



State Board District 10 Andrea Harpen

Andrea Harpen is a chemistry and physics teacher with 15 years of teaching experience at Blanchester High School. Before teaching and raising her family, she was as a chemical engineer managing the processing and packing of soybean oil for Proctor & Gamble's Ivorydale food plant.

Andrea has incorporated her industry experience into her teaching, distinguishing herself as a leader in STEM education by doing summer research of breakout topics in science. After immersing herself in nanoscience research for two summers at Purdue University, Andrea earned the distinction of Master Teacher in Nanoscience Education from the university. She also did an internship in the Nuclear Energy Department at Argonne National Labs, writing materials in nuclear energy education that are used for international training seminars.

She won the 2010 Governor's Award for Excellence in STEM Education and was a 2011-2015 Master Teacher Trainer in Biofuels and Bioproducts for the Ohio Bio-Products Innovation Center at The Ohio State University. Andrea presented "Chemistry in a Biobased Economy," a green-chemistry lesson, at the 2013 Science Educators Conference of Ohio. She was the lead teacher-presenter for a five-state, \$5 million U.S. Department of Agriculture Bioenergy & Bioproduct grant presentation in Washington D.C.

Her emphasis on teaching about cutting-edge research has helped her economically disadvantaged students win almost \$60,000 in cash and scholarship awards over the past 10 years. Her work to build relationships between academia and industry has resulted in more than \$30,000 in sponsorships and field trips awarded to her students. She has presented at the Science Educators Conference of Ohio, Ohio State Biofuels and Bioproducts Workshop, National Science Teachers Association-funded Science Teacher's Nanoscience Workshop, National STEM Teachers Workshop and National Chemical Education Conference.