Name: Shirley Ann Jackson

Degrees conferred:
1968- Bachelors in solid states physics from MIT
1973-Ph.D. degree in theoretical elementary particle physics (nuclear physics) from MIT
Research area: subatomic particles, semiconductors,
Ways to integrate in to the classroom: eating habits (of honeybees), portable phone, caller ID, Fiber optic cables, solar cells

Biography essay:
Shirley Jackson was born in Washington, D.C. to Beatrice and George Jackson on August 5, 1946. Her parents encouraged her love for science. While she was in high school she was in advanced math and science course. She graduated in 1964 as the valedictorian of her high school. Shirley started her undergraduate work at MIT where she was one of only a few African American students. She was the only one studying theoretical physics, the whys behind physics. In 1968 she graduated with her B.S. from MIT and wrote a thesis on solid-state physics, the study of solid objects. In 1973 she graduated MIT with her PhD in elementary particle theory. She was also the first African American women to receive her PhD from MIT and the second African American women in the US to earn a PhD in physics.
In 1980 Jackson became the president of the National Society of Black Physicists. Then in 1991 she became a professor at Rutgers University. In 1995 she was appointed by President Clinton as the chair of the Nuclear Regulatory Commission and in 1998 she was inducted into the National Women's Hall of Fame and then became the eighteenth president of Rensselaer Polytechnic Institute. In 2016 Shirley Jackson was awarded the National Medal of Science, the highest science honor that can be bestowed on someone by the US government.

Research description:
Shirley conducted research in theoretical physics at the Fermi National Accelerator Laboratory where she focused mainly on hadrons. During this time, she also studied Landau theories of charge density waves, ordered fluid of electrons in a linear chain compound or layered crystal, in one- and two-dimensions, and Tang-Mills gauge theories and neutrino reactions. In 1976 she started working with Bell laboratories on the electronic properties of ceramic materials to see what could be used as superconductors of electric current. Through her research at Bell she was able to show the technology that lead to the making of portable fax, touch tone phones, solar cells, fiber optics, call waiting and caller ID.
Information in this biography is taken from: **Wikipedia,** https://news.rpi.edu/content/2015/12/22/president-shirley-ann-jackson-named-recipient-national-medal-science **,** http://www.thehistorymakers.com/biography/shirley-ann-jackson-41 **and** http://www.black-inventor.com/Dr-Shirley-Jackson.asp