# THE NUMBER LINE

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Look for this icon on articles which spotlight members of our Executive Council who work tirelessly as volunteers on behalf of the organization.

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# PRESIDENT'S MESSAGE

It's hard to believe that it is May already. In some ways, it seems as though the school year has just begun. For me, this was always a time to reflect on what was done during the school year as well as begin the process of modifying and making plans for the new school year. Louisiana Association of Teachers of Mathematics (LATM) is much the same. LATM's year begins at our summer retreat in June. This past June, we spent time composing a letter to Governor Jindal encouraging him not to abandon our students as he began talk about reversing his stance on the Common Core State Standards. During this school year, we held our annual conference in conjunction with LSTA in Shreveport. Soon afterwards, we released "The Math Report" which describes the critical need we continue to have in Louisiana for high standards that are based in research and will put our students on equal footing with other students from around the nation.

Last summer, members of the Executive Council of LATM created professional development workshops designed to support our membership in their teaching of our state mathematics standards. Those workshops were presented at the joint conference in November and received positive feedback. The elementary professional development session has been selected to be presented at the Teacher Leader Summit in June. To better meet the needs of teachers, our presenters have worked to divide the original presentation into several strands and to increase the activities to give more in-depth information.

In the late winter, we sponsored special awards for math and physics at the Louisiana State Science and Engineering Fair; members of LATM assisted with the judging. Also, notices were sent to high schools around the state for high school seniors to apply for the two Carol Meyer Scholarships (\$500 each). In March, letters were mailed to Superintendents and emails were sent to Administrators asking for nominations for the LATM Outstanding Teacher Awards. That deadline was May 1. LATM Travel Grant applications are now available to help teachers with the cost of attending the 2015 Joint LATM/LSTA Conference in the fall. The deadline for LATM members to apply is September 4, 2015.

Very recently, we sent a call for proposals for the Extended Sessions of the 2015 joint LATM/LSTA Conference. Those proposals should be submitted no later than June 15<sup>th</sup>. That call for proposals begins our cycle again as we prepare for our next conference to be held in November. A call for One Hour (Concurrent) Sessions will be made soon. Those of us on the Executive Council are always trying to meet the needs of our membership by revising and improving our services. You as a member are our driving force. See what you can do to get more involved and to get more out of our organization and services.

In good conscience, I cannot close without adding my thoughts on the Common Core State Standards in Mathematics. I am amazed that so many non-educators are trying to throw out these national standards, which we have adopted and have been using successfully for several years in our state. National standards are grounded in years of extensive research. They have been carefully vetted and aligned to what our children should know and be able to do in mathematics, and our students have risen to the challenge. It is important to recall that Common Core State Standards do not dictate a curriculum, do not call for a particular assessment, and do not tell us how teachers should be evaluated.

There is absolutely no way that the State of Louisiana can create new standards in a timely manner that will not interrupt the learning cycle of our students. Without an abundance of time and expert input, they will not be able to offer standards that are <u>focused</u> on what matters most, show <u>coherence</u> across grade levels, and are <u>rigorous</u> in the development of conceptual understanding, and procedural skill and mathematical fluency. Additionally the standards need to develop the ability to apply knowledge of math to solve complex and real-world problems.

I am concerned about financial support for creating new standards. As someone who has written curriculum at the state and local level on numerous occasions, I know that this type of undertaking is extremely expensive and time-consuming. Budget cuts are already being proposed everywhere. From where would we derive funds to support this project? More importantly, from what other program(s) would money be taken to support this project? We must do a reality check!

I encourage each of you to enjoy your well-earned and well-deserved summer break. I know that it is not a time to sit around and relax because teachers never have time to relax! By nature we are always planning for the next year, but we can at least have fun doing that. Make it a great summer!

Sincerely,

Maryanne W. Smith LATM President

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# VICE-PRESIDENTS' CIRCLE

#### **Number Lines Are Not Just for Timelines**

Amanda Perry Vice-President for Elementary Schools

Haven't we all used number lines? We have them posted in our classrooms. We tell students that they will extend their understanding of the number line when they are introduced to integers.

So, why do people outside of education see this as a new tool? Maybe, they were not given the opportunity to fully understand the number line. The number line actually helps students visualize number relationships. Students can use a number line to compare numbers as well as demonstrate addition and subtraction of whole numbers as a precursor to mental computation. In addition, the number line is a great tool for the decomposition of fractions. Yes, the number line is an incredible mathematical tool.

The following lesson comes from NCTM's Illuminations and can be aligned with Kindergarten, 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> grade Common Core State Standards along with Math Practices 1, 4, 5, and 6. In this lesson, students will: use the number line to model sums, investigate the commutative property of addition, and solve/create puzzles using the number line.

Tell the students that they will find sums using the number line model. Display a large number line and a 5+4 domino, that is, a domino with 5 spots on the left side and 4 spots on the right. Then demonstrate with a counter how a "hop" of 5 is taken on the number line. You may wish to encourage students to count aloud as the hop is made. Then make a hop of 4, starting at the place the counter landed. You might choose to have them record what happened using the equation notation 5+4=9, or to informally describe the moves this way: "If you take a hop of 5 spaces and then a hop of 4 spaces, you land on 9." You may wish to highlight the fact that in this model, spaces are counted, not points on the number line.

After several trials, put the students in pairs and give each pair some dominoes, a counter, and individual number lines.

Ask the students to take turns moving the counter on the number line to find the sum shown on the domino and record the hops in pictures and in equation form. Ask them to draw the first hop and write the first numeral in green. Then draw the second hop and write the second numeral in red. Encourage the students to predict the sums and to verify their predictions by moving a counter on the number line.

After allowing time for exploration, ask the students to predict the answers to questions such as "If Return to Table of Contents

I take a hop of 3 and then a hop of 5, where will I land?" [8] Now have students make up 2 similar problems on a piece of paper and trade them with a friend. Students should then solve their partners' problems using the number line. When the pairs have finished, call them together to discuss what they did. Encourage them to use the number line in their explanation. Then ask "If I take a hop of 5 and then a hop of 4, where will I land?" [9] "How about if I take a hop of 4 and then a hop of 5?" [9] "Will this work every time?" [Yes]. Be sure to lead a discussion about the order (commutative) property. You may need to use other examples to illustrate this important property of addition.

As a concluding activity, pose puzzles such as "I am the number you land on when you take a hop of 5 and then a hop of 1. Who am I?" [6] You may wish to encourage students to create and share similar problems. One or more of these puzzles could be added to their unit portfolios.

Of course, there are many extensions that can be used with a lesson like this. Vertical alignment and use of the tool is easily accessible (see the link for "Number Line Journeys" below). In all of the clamor about "fuzzy math" and the confusion of curriculum versus standards, there is a constant – the ever-faithful number line!

Adapted from Illuminations Lesson "Hopping on the Number Line" & "Number Line Journeys."

http://illuminations.nctm.org/Lesson.aspx?id=355 http://illuminations.nctm.org/Lesson.aspx?id=2602

# **Multiple Entry Points for Instructional Tasks**

Lori Fanning
Vice-President for High Schools

As we continue our work of making high school mathematics more rigorous, we must also remember that instructional tasks can be developed to provide entry points for students at many different developmental levels. Meeting students where they are developmentally and providing pathways to success is critical to the work of teachers in this time of transition. One way to do that is to develop parallel tasks.

Parallel tasks, usually three or four, are designed to meet the needs of students at different levels but are so similar in context that the entire class could have a discussion and students may or may not realize that they had worked on different tasks. The focus in these tasks surrounds the "big ideas" in our units of study. In order to create these parallel tasks, prior assessment data should be analyzed to determine where the developmental differences might occur. Next, develop the parallel tasks with follow up questions that will guide students to reflect about their work. Encourage mathematical discourse among your students in answering the big questions posed by the task. Finally, develop questions that will challenge all students and scaffold the conceptual ideas for those who need help.

One Geometry parallel task example that is underpinned by geometric transformations is as follows:

Task A: Draw a quadrilateral EFGH in Quadrant I. Reflect quadrilateral EFGH so that the image is in Quadrant III. Describe your reflection line.

Task B: Draw a quadrilateral EFGH in Quadrant I. Reflect quadrilateral EFGH so that the image is in Quadrant III. Determine the matrix that will describe the transformation.

Students completing either task could answer the following questions:

- What are some ways that you could prove that what you did created a reflection of the original image?
- What is the slope of the reflection line? How will you know what the sign of the slope of the reflection line means in the context of this problem?
- How can you describe the image of any point in addition to the coordinates (either the line or the matrix)?

Another great place to find instructional tasks that have multiple entry points is the Mathematics Assessment Project (MAP). The tasks developed by this group focus on problem solving and content understanding. Each task is identified as novice, apprentice, and expert tasks with lessons and exemplars. Two such tasks are "Fun Size Cans" (apprentice level) and "Best Size Cans" (expert level). Both tasks deal with the surface area and volume of cans. The apprentice level task scaffold the learning by providing guiding questions that lead students to the understanding of the "big idea". The expert level task is very open ended and provides students with the opportunity to connect concepts across a broad range of standards.

The complete lessons can be found at http://map.mathshell.org/materials/lessons.php.

# **Video Applications for Graphs of Sine Functions**

Vickie Flanders Vice-President for Colleges

There are numerous videos on YouTube showing what happens when the amplitude and frequency of a sine function is changed. These videos are great visual aids to add to a lesson on graphing trigonometric functions. The students can eyewitness the changes that occur in a sine wave when the frequency and amplitude are altered.

Radio waves are excellent examples of sine graphs. AM stands for Amplitude Modulation, and FM stands for Frequency Modulation. Check out the animation for a radio signal on an AM wave versus a FM wave at <a href="https://illumin.usc.edu/114/catch-a-wave-radio-waves-and-how-they-work/">https://illumin.usc.edu/114/catch-a-wave-radio-waves-and-how-they-work/</a>.

There are a number of videos demonstrating how flowing water is affected by a speaker's volume. One such video is titled Amazing Water and Sound Illusion and can be found https://www.youtube.com/watch?v=UOfAmsQvgg4 and another video named Amazing Water and Sound Experiment #2 can be found at <a href="https://www.youtube.com/watch?v=uENITui5\_jU">https://www.youtube.com/watch?v=uENITui5\_jU</a>. A sine wave is produced, and at a frequency of 24 Hz (24 cycles per second), the water seems to be frozen in time. However, as the frequency is increased, a slow motion forward effect takes place, and as the frequency is decreased, a slow motion reverse effect takes place.

Another interesting video is titled *Amazing Resonance Experiment* and can be found at <a href="https://www.youtube.com/watch?v=wvJAgrUBF4w">https://www.youtube.com/watch?v=wvJAgrUBF4w</a>. A metal plate with sand on it is placed on top of a speaker. The metal plate vibrates due to the sound of the speaker and moves the grains of sand to create interesting geometric patterns. The higher the frequency, the more complex the geometric pattern. These videos give students a new perspective on a sine graph and show that math can be fun!



**Ellen Daugherty** is currently serving as the Treasurer on the LATM Executive Council. She previously held the positions of NCTM rep and BRACTM affiliate rep. She serves as the K-3 Literacy Coach at the LSU Lab School where she has been working for the past 11 years. In addition to serving on this board, she also serves as President of the Capital Area Reading Council. She has been an educator for 28 years. She loves what she does and wouldn't dream of doing anything else!



# STUDENT RECOGNITION

# **2015 Louisiana Science and Engineering Fair Mathematics Category LATM Award Winners**

On March 24-25, 2015, Louisiana State University hosted the 2015 Louisiana Science Engineering Fair for students in grades 6 – 12. Members of the LATM Executive Council visited the fair and chose three winners in the Mathematics category from each of the Junior and Senior divisions. The names of the winners and their project titles are listed below.

#### Junior Division - March 24, 2015

First Place: Mackenzie Cormier, "Does the Golden Ratio Determine Beauty"

Second Place: Andrew Knott, "Base Station"

Third Place: Breanna Epperly, "Accuracy of Mark and Recapture Estimating"

#### Senior Division - March 25, 2015

First Place: David Luo, "Deeper Investigations of the Euclidean Algorithm" Second Place: Elya Courtney, "Improving Accuracy of Frequency, Amplitude and Phase

with EI rather than FFT"

Third Place: Adeline Martin, "Chance" (not in the picture below)



LSEF Junior Division LATM Award Winners



LSEF Senior Division LATM Award Winners

# **Carol Meyer Memorial Scholarship**

The Louisiana Association of Teachers of Mathematics established the Carol Meyer Memorial Scholarship to support high school seniors who have demonstrated a commitment to completing their education in Mathematics, Mathematics Education, or Elementary Education.

Congratulations to our 2015 recipients – Haley Campbell of Sulphur High School and Kassie St. Pierre of Lutcher High School! Stay tuned to the next edition of the Number Line for pictures of our winners.

# **OPPORTUNITIES FOR TEACHERS**



# Presidential Award for Excellence in Mathematics and Science Teaching

Unfortunately there has still not been a White House announcement of either the 2013 and/or 2014 Presidential Awardees for Excellence in Mathematics and Science Teaching (PAEMST).

Our 2015 Presidential Award candidates submitted their completed packets by May 1, 2015. All Louisiana nominees and their nominators were sent reminder emails and timeline information. Louisiana applicants have received First Care Kits and stress pencils from our state program to encourage them as they completed their submission packets. The national program provided webinars to respond to application questions and applicants had the option of requesting a mentor. Helpful hints on writing the narrative sections and preparing the video were also provided to our applicants.

A state selection panel will convene in early June to review and score the applicants' written components and their classroom videos. Up to five state finalists may be selected for consideration by a national selection panel. The state finalists will be honored at a recognition luncheon at the Governor's Mansion next fall.

The 2014-15 academic year was a secondary cycle for teachers in grades 7-12 of math, science, computer and engineering courses. Next fall nominations to honor elementary teachers will be accepted.

For more information please contact Jean May-Brett at <a href="mailto:jam05@bellsouth.net">jam05@bellsouth.net</a>.

# Short Course (Extended Session) Proposals for the 2015 LATM/LSTA Joint Math Science Conference

**Interested presenters** may submit a proposal for a 3-hour or a 6-hour session or field trip that will be held on **Monday**, **November 9**, **2015**. One offsite computer lab is available for a technology session. With the exception of an extended session that requires a computer lab, presenters must provide all equipment (computers, LCD panels, internet access, and other items) needed for their presentation.

To submit an online Extended Session proposal go to <a href="https://docs.google.com/forms/d/1bpuBowkSUMfw7fTC-NzFqHofS7pN2lkvqWpd6NrRDKI/viewform?usp=send\_form">https://docs.google.com/forms/d/1bpuBowkSUMfw7fTC-NzFqHofS7pN2lkvqWpd6NrRDKI/viewform?usp=send\_form</a>

Proposals must be submitted via this link by June 15, 2015.

The conference program allows for each Extended Session to have a maximum of 3 names listed as the presenters: the **Lead Presenter** followed by, at most, two **Co-Presenters**. Co-Presenter information must be entered at the bottom of the form. **The Presenter and Co-Presenter(s) listed in this proposal must register for the conference**.

Questions or concerns regarding this process should be directed to Maryanne Smith at <a href="mailto:latm.lsta.extsessions@gmail.com">latm.lsta.extsessions@gmail.com</a>

# Concurrent Session (1-hour) Proposals for the 2015 LATM/LSTA Joint Math Science Conference

**Interested presenters** may submit a proposal for a 1-hour concurrent session to be held on **Tuesday and/or Wednesday**, **November 10-11**, **2015**. Presenters must provide all equipment (computers, LCD panels, internet access, and other items) needed for their presentation. Rooms will have Wi-Fi access as well as a screen or wall space on which to project images.

To submit an online Concurrent Session proposal go to <a href="https://docs.google.com/forms/d/1alyVbt\_Y\_Xlh9ZT0lc8XGskijY7SHSvpz7N01BRqoVg/viewform?usp=send\_form">https://docs.google.com/forms/d/1alyVbt\_Y\_Xlh9ZT0lc8XGskijY7SHSvpz7N01BRqoVg/viewform?usp=send\_form</a>. Proposals must be submitted via this link **by August 24, 2015**.

The conference program allows for each Concurrent Session to have a maximum of 3 names listed as the presenters: the **Lead Presenter** followed by, at most, two **Co-Presenters**. Co-Presenter information must be entered at the bottom of the form. **If the proposal is accepted, the Presenter and Co-Presenter(s) listed in the proposal must register for the conference.** Registration must be complete (submitted and fully paid) by the early-bird deadline, October 9, 2015. The early-bird registration fee is \$75. After this date, increased registration fees will apply. The program committee reserves the right to remove accepted proposals from the program if registration is not completed by October 9.

Questions or concerns regarding this process should be directed to Mandy Boudwin at <a href="mailto:lamathandscience@gmail.com">lamathandscience@gmail.com</a>.

# You Can Do It: Tips for First-timers to Submitting a Successful Proposal

Maryanne Smith President

Do your co-workers ask for your assistance in teaching a concept? Do you have a standards-based activity that works well for your students that you feel others would like to know about? Have you created a teaching strategy that you have shared only with your peers at your school? Have you ever wanted to present at a state conference but felt too scared?

Just remember, almost all speakers at our conferences are teachers, just like you, sharing something they do or have done in their classrooms. The first time they presented, they were probably very nervous, too. I would like to offer a few tips for you to think of something you might want to share and to act on it. The first step is to come up with an idea and submit a proposal.

- 1) **Reflect:** Think of the most successful moments you have had as a teacher. Write them down in a brainstorming manner. Try to think of at least ten things.
- 2) **Prioritize**: Take those ideas and try to put them in order of most successful for you or perhaps most needed by other teachers. Next you need to winnow down to the top three choices. After careful consideration, choose your topic.
- 3) **Network:** Find a colleague who you feel shares your philosophy. Ask that person if s/he would be willing to present with you. That person can be your co-presenter who will give you support, but allow you to present your ideas. (Remember, two is company; three's a crowd.)
- 4) **Collect:** Spend the rest of the school year gathering student work and materials that will support you in conveying what you want to get across to your audience. Make sure you have this readily available to you even during the summer.
- 5) **Decide:** Do you feel you can get your points across in a 50 minute to one hour session (regular session) or do you need three hours (extended session) or all day (extended full-day) to best share your ideas?

- 6) **Create:** Come up with an eye-catching title for a session that you would like to attend as a participant. Then, again thinking as a participant, write a short description of what you will present.
- 7) **Submit:** Go online and submit either a regular session or extended session. If you are apprehensive, only do one or the other. You can do more next year.
- 8) **Take a deep breath:** You've completed the first step.

Look for tips on how to present a successful workshop in the next issue of The Number Line.

## **2015 LATM Travel Grant Application**

The Louisiana Association of Teachers of Mathematics is awarding ten travel grants for \$300 each to offset the expense of teachers attending its 2015 LATM/LSTA Joint Math and Science Conference in Baton Rouge, November 9-11, 2015. The money can be used to cover conference registration, short course registration, lodging, meals, parking, and/or travel. Grant applicants will be notified of their status at least one month prior to the conference. The money will be awarded at the conclusion of the conference. Awardees must attend for a minimum of two days of the conference, participating in no less than 9 hours of conference presentations. They will be responsible for full conference registration and are encouraged to attend all three days of the event.

Principal Verification Sheets must be postmarked no later than September 4, 2015. The LATM Travel Grant Coordinator will select a committee of math leaders from throughout the state to score the applications. Order of receipt or geographic location will not be considered in the awarding of the travel grants. Qualifications and regulations for grant eligibility are as follows:

- 1. Applicants must be LATM members on or before August 1, 2015. Membership can be confirmed by Kathie Rose (<u>kathierose@ymail.com</u>).
- 2. Awardees must attend for a minimum of two days of the conference, participating in no less than 9 hours of conference presentations. They will be responsible for full conference registration and are encouraged to attend all three days of the event.
- 3. Awardees are expected to use information and skills gained at the conference to improve their teaching skills and classroom instruction.
- 4. Awardees are not eligible to reapply for the travel grant until the 2018 Annual LATM or LATM/LSTA Joint Conferences.
- 5. Awardees that decline to attend the 2015 LATM/LSTA Joint Math and Science Conference, by October 15, 2015, cannot apply the money to other conferences or transfer it to another individual.
- 6. Awardees who have not notified the LATM Travel Grants Coordinator by October 15, 2015 are not eligible to reapply for the travel grant.
- 7. LATM Executive Council Members and Travel Grant Committee Members are not eligible for the grant.
- 8. Awardees cannot submit expenses that will be paid by other funding sources.

Applications that do not meet the requirements or provide false information will be disqualified. After submitting your application online, send the *Principal Verification Sheet*, postmarked no later than September 4, 2015, to Beth Smith, 711 Comanche Trail, West Monroe, LA 71291. Questions can be e-mailed to Beth Smith <a href="mailto:bethsmith1124@gmail.com">bethsmith1124@gmail.com</a>.

2015 LATM Travel Grant Online Application Form

**2015 LATM Travel Grant Principal Verification Sheet** 

Or Visit: http://lamath.org/LATM\_Travel\_Grants.htm

#### YOUR LATM JOURNAL

Have you read the latest volume of the LATM Journal? The latest volume is available at <a href="http://lamath.org/journal/LATMJournalVolume102014.pdf">http://lamath.org/journal/LATMJournalVolume102014.pdf</a>. The journal has something for everyone. Find out how to get to know your college students in an article written by LATM Executive Council member Vickie Flanders. Have you wondered about classroom simulations? Check out Stimulating Intuition with Simulations by former LATM Journal editor Andy Talmadge. Want to know a little about what pre-service teachers think? Read Preservice Point of View: A Look Back by Executive Council members Nell McAnelly and DesLey Plaisance.

Articles are accepted year round for the journal. Articles should be submitted by early summer for possible publication in the 2015 volume. Submission information can be found at <a href="http://www.lamath.org/journal/LATMJournalSubmissionInformation.pdf">http://www.lamath.org/journal/LATMJournalSubmissionInformation.pdf</a>

The LATM Journal Editorial Board is always looking for reviewers. Journal articles typically fall under one of two categories – mathematics-based or mathematics education-based. Sometimes articles blend the two categories. If you have any university contacts that you think would be interested in reviewing, contact the editor or send contact information to the editor.

In addition, the LATM Editorial Board is always looking for guest column writers. Possibly you have an opinion about a current mathematics or mathematics education topic and would like to share that opinion with your fellow LATM members. Contact the editor if you are interested in writing a guest column.

If you or anyone has any questions or suggestions about the *LATM Journal*, contact editor, DesLey Plaisance, at <a href="mailto:desley.plaisance@nicholls.edu">desley.plaisance@nicholls.edu</a>.

#### Look for LATM at the Teacher Leader Summit

Several of the association officers will be presenting a series of LATM sessions during the Teacher Leader Summit June 4/5. The elementary sessions will each be offered both Thursday and Friday. The session titles are:

#### LATM's Essential Math Models: Number Bonds

- To understand the value of the number bond for gaining number sense.
- To analyze the progressions of the area model from PK to middle school.
- To recognize the importance of mathematical discourse and rigor in instruction.

#### LATM's Essential Math Models: Tape Diagrams

- To understand the value of new models for gaining number sense.
- To analyze the progressions of the tape diagram.
- To determine when it is appropriate to use the comparison model and the part/whole model.
- To recognize the importance of mathematical discourse and rigor in instruction

#### LATM's Essential Math Models: Area Models

- To understand the value of the new models for gaining number sense.
- To analyze the progressions of the area model from PK to middle school.
- To recognize the importance of mathematical discourse and rigor in instruction.

Teachers and mathematics specialists who are in the classroom will facilitate these sessions. The LATM sponsored summit rotations are being offered for teachers, school administrators and district staff to provide experiences to be redelivered during school and district professional development in-services, as school/grade PLCs, while mentoring and coaching math colleagues.

# Need an introduction to the Math Design Collaborative?

Wondering about Math Design Collaborative? The opportunity for an introduction is coming during the Teacher Leader Summit June 4-5, 2015.

There will be several MDC sessions both Thursday and Friday at the middle and high school levels. The presentations have been designed to benefit Teacher Leaders working with educators familiar with the MDC lessons and tasks who wish to further their understanding and extend their network along with teacher leaders new to MDC and the MAP website looking for rich instructional resources to offer students rigorous math problems and projects. The schedule has been arranged so sessions for each grade band are available both days

Teacher Leaders responsible for teaching mathematics and/or working with teachers of math should check the summit schedule and look for the following MDC sessions.

**MDC: Formative Assessment Lessons 6-8** 

Facilitators: Emma Jordan and Tanya McGee

MDC: Formative Assessment Lessons 9-12

Facilitators: Terrie Johnson and Tammy Hall

MDC Connections to Eureka Math and the Guidebooks

Facilitators: Kristen Mason and Shelby Stone

Implementing Math Design Collaborative in Middle School

Facilitators: Sandra Lebouef, Paula Landry, and Bridget Soumeillan

Implementing Math Design Collaborative in High School

Facilitators: Sandra Lebouef, Paula Landry, and Bridget Soumeillan

MDC for 4U

Facilitators: Connie Dupre, Mallory Carrerre, Mary Gautreaux and Dr. Roslyn Dempster

**Engaging High School Learners with MDC** 

Facilitators: Valerie Scott, Kimberly Lirette, Amanda Johnson, Alisha Marcel and Geri

Schexnayder

MDC: Vertical Articulation Utilizing Progression Documents (K-8)

Facilitators: Susan Tullier and Heather Hoffpauir

MDC: Vertical Articulation Utilizing Progression Documents 6-12

Facilitators: Susan Tullier and Heather Hoffpauir

The Math Assessment Project/MDC website <a href="http://map.mathshell.org">http://map.mathshell.org</a>, which contains the formative lesson challenges and tasks, is free and available to all math teachers. The website offers both Problem Solving and Concept Development lessons for middle and high school courses. The three levels of tasks - Novice, Apprentice and Expert provide a wide range of instructional lessons and formative assessment tasks.

# **AFFILIATE NEWS**

# **Baton Rouge Area Council of Teachers of Mathematics (BRACTM)**

The executive board will begin planning for the 2015-2016 school year. Members are encouraged to offer suggestions as to what type of professional development would be useful during the upcoming year!

To begin receiving BRACTM emails by becoming a member, please contact Trisha Fos at bractm@gmail.com.

## Northwest Louisiana Mathematics Association (NLMA)

The Northwest Louisiana Mathematics Association's winter conference was held Saturday, February 28, 2015 from 8:00 a.m. to 12 noon at the Caddo Parish School Board. The Conference theme was *NLMA 2015: Support for the Core.* The conference utilized a unique format this year. Teachers were assigned to rooms by grade band (PK-K, 1-2, 3-5, 6-8, and 9-12). Teachers in each grade band received several presentations ranging from 40 to 80 minutes. Twenty-four presenters offered sixteen highly engaging sessions. Over 150 teachers participated. The conference received positive media coverage!

NLMA is actively seeking individuals from Region 7 who want to take a more active role in the organization by serving on the executive board. Please contact Tonya Evans at <a href="tevans@caddoschools.org">tevans@caddoschools.org</a> if you are interested or require more information.

#### Pictures from the NLMA Winter Conference



All About Fluency
Presenters: N. Whitehorn and S. Southwell



Let's Measure Presenter: J. Mack





Math in Action - Presenter: K. Rogers

# Northeast Louisiana Teachers of Mathematics (NELATM)

The Northeast Louisiana Association of Teachers of Mathematics (NELATM) is preparing its new slate of office nominations. We are seeking members who are interested in serving on the NELATM Executive Council. If you are a member of NELATM and are interested, know of someone who is interested, or have questions, please contact Beth Smith at <a href="mailto:bethsmith1124@gmail.com">bethsmith1124@gmail.com</a>.

### SouthEast Area Teachers of Mathematics (SEATM)

SEATM Board members met on March 5<sup>th</sup> and began planning their Fall 2015 Professional Development. The date is set for Thursday, September 3<sup>rd</sup> at Slidell Junior High School located at 333 Pennsylvania Avenue in Slidell. The goal of this workshop is to give teachers more support as they begin the 2015-16 school year with the newly adopted Mathematics curriculum. More information will be available in May.

Two Carol Meyer Scholarships in the amount of \$250 will be awarded in the Fall of 2015.

SEATM congratulates Gina Duraprou, Vice President of High School, for her new position as an Assistant Principal. The board is now in the process of electing a new person for this position.

Ellen Marino is retiring as Treasurer of SEATM. Many thanks for her support and dedication to SEATM. Jackie Moore, who has shadowed Mrs. Marino throughout the 2014-15 school year, is on the April ballot to be elected Treasurer for the 2015-16 school year.

Stacey Magee has graciously agreed to remain a consultant to the SEATM Board.

## Southwest Louisiana Teachers of Mathematics (SWLTM)

The Southwest Louisiana Teachers of Math Mini-Conference originally scheduled for Saturday, March 28, 2015 will be rescheduled for the fall. For information regarding the SWLTM Mini-Grant, membership, or the conference, please visit <a href="http://www.faculty.mcneese.edu/swltm/">http://www.faculty.mcneese.edu/swltm/</a> or find us on Facebook.



A group of 55 mathematics teachers in Calcasieu Parish Public Schools is finishing up the Math Science Partnership Grant for the 2014-15 school year. During a June institute, these teachers attended a two-week professional development opportunity held at the district's Curriculum and Instruction Department. They participated in math content training led by Shavela Harvey, a mathematics instructor at McNeese State University and Advanced Placement math teacher at Washington-Marion High School. Assisting her were Master Teachers Jessica Rivero, Dana McGee, and Leslie McFarland.

# NCTM UPDATE

#### **Call for Proposals**

Share your teaching ideas and practices by presenting at an upcoming NCTM fall regional conference. Proposals for the 2016 Regional Conferences in Phoenix, Philadelphia or St. Louis may be submitted starting on September 1, 2015.

#### To download information on how to apply, go to

https://www.nctm.org/Conferences-and-Professional-Development/Be-a-Speaker/



#### **Resources for YOU!**

Check out NCTM's Illuminations site to find the latest resources for teaching math.

http://illuminations.nctm.org/

Pre-K-Grade 2 Interactive: How Many Under the Shell?

Practice addition and subtraction with Okta.

Grades 3-5 Interactive: Turtle Pond

Guide a turtle to the pond using computer commands.

Grades 6-8 Interactive: Free Ride

Explore fractions using the context of a bicycle and gear ratios.

Grades 9-12 Interactive: Pi Fight

Become comfortable using both radians and degrees.

#### Video Series Elaborates on Math for Students to Succeed

 $\frac{http://www.nctm.org/Standards-and-Positions/Common-Core-State-Standards/Teaching-and-Learning-Mathematics-with-the-Common-Core/ \\$ 

NCTM and The Hunt Institute have produced a series of videos to enhance understanding of the mathematics that students need to succeed in college, life, and careers. Beginning in the primary grades, the videos address the importance of developing a solid foundation for algebra, as well as laying the groundwork for calculus and other postsecondary mathematics coursework. The series also covers the Standards for Mathematical Practice elaborated in the Common Core State Standards for Mathematics and examines why developing conceptual understanding requires a different approach to teaching and learning.



**Susan Carter** serves as the SEATM Representative. She currently serves as President of the SouthEast Area Teachers of Mathematics (SEATM) and teaches 3<sup>rd</sup> grade at Honey Island Elementary School in Slidell. Susan returned to school at age 40 and received both her Bachelor's degree in Elementary Education and Master's degree in Educational Leadership and Technology. Susan has taught 1<sup>st</sup>, 2nd, and 3<sup>rd</sup> grades in Slidell, has helped write Math curriculum for St. Tammany Parish, and given presentations at various St. Tammany Parish Summer Institutes on both Literacy Work Stations and Mathematics teaching. Susan and her husband, Chip, have been married for twenty years and have one son, a junior at Northshore High School. She can be reached at susan.carter@stpsb.org.



# **MSP UPDATE**

The 2014-15 Louisiana Math Science Partnership (MSP) project year is ending this spring. Teachers are meeting with the district leaders and instructional staffs to complete the academic year follow-up sessions and complete the end of the year surveys and post-test.

Districts projects that sunset are Avoyelles, Bossier, Caddo, Calcasieu, Lafourche with partners Assumption and the Houma-Thibodaux Diocese, and Vermilion. Thirteen of the current MSP projects will begin a second year of professional development in content and classroom best practices with a 2015 summer institute.

The Louisiana Department of Education (LDOE) recently held a new round of competitive funding for MSP sub-grants. MSP grants support high-need school districts in the implementation of new standards and assessments through collaborative partnerships with Institutions of Higher Education (IHE). MSP projects must include districts and university partners and may include community resource providers such as museums, foundations and non-profit facilities. The results of this year's RFP review will be presented for BESE approval allowing projects to begin providing professional development summer institutes to the teacher participants from partnering districts. John Hanley john.hanley@la.gov is the LDOE MSP contact.



East Baton Rouge MSP Project



Vermilion MSP Project

# MDC UPDATE

# A Report on Louisiana's MDC Initiative

This has been a successful year for the MDC initiative. Teachers around the state have had the opportunity to attend a series of training institutes funded by the LDOE. Trainer teams in Bossier and Lafayette provided one day January and April institutes for teachers and administrators to follow-up on the summer and fall meetings in the north and central parts of the state.

Several MDC sessions will be offered during the Teacher Leader Summit in June. Teachers from the MDC Integration districts of Bossier, Jefferson, Lafayette, Terrebonne and West Baton Rouge will be facilitating sessions for participants new to and experienced with the Math Assessment Project materials for high school and middle school. These sessions are open to all Teacher Leaders who will enjoy the experience and have a wealth of resources to take back to share with colleagues during in-service and PLC redelivery.

Another introduction opportunity for teachers in the metro New Orleans area is through Core Element (<a href="http://core4kids.org/profdev.htm">http://core4kids.org/profdev.htm</a>). A one-day session Mathematics Assessment Project/Math Design Collaborative: Supporting 21<sup>st</sup> Century Math Teaching will be offered July 7<sup>th</sup>. The \$25 registration fee will be returned to participants so the session is technically free.

Middle school and high school math teachers from all districts/schools are invited to take advantage of the 2015-16 MDC Training Institutes that will be held in July. Two sessions will be offered: July 21st in Lafayette and July 23 in Bossier. Every district has been given an allotment of free seats for these MDC sessions from the LDOE. Click <a href="here">here</a> for more information from the LDOE. To register for the training institutes, visit: <a href="http://www.solutionwhere.com/ldoe/cw/showcourse.asp?4198">http://www.solutionwhere.com/ldoe/cw/showcourse.asp?4198</a>.

Teachers from districts currently not included in district and school-wide programs around MDC are invited to review the materials and encouraged to consider implementing the challenges or tasks in their instruction. The Math Assessment Project website <a href="http://map.mathshell.org">http://map.mathshell.org</a> with the formative lesson challenges and tasks is free and easily accessible.

Available to all math teachers, the website offers both Problem Solving and Concept Development lessons for middle and high school courses. The three levels of tasks - Novice, Apprentice and Expert provide a wide range of items for teachers to select from. With the tasks are scoring rubrics, ungraded and graded samples of student work. All of the items are aligned to Common Core Math Standards for both content and mathematical practice and excellent resources for teachers of math courses in grades 6-12 no matter what math curricular materials have been selected for district/school use.



Bossier MDC Team



Lafayette MDC participants working on a task

# LATM EXECUTIVE COUNCIL

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# Renew your Membership

Did you attend the 2014 LATM/LSTA Joint Conference in October? If so, your LATM and LSTA memberships were automatically renewed. If you were unable to attend, it's time to renew your membership by visiting <a href="http://lamath.org/Membership.htm">http://lamath.org/Membership.htm</a>. Submit the renewal information, print the renewal receipt, and mail the renewal receipt and \$15 payment to the address specified on the receipt. If you have any difficulties with the online form, please contact Kathie Rose at <a href="https://kathierose@ymail.com">kathierose@ymail.com</a>.



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