

# MONTHLY NEWSLETTER

Feb. 2018 | Issue No. 1

The AMSTI-USA Monthly Newsletter is published on the first business day of each month. All issues are archived on the AMSTI-USA Wiki page [HERE](#). For questions or comments please email Mike Degen at [mdegen@southalabama.edu](mailto:mdegen@southalabama.edu).

## From The Director



Rachel Broadhead | Director

### A Fresh Direction

AMSTI is undergoing some changes! We are putting our belief in the benefits of continuous improvement into action, and I am excited to share the first big shift in our work.

Beginning this academic year each district with AMSTI schools will develop an AMSTI Professional Learning Support Plan (PLSP) for the State Department of Education. The PLSP will cover a three-year timeline and communicate the district's vision for math and science instruction. AMSTI sites will then use that vision to align support with that district's specific goals, allowing for a more strategic and equitable deployment of AMSTI resources.

At a time when all of education is being asked to do more with less, this level of intentionality will help us maximize our

resources, especially human resources.

While all AMSTI schools that submitted a recommitment letter will have access to the standard AMSTI supports, this framework of rotating additional supports will allow schools time to focus on incremental, achievable goals and allow AMSTI to allocate targeted follow-up assistance.

To accomplish this at the USA site, we will return to offering our Coaching Community model of professional learning. This structure will have an increased attention to building capacity in teacher leaders at the school level to improve the sustainability of AMSTI best practices. A portion of schools in each LEA will receive tailored support planned collaboratively by school and AMSTI personnel to fit within the local school culture and context.

This approach, coupled with a gradual release of support over the three-year PLSP, means that AMSTI schools will move through periods of heightened strategic support and periods of general sustainability assistance, making room for all schools to be well supported over time and allowing for administrators and teachers to focus on other instructional priorities as needed.

# Materials & Professional Development News

## New Color-Coded Teacher Tags for Semester-Long Kits



Susan Andress | Business Manager

In the process of picking up and delivering science kits across Region 10, we noticed that some teachers, administrators, and district delivery staff have been confused about which kits are quarter- and semester-length.

For several years we have color-coded the teacher tags for the quarter a kit leaves the warehouse. We also currently note this information on the return flyer, and only list kits to be returned on the spreadsheet.

We are now adding two additional colors for the semester-long kits (see table below). Color codes will be communicated quarterly to the districts and noted in school packets as to which color or colors should be returned during the specific return dates.



Sample Teacher Tag for 3<sup>rd</sup> Quarter

Teacher Tag Colors by Quarter/Semester			
August - October	1st Quarter	August - December	1st Semester
October - December	2nd Quarter	January - May	2nd Semester
January - March	3rd Quarter		
March - May	4th Quarter		

Note: Bolder colored teacher tags indicate kits for online training courses.

## Important Dates

<b>March 1st – 23rd</b>	Cycle 4 Online Compressed Training Enrollment is opened. *NOTE online compressed training is only available to those who have completed Year 1 and Year 2 Summer Institutes. Registration for online training is open year-round. You may do so by clicking <a href="#">HERE</a> .
<b>March 31</b>	Cycle 3 Online Course training ends. Be sure to have investigations and coursework completed.
<b>May 25</b>	Cycle 4 Online Course training ends. Be sure to have investigations and coursework completed.
<b>April 24</b>	Meeting for AMSTI School Principals
<b>June 11 - 22</b>	<b>Summer Institute 2018</b> (More information, including location, TBA). Register here for <a href="#">Summer Inst.</a> , or here for <a href="#">Compressed Training</a>

## AMSTI-USA Welcomes New P.D. Coordinator



Mike Degen | P.D. Coordinator

Mike Degen joined AMSTI-USA as Professional Development Coordinator (and editor of this publication) in August. Before coming to AMSTI, Mike worked as a data associate for a charter school management organization in AZ, for which he also co-taught a seminar in ancient Greek & Roman literature, and coached high school boys varsity soccer. He and his wife, Michelle, live in the Midtown neighborhood.

# Math Highlights

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## From the View of a New Math Specialist

By Jennifer Fagerstrom

With so many wonderful occasions to interact with and learn from teachers, students, and AMSTI specialists during my first two months as a math specialist, it is hard to pick just one as my favorite.

Here is a sampling of the engaging learning opportunities taking place in Region 10!



A student examines a prickly pear cactus.

Students in Ms. Webster's first grade class at Council Traditional School investigated things from nature and made connections between the world they live in. Using the Engineering Design Process students were asked to think about which

materials would work best in designing a pair of hiking shoes. After learning about Velcro, they used the new information they had learned to design their own hiking boots.

At Foley Elementary, kindergarten and first grade teachers put new learning about visual routines and quick images into action. Teachers practiced and gathered evidence by implementing quick images with their students. They reconvened afterward to discuss how best to implement quick images in their classrooms.



A teacher implements quick images with her students.

## Learning Math with Models and Manipulatives

By Karma Clarke

What is the best way to teach math?

Studies show that students who use concrete models and manipulatives show an increase in understanding of math concepts and create a conceptual foundation in math.

This year, Thomasville Middle School 6<sup>th</sup> graders (pictured) explored hands-on learning of multiplication with the use of manipulatives in their class.

Mrs. Hyde's students created area models to identify factors, prime and composite numbers.

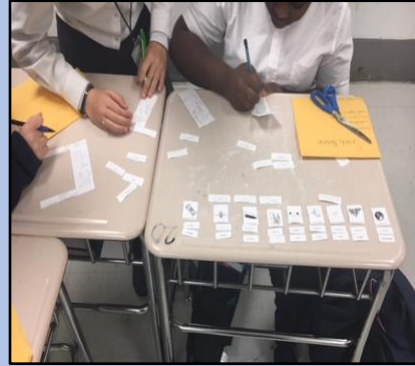
# Cultivating Joy and Creativity in Math

By John Rice

December and January were busy months with the holidays and testing, but these did not stop AMSTI schools from learning in fun and challenging ways!

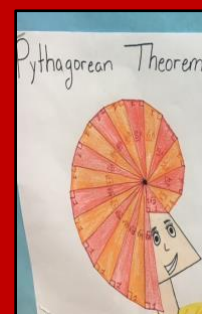
During recent support visits, I saw the products of some great activities and got to be a part of engaging lessons that explored math concepts in challenging, yet fun ways. These lessons illustrated great ways to push students to gain deeper content knowledge.

There were plenty of “aha!” moments, rigorous mathematical discourse, and some artistic ability on display by students.



Students in Mrs. Courtney Grimes-Thomas' class at Denton Magnet School engage in a Formative Assessment Lesson.

Students explored the use of scientific notation to estimate the relationships between the sizes of real-world objects.



Above, Dunbar Creative and Performing Arts Magnet School students in 7<sup>th</sup> and 8<sup>th</sup> grades explored square roots as they relate to right triangles as part of a CMP3 investigation from the “Looking for Pythagoras” unit. They also got to show off their artistic abilities, creating and transforming their own designs for the Wheel of Theodorus, which illustrates the relationship between consecutive square roots on a number line.

# Science Highlights

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## Learning with Mrs. Lyles

By Chelsea Bailey

This year has been one of learning for me as a specialist. For the past two years, I have been digging into research on rigorous classroom assessments, but found myself in need of a room full of students to try out some new ideas – action-based research!

Enter, Darla Lyles, a 5th grade departmentalized science teacher at Thomasville Middle School, who was willing to let me try out my new assessments on her four science classes.

### Starting with Preconceptions

The idea was to take a standard, unpack the learning targets, and then find (or create) a formative assessment that would give us insight into the students' thinking



Chelsea Bailey, left, at the NSTA STEM Expo.

toward that target.

We were working on lesson 2 in the Earth, Gravity, and Space module, and wanted to show that the students were not being as rigorous in their thinking as they needed to be; we needed to work on thinking about our claims, evidence, and reasoning.

We administered a diagnostic test and then took responses, grouping them by levels of understanding. This really showed us the misconceptions that students were bringing to this unit.

### Bell Ringers and Exit Slips

After we sorted students' responses we could plan our lessons. Mrs. Lyles and I chose a lesson that would help address the idea of atmosphere and gravity.

Each day we ended with a quick exit question, which asked students to restate the big idea for the day. The next day, we started class with a two-question bell ringer activity that connected the previous lesson to what we were doing that day. These bell ringers guided us in the direction we needed to go each day, building to the learning target.

### Ending the Week with Assessment

At the end of the week, I hoped to see the gains in students' thinking.

My guiding question for this year is simply what could happen if we increased the rigor on our weekly tests to match that of ACT Aspire – or whatever we decide to use for year-end assessments. I wrote a 10-question quiz that was complex and required critical thinking, while using several



questions from the bell ringers and items from class, like a chart similar to one from our labs.

I believe my hypothesis was correct; that critical thinking on paper is harder than in the discourse during a lesson and this is the direction we need to go. I was slightly concerned to see so many puzzled faces as students began the quiz.



Darla Lyles, Fifth Grade teacher at Thomasville Middle School.

The first class ended in two basic groups: those who “got it” and those who struggled. I am anxious to see the results from all of Mrs. Lyles’ classes and to look for evidence of how, or if, the students’ thinking changed. Having their preconceptions organized from the beginning of the unit, I now have evidence to compare.

*A special thanks to Darla and the 5<sup>th</sup> grade faculty at Thomasville Middle for letting me be a member of their grade level during homecoming week!*



## Inside a Lesson: Kindergarten Plants & Animals

By Christine Sealy

On a recent visit to Robertsdale Elementary, we found Kindergarten teacher, Mrs. McKenzie, and her class exploring plants from the Plants and Animals science kit.

Using hand lenses these inquisitive young scholars discovered how the plant photo cards and real plants were alike and different.

Mrs. McKenzie took advantage of the opportunity to incorporate math reasoning into this science lesson by asking the students questions like:

Which plant is the tallest?

Which plant is the shortest?

Which plant has the most leaves?

Are you an AMSTI teacher or AMSTI school administrator with a story you'd like to share? Have a question or comment about this publication? Please send inquiries to Mike Degen, AMSTI Region 10 Professional Development Coordinator, ([mdegen@southalabama.edu](mailto:mdegen@southalabama.edu)) or call (251) 665 - 4684.