The Mathematics Coaching Program
The College of Education and Human Ecology

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MCP Principal Links

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Upcoming Events

We are very pleased about the number of administrators who have attended professional development sessions with their coaches. We still have three opportunities to attend professional development. Please request from and submit the registration form to mcp_coaching@osu.edu.
Furthermore, if you know of any administrators who are interested in being involved with the MCP, please direct their attention to the upcoming recruitment session.

Recruitment Session

The date for the 2013 recruitment session is **Thursday, February 7** from 9:30 am to 2:30 pm. The session will be at our Worthington Professional Development Location. Please request from and submit recruitment registration forms to mcp_coaching@osu.edu.

Remaining Professional Development Days

February 7 & 8 (Thursday, Friday)
March 4 & 5 (Monday, Tuesday)
April 11 & 12 (Thursday, Friday)

Please note: there is one additional professional development for all coaches, on May 20, 21, & 22. These days are work days and we will not be running regular sessions for administrators to attend.

> **"Intelligence plus character: that is the goal of true education."**
> **- Martin Luther King Jr.**

CCSS for Mathematical Practices and the MCP Approach

Common Core Standards for Mathematical Practices include 8 items each of which address the need to help children of all ages to go beyond algorithmic fluency and move towards acting as mathematicians, making and testing conjectures, identifying important mathematical structures and using them to make sense of contexts using mathematical tools.

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Meeting these standards is less likely to occur if children are not provided with sustained and coherent experiences that foster the development of those skills. Children need to be provided with time and space to talk about mathematical ideas. Open-ended tasks have the potential to engage children in talking and doing mathematics whilst developing the type of dispositions Mathematical Practices promote. Let's consider an example. A typical school task asks students to compute answers to addition or subtraction sentences [e.g. 12+13= ?; 25-6=?]. Students' answers may reveal their algorithmic fluency without providing teachers with insight on the type of reasoning or thinking they used. More importantly, these types of tasks fail to engage children in noticing mathematical structures. Imagine now if the same tasks were modified and presented to children as:

Find at least three different ways that 25 may be obtained by adding two double-digit numbers?
Find at least three different ways that 25 may be obtained by subtracting two double-digit numbers?
Is it possible to reach 25 by adding two single digit numbers? Why?

Notice that in the second sequence of questions not only room for creative problem solving is present for children, there is also the opportunity for the teacher to sharpen children's attention to the structure of base ten number system.

Common Core State Standards Helpful Links

The following links have been recommended to MCP coaches to aid them in implementing the CCSS, the MCP approach, and technology in their classrooms.

Project INTERMATH: http://intermath.coe.uga.edu/
Problem Solving Course: http://jwilson.coe.uga.edu/emt725/emt725.html
Technology and Secondary School Mathematics Course: http://jwilson.coe.uga.edu/emt668/emt668.html

THE OHIO STATE UNIVERSITY

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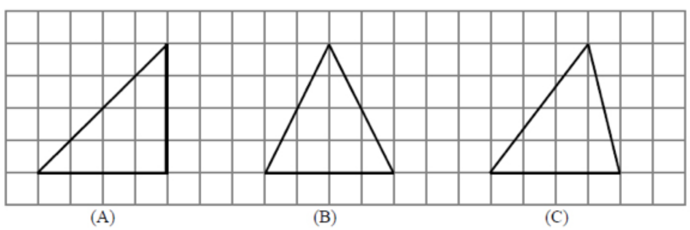
NEW! Problem of the Month

Each month we will begin publishing a mathematical problem posed to students with whom the MCP works. Ask yourself how you would solve the problem and how you think the students would solve this problem? Then consider the data at the bottom of the page about how a sample of students solved the problem

What is the area of each of the triangles in the grid? Please explain how you arrived at your answers. (Each small square has an area of 1 square centimeter.)



Administrator SharePoint Website

MCP utilizes Microsoft SharePoint as a management tool for communication and data collection. There is a site specifically designed for administrators which can be accessed at http://collaborate.csnp.ohio-state.edu/sites/mcpadmins. If you are new to MCP and have not used our SharePoint site before, you will need a username and password to log in. Please contact mcp_coaching@osu.edu for technical support.

5th Grade Student approaches to problem of the month:

Approach	Description	Percentage
Number without reasoning		24%
Proportional/fractional squares	Assigning proportions/fractions to partial squares	23%
Whole & partial squares	Indicating whole squares and partial squares	20%
Descriptive statement only	Statement without visual representation	20%
Largest triangle	Stating a triangle is the largest	5%
Other answers	Multiplying / half of a square	2%

The MCP Takes on High School!

This year we are proud to announce that we now have seven different coaches working at the high school level, a new milestone for this project. We also have eleven coaches at the middle school level.

MCP has a total of fifty-four coaches in the program working in sixty-one schools.

Stay Connected: Social Media

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How much time is too much time?

Administrators, teachers, and even coaches have expressed concern about what the appropriate amount of time is to spend on an individual problem. The MCP model champions the idea that if children are using their own thinking on a time consuming, rich problem, they are doing and learning more than if they complete multiple algorithmic problems. As children become accustomed to the MCP approach to mathematics, they will gain speed because they know *how* to think about problems.