

**Grand Hank** - self-proclaimed world heavyweight champion of science - is donning his funky green safety goggles, bouncing from foot to foot, nodding as his assistant explains why it's important to keep safe in the lab. "Ladies and gentlemen, welcome to The Science Lab of **Grand Hank!**" the champ says over a thumping rap beat, scratching invisible records. And, via live television, Tyraine Ragsdale, better known by his DJ name, **Grand Hank**, is off. He's rapping, performing experiments, throwing out terms like centrifugal chromatography, and generally exhorting his audience of high school students to love science. "You, too, can be a scientist!" he shouts. "Everybody can be a scientist!" Ragsdale, 43, a burly, gregarious chemist, knows the lines by heart. For the last two decades, he has been reaching out to students around the region, combining his two loves - music and science - to inspire young people to dream big. Last week, Ragsdale won the George Washington Carver Award, given annually to someone who has displayed outstanding accomplishments in the field. "Hank is an excellent motivator," said Ambra Hook, a science administrator for the Philadelphia School District and member of the committee that picked Ragsdale for the award. "He has a way of connecting all the things the kids are interested in, and he knows how to make science fun." It's a big deal to a kid who grew up in the Mill Creek housing project in West Philadelphia, someone who failed his first few chemistry classes but knew that school was his ticket to good things. "I grew up knowing what not having an education could do for you," said Ragsdale. After graduating from University City High School and earning a degree in chemistry at the University of Pittsburgh, Ragsdale worked as a research scientist for Johnson & Johnson. While at Pitt, he was struck by the lack of African Americans in the field. He vowed he'd do something to fix that. He found his chance about 20 years ago, working with a program that sent scientists into classrooms. While lecturing a group of bored children about what he did, he had an epiphany. "I could see them fading in and out," he said. "It was just words to them. So I started rapping - using the beat of one of the songs they were familiar with. That just got them." Back in college, Ragsdale was Grand Master Hank - "a pretty big-time DJ," he'll tell you proudly. He favors raps about famous black scientists and why science is cool, all with killer beats, of course. "Now is the time for educated people to open our mouths and speak," he said. "This is the time to build, not destroy." At first, **Grand Hank Productions Incorporated** was a side business - Ragsdale took his experiments, motivational speeches and raps to classrooms all over the East Coast. Eventually, though, he left Johnson & Johnson to devote himself full-time to the business of being **Grand Hank**. Now, his Mount Airy headquarters features a full studio for science shows. The business has morphed into a "multimedia education company" that produces DVD series, conducts teacher-training sessions, and will soon sell science kits for the consumer market. He visits at least 50 schools a year. Ragsdale employs more than a dozen people and is headed to New Orleans later this week to address the National Science Teachers Association. He produces two TV shows weekly: *The Science of Philadelphia*, aimed at middle school students, and *The Science Lab of Grand Hank*, for high schoolers. Both air on PSTV, the Philadelphia School District's public-access channel; the latter also goes out to stations in New Jersey, Delaware, and Maryland. He works with 20 school districts in Pennsylvania and New Jersey, including Philadelphia and Camden; an average appearance and professional-development package costs between \$1,500 and \$2,500. But really, he said, it's still about the chance to reach the young men or women who think science is boring and beyond them. "They're reacting with shock and awe," Ragsdale said. "The level of experiments that we do are designed to stun and amaze." The other day, Ragsdale and DJ Marty Geez - in real life, Ragsdale's nephew Martino Fleming - stood at lab tables in front of fluorescent backdrops and filmed a show about radial chromatography that used science to determine the colors that make up a single felt-tip pen. Throughout the half-hour experiment, Ragsdale promised he would defend the "World Heavyweight Championship of Science" - and continue to hold the heavy, blinged-out championship belt he had made - by solving his problem. When he found a single felt-tip pen contained purple, blue, and yellow colors, he began crowing. "I'm excited! I love what I do right here! You try it and see if you can do radial chromatography, too," he said. Hook, from the Carver committee, is director of high school instructional programs for the Philadelphia School District and has been working closely with Ragsdale for 10 years. She joins him on *The Science of Philadelphia*. "A lot of times, kids think science is magic. We stress that it's not a trick, that they can learn the theory behind it," she said. Hook likes that students can turn on his show and see an African American role model, too. Although his expectations for students are high, they gravitate towards him because he speaks their language, she said. "Hank," she said with deliberate understatement, "is not shy. When he's interacting with the kids, it's hyped." 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