Spring 2012 MTI Courses

Spring 2012 Mathematical Thinking for Instruction (MTI) courses are beginning soon. If you or someone in your district needs to take the class, use this opportunity to sign up.

Go to the SDE MTI website for schedule and registration information:
www.sde.idaho.gov/site/math/mti.htm

Summer 2012 MTI Courses

Registration will open at 8:00 AM (MST) or 7:00 AM (PST) on April 2nd for Summer 2012 courses.

To contact Nichole Hall at the State Department of Education about the MTI course, email nhall@sde.idaho.gov. To contact a Regional Math Specialist through IDMT, refer to your region below for email addresses.

<table>
<thead>
<tr>
<th>Region</th>
<th>Instructor</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region I</td>
<td>Abe Wallin</td>
<td><a href="mailto:abewallin@boisestate.edu">abewallin@boisestate.edu</a></td>
</tr>
<tr>
<td>Region II</td>
<td>Christina Tondevold</td>
<td><a href="mailto:christinatondevold@boisestate.edu">christinatondevold@boisestate.edu</a></td>
</tr>
<tr>
<td>Region III K-3</td>
<td>Sarah Reynolds</td>
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</tr>
<tr>
<td>Region III 4-8</td>
<td>Jackie Ismail</td>
<td><a href="mailto:jacquelynismail@boisestate.edu">jacquelynismail@boisestate.edu</a></td>
</tr>
<tr>
<td>Region III 6-12</td>
<td>Gwyneth Hughes</td>
<td><a href="mailto:gwynethhughes@boisestate.edu">gwynethhughes@boisestate.edu</a></td>
</tr>
<tr>
<td>Region IV</td>
<td>Michele Carney</td>
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</tr>
<tr>
<td>Region V &amp; VI</td>
<td>Karin Moscon</td>
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</tr>
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</table>

It is not what is poured into a student that counts, but what is planted.
- Linda Conway

In this issue:

- Spring MTI Course Registration
- The Five Big Ideas: Structure of Mathematics
- MTI Webinars and Follow-Up
- Regional MTI Workshops and Conferences
When teachers and their students focus on the structure of mathematics, they examine the broad concepts, or structural components, that underlie and connect the entirety of mathematics. An example of a structural component emphasized in the MTI class is decomposing. The following examples provide potentially useful decompositions for whole numbers, fractions and algebraic expressions in terms of operations and solving problems.

\[
\begin{align*}
7 + 8 & \quad \frac{1}{2} + \frac{1}{4} & \quad 3y \\
3 & \quad \frac{1}{4} & \quad y + y + y \\
5 & \quad \frac{1}{4} + \frac{1}{4} + \frac{1}{4} &
\end{align*}
\]

In the classroom, focusing on the structure of mathematics is exemplified by selecting problems that address big mathematical concepts and asking students why strategies, procedures, and models work and how they are related.

For example, when students use an array to develop derived facts for multiplication, they develop an understanding of mathematical properties that will appear throughout their math careers (see figure below). The same properties will help them develop efficient models and algorithms for whole number, fraction, and decimal multiplication, write algebraic expressions, and solve equations.

The structure of mathematics is missing when lessons focus on rote memorization (e.g. chanting facts) or treat topics in isolation (e.g. approaching division with decimals and with whole numbers as two unrelated skills). If the overarching structure of mathematics is ignored, students see mathematics as a series of skills to be memorized. When students learn mathematics with a focus on its structures, they are better able to apply and extend concepts to new mathematical topics and new contexts.

\[
7 \times 6 = 5 \times 6 + 2 \times 6
\]
A webinar is a seminar or workshop that is presented over the internet. During the webinar, you are able to interact with the instructor and other participants. The purpose of these webinars is to provide follow-up for the MTI course and when appropriate the Common Core State Standards. The webinars will also be archived to be accessible at a later date.

Before the webinar, make sure that your computer has the capability to run the software needed to participate. The email invitation to attend will include information describing minimum computer requirements. In addition, you will be informed on how the audio portion will be conveyed, which could be on the internet (you need speakers and microphone or a computer connected headset) and/or via telephone. If by phone, it will indicate how to use the conference call service (meaning toll free for you).

Ways to Participate:

- **Group** - This is the best way to participate in the webinar. The group could be grade level teams, cross grade-level teams, and/or teams from your district. You will need to establish a group leader. They will be the contact person who will enroll in the webinar and receive all of the documents and information.

- **Individual** - You are welcome to participate on your own, but the webinars are designed to be conducted in a group setting.

- **Miss a presentation?** You may view the archived webinar and accompanying resource materials. You can watch and listen to the presentation, questions, and discussion as it happened in the live webinar. The archive of the webinar will be available within two weeks of the webinar broadcast at: [http://tinyurl.com/mtifollowup](http://tinyurl.com/mtifollowup)

The schedule for the webinars is below & on the MTI Follow Up website: [www.tinyurl.com/mtifollowup](http://www.tinyurl.com/mtifollowup)

### Spring 2012 Webinars

**January 19th 5:00-6:00 (MST); 4:00-5:00 (PST)**
Composing and Decomposing Numbers, K-6th  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**January 30th 5:00-6:00 (MST); 4:00-5:00 (PST)**
Progression of Addition Models and Strategies in the CCSS, K-6th  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**February 16th 5:00-6:00 (MST); 4:00-5:00 (PST)**
Ratio and Proportional Reasoning, 6th-8th  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**February 22nd 5:00-6:00 (MST); 4:00-5:00 (PST)**
Multiplication: Strategies, Models, Context & the CCSS, 3rd-6th  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**February 24th 5:00-6:00 (MST); 4:00-5:00 (PST)**
Addition: Strategies, Models, Context & the CCSS, K-3rd  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**March 13th 5:00-6:00 (MST); 4:00-5:00 (PST)**
Expressions and Equations, 6th-8th  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**March 21st 4:45-5:45 (MST); 3:45-4:45 (PST)**
Division: Strategies, Models, Context & the CCSS, 3rd-6th  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**April 13th 5:00-6:00 (MST); 4:00-5:00 (PST)**
Subtraction: Strategies, Models, Context & the CCSS, K-3rd  
[Click here to Enroll](http://tinyurl.com/mtifollowup)

**April 18th 4:45-5:45 (MST); 3:45-4:45 (PST)**
Mathematics Instructional Practices, K-8th  
[Click here to Enroll](http://tinyurl.com/mtifollowup)
and how various aspects of the Math Initiative supports their implementation.

The conference is sponsored by the State Department of Education (SDE). More information regarding the location, who should attend, and agenda will be available soon on the SDE website:

http://www.sde.idaho.gov/site/math/

On Thursday, March 15th in Meridian, IDMT personnel will present sessions on MTI course ideas and integration with the Common Core State Standards. In addition several other related presentations on the Idaho Math Initiative will be conducted.

While the conference is still in the planning stages, the goal is to help build teachers, schools, and districts understanding of the Common Core State Standards and how various aspects of the Math Initiative supports their implementation.

Region III Follow Up Workshops

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<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Topic</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 12th</td>
<td>4:30 - 6:30</td>
<td>Addition and Subtraction Progression in the CCSS Grades K-6</td>
<td>Andrus Elementary, Meridian</td>
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<tr>
<td>January 19th</td>
<td>4:30 - 6:30</td>
<td>Meaningful Assessment Grades 3-8</td>
<td>Andrus Elementary, Meridian</td>
</tr>
<tr>
<td>January 19th</td>
<td>4:30 - 6:00</td>
<td>Warm-Up Tasks to Build Mathematical Understanding Grades K-8</td>
<td>Desert Springs Elementary, Vallivue</td>
</tr>
<tr>
<td>January 23rd</td>
<td>4:30 - 6:00</td>
<td>Rekenrek’s - Connecting to Common Core Standards Grades K-2</td>
<td>Summerwind Elementary, Meridian</td>
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<tr>
<td>January 25th</td>
<td>4:30-6:30</td>
<td>Meaningful Assessment Grades 3-8</td>
<td>Desert Springs Elementary, Vallivue</td>
</tr>
<tr>
<td>January 26th</td>
<td>4:30 - 6:30</td>
<td>Composing and Decomposing Number Grades K-6</td>
<td>Andrus Elementary, Meridian</td>
</tr>
<tr>
<td>January 26th</td>
<td>4:30 - 6:30</td>
<td>Warm-Up Tasks to Build Mathematical Understanding Grades K-8</td>
<td>Andrus Elementary, Meridian</td>
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<tr>
<td>January 31st</td>
<td>4:30 - 6:30</td>
<td>Composing and Decomposing Number Grades K-6</td>
<td>Mill Creek Elementary, Middleton</td>
</tr>
<tr>
<td>February 2nd</td>
<td>4:30 - 6:30</td>
<td>Fraction Understanding, Contexts &amp; Models in the CCSS Grades 1 - 7</td>
<td>Andrus Elementary, Meridian</td>
</tr>
<tr>
<td>February 2nd</td>
<td>3:45-5:45</td>
<td>Ratio &amp; Proportional Reasoning Workshop, Grades 6-8</td>
<td>West Middle School, Nampa</td>
</tr>
<tr>
<td>February 21st</td>
<td>4:30 - 6:30</td>
<td>Building Number Sense Grades K-2</td>
<td>Mill Creek Elementary, Middleton</td>
</tr>
<tr>
<td>February 21st</td>
<td>4:30 - 6:30</td>
<td>Models for Multiplication Grades 3 -6</td>
<td>Mill Creek Elementary, Middleton</td>
</tr>
</tbody>
</table>

To register for one of the workshops, visit the MTI Follow Up website: http://tinyurl.com/MTIfollowup.

For questions about the MTI workshops, contact a Regional Math Specialist:

Kinder - 3rd Sarah Reynolds: sarahreynolds@boisestate.edu
4th - 8th Jackie Ismail: jacquelynismail@boisestate.edu
6th - 12th Gwyn Hughes: gwynethhughes@boisestate.edu

Good teaching is more a giving of right questions than a giving of right answers. - Josef Albers