-Lesson: “How do you fix a broken heart?”

VIDEO TRANSCRIPT

Hey, it's Esther! Have you ever felt your heart beating? Have you ever wondered what that looks like? Check this out. This is a model of what a real human heart looks like inside someone's chest. See how it's moving? That ba-bump, ba-bump, ba-bump is a heartbeat. Each ba-bump you feel is the muscles in your heart squeezing. Those squeezes move your blood from your heart through your whole body. That's super important because you need your blood to keep moving to stay alive. I know I sometimes feel my heart beating when I get nervous. When I'm about to do something that scares me like riding a roller coaster or taking a test, my heart starts beating really fast. I bet you've probably felt that way at some point too. Someone named Ca'Nylah has a question about hearts. Let's call Ca'Nylah now.

[Video Call]

- Hi, Esther!

- Hi, Ca'Nylah!

- I have a question for you. How do you fix a broken heart?

- That's a great question.

Okay, so usually when we say someone has a broken heart, we just mean that they're feeling really sad. But like any other body part, a real heart can get sick or injured and need a doctor's help. Let

me tell you a story about a time this happened in the city where I grew up, Chicago. This is a true story, and it has to do with a doctor who lived in Chicago over 100 years ago. His name was Dr. Daniel Hale Williams. His patients called him Dr. Dan. One hot summer night in 1893, Dr. Dan was working at a Chicago hospital when a patient arrived with an emergency. The patient, a young man named James, had a deep cut in his chest that when all the way to his heart. Dr. Dan knew that this was serious. If James' heart stopped beating, he might not live. so he made a decision. He was going to fix James' heart. That meant doing heart surgery using tools to open James' chest and repair the injury inside his body. The tricky part was that Dr. Dan had never done heart surgery before. To be fair, most people hadn't. At the time, only one person in the whole world had ever done heart surgery like this before. I'm curious, have you ever tried to do something that you'd never done before? How did you feel? Now would be a good time to pause the video and discuss. Okay, ready? Maybe you felt scared, unsure, or excited. Maybe your heart even started beating really fast. As he prepared to do the heart surgery for the first time, Dr. Daniel Hale Williams probably felt some of those things too. But Dr. Dan had a lot of practice doing new and challenging things. Back when he first became a doctor, he faced a difficult problem. At that time, most hospitals in the U.S. refused to let Black doctors treat patients. Dr. Dan was an excellent doctor, but hospitals wouldn't hire him because he was Black. And there was another problem too. Most hospitals in the U.S. refused to offer good medical care to patients who were Black. So in a busy city like Chicago that already didn't have enough hospitals, Black people had fewer options that they could go to if they were sick. Dr. Dan understood how deeply unfair this was. Some people in his family were white, some were Black, and some were Native American. Some were born in the U.S., some weren't. Some of his neighbors were Black and some of them were white. Dr. Dan knew that everyone in his community needed good medical care, so he decided to do something he'd never done before. He decided to start a hospital. He gathered the best doctors and best nurses he could find, whether they were Black or

white. And with the help of his friends, he raised money with community leaders, pastors, business owners, politicians, and other people who believed in his vision. Together, they founded Provident Hospital, the first hospital in Chicago open to all patients and all skilled medical workers. This is the same hospital where years later, Dr. Dan decided to perform heart surgery to save James' life. Dr. Dan knew that trying this new surgery would be dangerous and scary, but he also knew that James needed the surgery. That's why he did all that work in the first place to create the hospital, so people like James could get the help they needed to stay healthy. So Dr. Dan got to work, carefully cutting through James' chest all the way to his heart. When Dr. Dan finally found the injury, he cleaned it, and then all that he needed to do was sew it closed, but James' heartbeat was still pumping. Ba-bump, ba-bump, ba-bump. Which meant that his heart and everything around it was moving. It was like trying to sew in an earthquake. Dr. Dan tried his best, and it wasn't easy, but in the end, it worked. James lived, and 51 days after he entered the hospital, he walked out a healthy man. James went on to live for many more years, and Dr. Dan served patients for many more years, and his hospital, Provident Hospital, still exists today. So, in summary, fixing a broken heart isn't easy, but Dr. Daniel Hale Williams believed that everyone deserves help when they're sick or injured, so he kept trying, and because he didn't give up, James and many others got the care they needed. Doing something for the first time can be hard, but when the thing that you're trying to do is important, when it helps people or makes the world a better place, it's worth the trouble. That's all for this week's question. Thanks for asking, Ca'Nylah!