

Physics
At Work

A. Dean Bell

Writer/Director; New York, NY

A. Dean Bell is an award-winning filmmaker, television writer, director, and producer. He wrote and directed the highly acclaimed show *SportsFigures* that aired on ESPN for 12 years.

SportsFigures is an educational television series designed to teach the principles of physics and mathematics through sports. Bell, having never even taken physics in high school while growing up in Rochester, New York, said he was not worried that he lacked a physics background when it came to writing and directing the show. "I was learning physics from the show's advisors and I felt that my discovery process could be translated into the show," he said.

SportsFigures won four Clarion Awards for best children's television program, and a number of Parents' Choice Awards. Bell knew that when *SportsFigures* was awarded these crowning achievements, his aim to combine education and entertainment had been achieved.

SportsFigures may have taped its last season, but it is still shown in reruns on *Cable In The Classroom*. "It is also used and available in school libraries across the country," said Bell.

Bell is also an assistant professor at SUNY Purchase, New York, his alma mater, where he has been teaching directing and screenwriting since 1995. "I tell my college students that as writers, don't hesitate to take that science course. You just might need to do something like write and direct a television series that teaches physics someday."



Rick Angelo

Producer, ESPN; Fairfield, CT

Rick Angelo began his career in sports television in 1995. Today, Angelo produces games for all college sports for ESPN.

Angelo believes physics plays a phenomenal role in his job. "Everything with sports has something to do with physics," he said. Producers use graphics and animation of the players to show a viewer the athleticism of the athlete. "We will use graphics to show the speed of a ball and what makes it the perfect pitch, to show the viewer what phenomenal athletes they are watching," said Angelo. "Physics enhances our stories about the athletes."

Sandra Giddins

Community Center Director and former Professional Athlete & Coach; Queens, NY

Sandra Giddins grew up in Yonkers, New York and started playing basketball at the age of nine. She played Division I basketball at Cheney University in Pennsylvania on a four-year scholarship. Her athletic career lasted less than two years after suffering a knee injury while playing in Brazil. "I went up for a rebound and came down and my whole knee just twisted," recalled Giddins. Giddins stated that physics and athletics go hand-in-hand. For example, many female basketball players often injure their knees while jumping, due to their low center of gravity. To avert injury, female athletes need to pay attention to their body's center of mass.



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Active Physics

get when they read A. Dean Bell's Profile. Also ask them if they can relate their *Chapter Challenge* to Bell's discovery process of physics.

Rick Angelo's profile demonstrates the importance of physics in the world of sports. Angelo's belief that physics plays a phenomenal role in his job, illustrates the role of physics in sports television shows. The production techniques that Angelo uses to show the viewer how the expert skills of athletes are based in technology rooted in physics concepts. Ask students if they can describe in detail how physics is used to enhance Rick Angelo's stories and what laws of physics he might be using to produce his television shows.

Sandra Giddins, a former professional athlete and coach, who started playing basketball at an early age recounts her success on the field in an impressive profile. Her story though has a tragic note. She suffered a knee injury that could have been prevented if she had paid attention to her body's center of mass while jumping—a prime example of how the laws physics affect the safety of an athlete on the field. In a discussion of Sandra Giddins's profile, encourage students to reflect on their sports experiences and how Newton's laws of physics determine their safety on the field.

Physics At Work

Physics At Work provides profiles of three accomplished professionals who employ physics to understand and improve the quality of their work. All three professionals have one aspect in common: an appreciation of physics. Have students read and discuss each profile.

A close reading of A. Dean Bell's career illustrates how his highly

acclaimed show *SportsFigures* was designed to teach the principles of physics and mathematics. Bell felt that his understanding of physics that came from the show's advisors could be translated into the show. Interestingly, Bell had never taken physics in high school but was able to relate to the subject so deeply that he produced one of the finest television shows in this genre that won him many awards. You might want to ask students what valuable lesson they