

Karen Plaster

- Work one on one with STEM Professionals as they transition into teaching 12 grade Math or Science classroom, coach collaborative teachers as they work with Woodrow Wilson Fellows

Educational Technology instructor (Fall 2011, 2012, 2013)

- Topics: 21st Century Skills, Digital Citizenship, PLE, Webquests, Vodcasts, Flip videos

Teaching Math to Middle Level Learners Instructor (Spring 2012, 2013)

- Topics: History of Math curriculum; Common Core Standards; Integrating Inquiry, Manipulatives, Literacy, Writing, and Technology into mathematics lessons; Field Observations

Leadership Through LEGO® and Lego® Colloquia (Fall 2018, 2019)

Think Tank to Shark Tank: Engineering to Entrepreneur Summer Camp (Summer 2014, 2015, 2018, 2019)

- Topics: needs assessment, research, product design, business plan and marketing processes  
Camp designed for middle school students; partnered with the Barker Center for Economic Education Development. Ran the camp in 2015 with Akron Urban League and the Boys and Girls Club of the Western Reserve.

Long Term Substitute Teacher

- Mogadore High School, April 2011  
9<sup>th</sup> to 12<sup>th</sup> grade Advanced Mathematics, Algebra I; Intermediate Math III and Geometry
- North Canton Middle School, Long Term Substitute Teacher, January to February 2011  
6<sup>th</sup> grade Mathematics, 4 sections and one section of English

R.R. Donnelley & Sons Company, Willard, Ohio Manufacturing Plant, 1993-1996

Manufacturing Facilitator in a 1,800 employee printing and manufacturing plant of large bound books.

Education & Credentials

The University of Akron, Akron, Ohio

Master of Science in Integrated Mathematics with Licensure (Grades 1-12) 2010

The Ohio State University, Columbus, Ohio

Bachelor of Science in Industrial and Systems Engineering, 1993

Honors & Associations

Crain's Cleveland Business 2019 Notable Women in STEM and the

Dorthey O. Jackson Award 2019 from Akron's Women's Network for Girls Who Code

College of Education Outstanding Teaching Award 2017

The University of Akron Excellence in Community Engagement Award 2016

State of Ohio FLL Outstanding Volunteer Award 2015

College of Education Outstanding Service Award 2015

National Council of Teachers of Mathematics (NCTM)

- Ohio Council of Teachers of Mathematics (OCTM)
- Ohio Mathematics Education Leadership Council (OMELC)
- Greater Akron Mathematics Educators Society (GAMES)

## National Science Teachers Association (NSTA)

### Publication

Plaster, K. & Pachnowski, L.M. (2018). Providing meaningful feedback to student math samples using the Mathematical Practices. *The Ohio Journal of Teacher Education*, 32(Fall),37-50.

### Presentations

Plaster, K., Pachnowski, L.M. & Green, S. (2019 October). *Blending Entrepreneurship and STEM Education: From Think Tank to Shark Tank*. Presented at Ohio Council for the Social Studies (OCS) Columbus, Ohio.

Plaster, K. & Ronnebaum, B. (2019, February). Robotics FIRST in Class. Presented at Ohio Educational Technology Conference (OETC): Columbus, Ohio.

Plaster, K. (2018, November). *Robotics FIRST*. Presented at Greater Cleveland Council of Teachers of Mathematics (GCCTM): Breaking it Down and Enhancing the “M”: University Heights, Ohio.

Walsh, V.L. & Plaster, K. (2018, November). *Join the Maker Movement*. Presented at Greater Cleveland Council of Teachers of Mathematics (GCCTM): Breaking it Down and Enhancing the “M”: University Heights, Ohio.

Pachnowski, L.M. & Plaster, K. (2018, November). *Girls Who Code Clubs and other Coding Topics*. Presented at Greater Cleveland Council of Teachers of Mathematics (GCCTM): Breaking it Down and Enhancing the “M”: University Heights, Ohio.

Plaster, K. & MartinClay, A. (2018, October). *Robotics FIRST*. Presented at NEOSTREAM Educators Day: Cleveland, Ohio.

Plaster, K., Pachnowski, L., & Baylor, L. (2018, June). *Girls Who Code Programs in Akron and Canton: Show and Tell*

Ronnebaum, B. & Plaster, K. (2017, October). *Did You Know that you Can Program LEGO Bricks?* Presented at the 67 Annual Ohio Conference of Teachers of Mathematics (OCTM): Columbus, Ohio.

Walls, J. & Plaster, K. (2017 February). *Hands on High School* Presented at the annual Greater Akron Mathematics Educators Society(GAMES): Akron, Ohio.

Makki, N., Holliday, G.M., & Plaster, K. (2016, December). *Shaping teaching practice through field-based action research*. Presented at the National Science Teachers Association (NSTA) Conference: Columbus, Ohio

Plaster, K. (2016, November). *Is there an App (or Website) for that?* Presented at the Greater Akron Mathematics Educators Society (GAMES) Akron, Ohio.

Plaster, K., Broadway, F. (2016, October). *Patterns in Art*. Presented at the 66 Annual Ohio Conference of Teachers of Mathematics (OCTM): Sandusky, Ohio.

Plaster, K., (2016, October). *A Fresh Look at Abstract* Presented at the 66 Annual Ohio Conference of Teachers of Mathematics (OCTM): Sandusky, Ohio

Makki, N., Evans, E., & Plaster, K. (2016, April). *Teachers' Understandings and Perceptions in an Engineering Design Course for Educators*. Presented at

presented to the annual international meeting of the American Educational Research Association (AERA): Philadelphia, PA.

Holliday, G.M., Makki, N., & Plaster, K. (2014, April). *Woodrow Wilson fellows: Shaping teaching practice through field-based action research*. Presented to the annual national meeting of the

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Co-Principal Investigator (with Pachnowski L, Makki N, and Holliday, G.M.) Ohio STEM Learning Network (OSLN) JA Woodrow Wilson Teaching Fellowship, Ohio Department of Education, \$15,500 (2014).

Co-Principal Investigator (with Pachnowski L, Makki N, and Holliday, G.M.) Ohio STEM Learning Network (OSLN) JA Woodrow Wilson Teaching Fellowship, Ohio Department of Education, \$25,000 (2013).

Co-Principal Investigator (with Pachnowski L, and Holliday, G.M.) The benefits and barriers of audio recording technology when used during teacher candidate supervisory experiences College of Education, The University of Akron, \$1,935 (2012).

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## Service Experience

### State of Ohio

Computer Science State Standards and Model Curricula writing committee 2018

### University of Akron Committees

Urban STEM Center, Director 2019 to 2020

College Council, Secretary 2019-2020

Admissions Committee 2018-2019 (chair)

Scholarship Committee 2015, 2016, 2017 (chair), 2018 (chair), 2019 (chair)

Dean Search Committee Spring 2017

United Way University of Akron 2016

Commencement Marshal Fall 2015, 2016 Spring 2016

Teacher Academy Visit Day Fall 2016

Counselor Visit Day Fall 2016

Student Teaching committee 2015, 2016 2017

Woodrow Wilson Committee Fall 2011 to 2016

CAEP Clinical & Field Subcommittee 2013, 2014, 2016

Woodrow Wilson K-12 Curriculum Committee (w/ Akron and Canton Public Schools) 2011, 2012, 2013

TPA committee Fall 2011, 2012, 2013

Education Minor Committee 2012, 2013

Ed. Masters requirement Committee Spring 2012

### FIRST LEGO League (FLL)

Director of the University of Akron's FIRST LEGO League (FLL) District tournament held Jan. 2014, 2015, 2016, 2017, 2018 & Dec. 2018, 2019

- Hosted 40 FLL teams (made of 4<sup>th</sup> through 8<sup>th</sup> graders) and 40+ FLL teams from NE Ohio and their families annually
- Recruited and organized over 75 volunteers annually
- Partnered with the College of Engineering, Rockwell automation and NE Ohio STEM alliance leaders
- Attended Ohio FLL meetings and training

FIRST World Tournament Project Judge 2018, 2019

Kirtland Regional FLL tournament, Tournament Director 2015

Snowed In Regional FLL tournament at the University of Akron, Tournament Director 2016

Solon Regional FLL tournament, Project Judge 2013; Field Manager 2014; Tournament Director, 2015

Cleveland Regional tournament, Head Project Judge 2015

Lorain Community College Regional FLL tournament, Field Manager 2013, 2015

Hathaway Brown Regional FLL tournament, Core Judge 2013; Project Judge 2014

Hudson Regional FLL tournament, Field Manager 2012, 2013

Seton Catholic Regional tournament, assisted in running tournament 2014

State of Ohio Tournament, Project Judge 2015, 2019, 2020; Field Manager 2016-2018

Organized FLL Judges Training at University of Akron, 2013, 2014, 2015  
Organized FLL Scrimmage at University of Akron, 2013, 2014, 2015, 2016, 2017, 2018, 2019  
Organized FLL Programming workshop at the University of Akron for FLL, 2013

NEOHOTS Mission to grow FLL throughout Northeast Ohio

Co-Founder & Board Member 2014- current  
Outreach & Tournaments committee chair

Summit & Stark County

Code Hopper, organizer 2018 to present  
Code Girl Fall 2016, 2017, 2018  
Girls Who Code leader, Fall 2016 to 2019