

# Celebrating 20 Years of the Math & Science Collaborative (MSC)

Below is a timeline indicating activities by MSC since its inception 20 years ago. While many continued for multiple years, each is only mentioned in the initial year. Those that are on-going in 2014-2015 are highlighted yellow; the 32 MSC staff members are blue. Much to celebrate!!

## 1994

Local foundations ask Allegheny Policy Council (APC) to explore coordination of regional efforts. APC survey invites SWOT analysis by county and city districts and identifies 50+ outside initiatives reaching in to help schools

APC convenes Founding Congress at Carnegie Museum involving district teams from all 42 county districts and Pittsburgh Public Schools. After keynote by Richard P. Simmons, CEO of Allegheny Ludlum, participants heard survey results and set goals in role-alike groups

APC report from Congress was released at Town Hall Meeting indicating priorities for MSC action and the selection of location of MSC at Carnegie Science Center (CSC)



Carnegie Museums selected Nancy Bunt as MSC Managing Director to initiate MSC at CSC

Coordinator, Eric Stickney and Secretary, Susan McAllister join MSC staff

### MSC Steering Council

was elected/appointed as designated by founding congress (see page 2)

Mission/Vision was developed by Steering Council (see pages 4-5)

Task Forces developed strategic plans to address the 13 priorities identified by the Congress

## 1995

Steering Council authorized 5 actions which were taken to address task force priorities:

(1) Conducted baseline Survey of status of math and science education

(2) Convened expert summit setting "Parameters for Technology Use" for districts

(3) Developed annual "MSC Journal" initially to report on (1) and (2), published/distributed in partnership with Pgh Business Times, featuring NO for-profit advertising



(4) Developed and facilitated Regional Science & Math Academy involving all 42 county districts and Pgh Public Schools in supported planning by leadership teams, including business partnerships, with supported access to regional professional development (PD)

(5) Facilitated 3 day Curriculum Conference featuring 40 national and local initiatives

## 1996

Inaugurated monthly Resource Partners Network for regional initiatives (see page 36)

Expanded to surrounding counties with support of PA Dept. of Education (PDE)

Initiated annual *Three Rivers Educational Technology Conference* (TRETIC)

Facilitated "Making National Standards Work for the Region" in PD series

Engaged Peggy Douglas as MSC Administrative Secretary

Inaugurated "Network Connections" bi-annual conferences for district teams (see page 31 and see impressive list of keynoters over the 20 years)

## 1997

Partnered with Allegheny Intermediate Unit (AIU) to facilitate Regional Title II Consortium offering multiple PD offerings to participating districts

Developed and facilitated “Making Standards and TIMSS Work for the Region” PD series with support from Mid-Atlantic Eisenhower Consortia

Facilitated review and testimony to strengthen proposed Pennsylvania academic standards in mathematics and science

## 1998

Developed Curriculum Focal Point at CSC to feature research-based instructional materials

Facilitated Curricula Showcases of research-based mathematics and secondary science instructional materials

Awarded “Focus on Conceptual Understanding of Science (FOCUS)” planning grant from National Science Foundation (NSF) to create a regional approach to middle level science, initiating email and piloting of middle level curricula including STC, FOSS, Event Based Science and SEP-UP

Designated as lead to address math and science education in Working Together Consortium

Facilitated official participation of SW PA as a workforce region in TIMSS 1999 Benchmarking with corporate support

## 1999

Facilitated quarterly Teacher Networks for users of *Cognitive Tutor* and of *Everyday Math*

## 2000

Facilitated development of a Regional Mathematics Curriculum Framework partnering with AIU

Provided MSC planning as model to establish Arts Education Collaborative

Moved from CSC to Regional Enterprise Tower as part of Collaboratives for Learning

Awarded Heinz Endowments grant for \$1 million to facilitate use of Carnegie Learning’s Cognitive Tutor in Algebra in all SW PA high schools requiring research-based implementation involving PD, computer usage, and timing of instruction

Engaged Marcia Seeley as Mathematics Coordinator and Stephanie Griffith as Secretary

Selected Lou Tamler as Director of MSC

Worked with McDonalds Corporation to create tray liners promoting math challenges

## 2001

Published *Regional Report on Math and Science Education* with International Educational Study Center at Boston College to share 1999 TIMSS Benchmark findings for SW PA

Facilitated development of a *Parent Handbook for Elementary Mathematics* to introduce parents to standards based instruction, with a particular focus on *Everyday Mathematics*



## 2002

Moved organizational home from Carnegie Museums to AIU to foster sustainability of PD and curricular guidance in mathematics and science

## 2003

Selected Sally Scherling as Administrative Secretary

After receiving training from Education Development Center (EDC), introduced an administrative seminar series, *Lenses on Learning*, ultimately reaching over 300 participants

Won an \$18.3 million NSF comprehensive Math Science Partnership (MSP) award for 5 years to facilitate partnerships among 4 institutions of higher education (IHEs)-- Carlow University, Chatham University, Robert Morris University, and Saint Vincent College--CSC, and 44 school districts, evaluated by RAND Corporation

Recruited Sam Shaneyfelt as K-12 Project Director

Facilitated development of the Regional Science Curriculum Framework

Recruited and trained Coordinators to bring math and science expertise to IUs 1, 3, 7 and 27 including as Math Coordinators: Greg Boggs, Michele Burgess, LuAnn Malik, and Mary Shapiro; and as Science Coordinators: James Haser, Kevin Kelly, and Gabriela Rose

Identified Andrea Miller as Math Project Director

Initiated the annual five day Leadership Action Academy for MSP districts to engage in root cause analysis and make strategic selection of participants for MSP PD to strengthen district

teaching and learning of mathematics and science

## 2004

Won a \$2.1 million three year PDE Math Science Partnership grant award to add eight high needs, resource-poor districts to the SW PA MSP

After receiving training from EDC in *Developing Mathematical Ideas* curricula, facilitated 10 day Elementary Teacher Leadership Academies on all four IHE campuses

After receiving training from West Ed developers of *VideoCases in Mathematics Professional Development*, facilitated ten day Secondary Mathematics Teacher Leadership Academies, also on all four IHE campuses

After receiving training for BSCS in their National Academy for Curricular Leadership, facilitated ten-day High School Science Teacher Leadership Academies on all four IHE campuses

Initiated the Math Coach Network, meeting five times annually to support these new positions

Based on *Lenses on Learning*, developed *Eyes on Science* seminar series for administrators

Selected Michael Fierle and Todd Price as Math Coordinators, Jennifer Satler as Science Coordinator, Jay Moser as Science Project Director, LeeAnne Krause as Publication Specialist and Michele Young and Natalie Krall as Data Specialists

## 2005

Facilitated development of multiple three day Content Deepening Seminars in partnership with IHEs and other regional providers focused on the big ideas of the curricular frameworks

Convened quarterly teacher networks for users of *Investigations in Number, Data and Space* and *Connected Mathematics*

Recruited Ruth Martin to become Science Project Director

Selected Matt Friedman and Corinne Murawski as Math Coordinators. Margy Ritson took sabbatical leave to serve as Science Coordinator bringing experience of ASSET to MSC

Developed a ten day Elementary Science Teacher Leadership Academy focused on the use

of inquiry which was facilitated on all four IHE campuses

Developed, published and distributed *Parent Handbooks for Elementary Science*, and additionally for *Elementary Math*, focused on *Investigations*

Facilitated Year 2 of each of the three ten-day Teacher Leadership Academies on 4 campuses

## 2006

Selected Barbara Lease as Coordinator in Science and Sandy Fowler as Coordinator in Math

Developed and facilitated a ten-day Early Learning Teacher Leadership Academy for K-3 focusing on effective strategies for teaching early math and science

After receiving training from Catherine Lewis of Mills College, facilitated a third year for each of the three Teacher Leadership Academies, focused on *Lesson Study*

Developed, published and distributed *Parent Handbook for Middle School Mathematics*

Selected Barbara Ash as Senior Secretary

## 2007

Won a new three year PDE MSP for \$1.5 million, continuing support for resource-poor districts

Facilitated sessions of the Elementary and Secondary Teacher Leadership Academies, and *Lenses on Learning* as strands of the Governor's Institute on Standards Aligned System

Featured the *Learning Lab* for three weeks in Duquesne Elementary School to enable educators to develop skills in observing student learning through a de-briefed fishbowl process

Developed, published and distributed *Parent Handbook for Middle School Science*

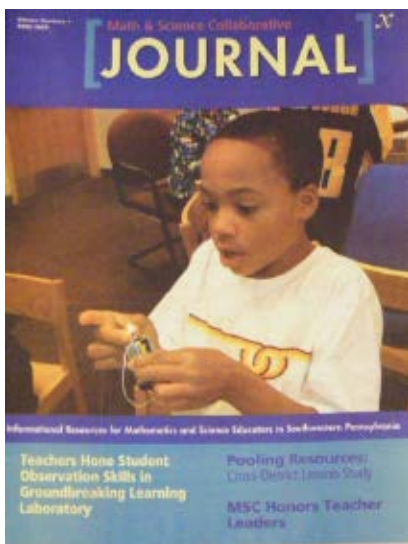
## 2008

Selected and trained Kristen Rice as Science Coordinator. Selected ten regional educators to become "Collaborative Teachers" beginning with the expansion of *Learning Labs* to 3 additional





sites in 3 different IUs to accommodate more educators



Developed, published and distributed *Parent Handbook for High School Math and Science*

Facilitated training of IU staff across PA to deliver two years of 10-day Elementary Math and Secondary Math Teacher Leadership Academies with funding from PDE and PaTTAN

## 2009

Facilitated training of PaTTAN staff and over 25 school district teams in eight day seminars to implement Lesson Study across the state with support of PaTTAN

Facilitated review of programming by participants using research-based criteria at inaugural Governor's STEM Institute

## 2010

Worked in partnership with Pittsburgh Super-Computing Center to refine CAST, computational reasoning PD, supported by DSF Foundation and Buhl Foundation

Awarded a new 3-year PDE Math Science Partnership Award for \$900,000 featuring six ten-day summer institutes focused on content and instructional approaches in math and science

After receiving training from developers, introduced 12 days Intel Math PD in partnership with Carlow University to strengthen K-8 math instruction

Facilitated Communities of Practice featuring 3 Learning Walks in MSP districts in each of the

four IUs to seek evidence of common core practices in classrooms

Facilitated quarterly Regional STEM Professional Learning Communities featuring strategies to address key problems of practice

## 2011

Awarded a 3-year Eligible Partnerships grant of \$270,000 to partner with Carlow University to facilitate Intel Math PD courses (see page 22)

Hosted and supported Regional Leadership Workshop of National Council of Supervisors of Math (NCSM) on *Implementing the Common Core*

## 2012

Initiated public awareness campaign, **math+science=success**, partnering with Carnegie Science Center, WTAE, and major sponsor: FedEx Ground (see page 37)

Facilitated Tech Council's STEM Summit, featuring National STEM report and Common Core State Standards and generated a report: *SW PA Regional Recommendations for Action*

Initiated pilot of **Educator/Corporation Collaboration on the Common Core (EC<sup>4</sup>)** (see pages 10-19) supported by PPG Industries and Alcoa Foundations

Participated in Pennsylvania's Educator Leadership Corps for the PARCC Consortia, identifying key strategies and resources for implementing the Common Core State Standards

## 2013-2014

Developed, administered, analyzed and reported on STEM professional development needs

Offered **professional development courses in math and science** (see pages 24-25)

Initiated quarterly discipline specific **Educator Networks** (see page 30)

Partnered with the Westmoreland County **Library Association** to provide **STEM PD** for librarians to support their enhancement of their summer reading program (see page 28)

Partnered with The Fred Rogers Company to focus on early math learning to develop and facilitate 20 days of **ELM<sup>2</sup>** PD for Head Start teachers (see page 26)