

Cassandra Armstrong

Skills

- Pre-K-12 STEM Curriculum Development
- Course Organization and Standards Alignment
- Professional Development Specialist
- Online or Hybrid Course Development
- Creative and Innovative

Experience

Curriculum Writer and Professional Development Specialist

2018-Present

Illinois Mathematics and Science Academy, Aurora, IL

- Little STEAMers Early Learning Project
 - Grant funded by The Boeing Company in 2019 to develop a STEAM-based early learning supplementary curriculum for 3-5 year olds in underrepresented communities in the St. Louis area
 - Developed, wrote, and provided professional development for six curricular units that are linked to *Illinois Early Learning Development Standards* as well as *Missouri Early Learning Goals*, are play-based, and are intended to strengthen executive functioning skills, early science skills, and Kindergarten readiness math skills
- Develop lessons aligned to the Next Generation Science Standards and provide professional development for K-5 educators in accordance with a grant from the Illinois State Board of Education
- Modify existing curricula for an 'at-home' or virtual format in response to the COVID-19 pandemic
- Develop competency driven, inquiry based, integrative, and problem centered virtual professional learning experiences within the Canvas learning management system for the IMSA Educator Micro-certification program
- Aid in the implementation and professional learning of the Canvas learning management system at IMSA
- Stay up to date with best practices in education, curriculum development, and pedagogy

Graduate Teaching Assistant- 'The 'E' in STEM'

2017-Present

NASA Endeavor STEM Teaching Certificate Project, Virtual

- Assist Professor Joshua Brown (Illinois State University) with the online graduate course 'The 'E' in STEM' for educators in the NASA Endeavor STEM program
- Help run and facilitate bi-monthly online courses through Zoom (previously WebEx)
- Aid in the facilitation of course discussions and grading assignments

Science Small Group Instructor

2014-2018

Pathways in Education, Chicago, IL

- Teach accelerated high school science courses to classes of ~15 students ages 14-21 in credit recovery to allow for personalized instruction

- Develop STEM Inquiry-based units of instruction that reach underserved students in the content areas of Biology, Chemistry, Physics, and Environmental Science (in both English and Spanish)
- Deliver Professional Development sessions to staff concerning academic rigor, data-driven instruction, and cross-curricular STEM instruction

High School Science Teacher

2011-2014

Public High Schools in Chicago, IL and Coldwater, MI

- Science Department Chair, 2014
- Curriculum alignment with the launch of the Next Generation Science Standards
- Experience teaching Biology, AP Biology, Chemistry, Earth and Space Science, Physics, Forensics, and Anatomy & Physiology
- ACT Preparation Coach

Education

Northeastern Oklahoma State University, Tahlequah, OK

2016

Masters of Science Education

Columbia University Teachers College, New York, NY

2016

STEM Leadership Endorsement

Michigan State University, East Lansing, MI

2011

Teacher Certification- Graduate Certificate

Michigan State University, East Lansing, MI

2010

Bachelor of Science in Biological Sciences, Minor in Chemistry

Professional Activities

Curriculum Development Examples

For students:

- [Little STEAMers Early Learning Program](#)
- [Model NGSS Lessons- 5th Grade](#)

For educators:

- DNA, RNA, & Proteins, Oh My!: Exploring Assessment using the NGSS's
- Engineering Hogwarts: An Integrative Approach to the 5E Instructional Model
- *Teaching STEM in the Preschool Classroom: A Book Study*

Presentation Examples

[Little Big Minds: STEAM for Our Youngest Learners](#)

- *University of Arizona Mathematics Educator Appreciation Day Conference* 2021
- *ASCD Pre-K and Kindergarten Annual Conference* 2021
- *NSTA Engage: Spring '21 Virtual Conference* 2021

[Problem Centered Teaching by Tomorrow](#)

- *Raising Student Achievement Conference* 2019
- *Metropolitan Mathematics Club of Chicago Conference* 2020
- *Kane County Institute Day* 2020
- *University of Arizona Mathematics Educator Appreciation Day Conference* 2021
- *IMSAtute Day 2021* 2021
- *Illinois Career Connections Conference* 2021

Professional Associations

National Science Teachers Association (NSTA)
Illinois Science Teachers Association (ISTA)
Michigan Science Teachers Association (MSTA)

2011-2021
2018-2021
2011-2014